Young people need to acquire the right knowledge and skills to become productive workers, good parents, and responsible citizens. Learning takes place in many environments—home, school, the workplace—but most investments in learning take place in schools. Those investments need to happen during childhood and adolescence, and the investments in adolescence are needed to make earlier investments pay off.

Despite great progress in primary schooling in developing countries, the preparation of youth for work and life is very low, just as demand for skills and knowledge is rising. Past education policies focused on increasing the number of people who go through the education system, rather than learning that takes place in schools. This chapter asserts that, to improve the skills of young people for work and life, education opportunities must be made more relevant to the needs of all young people as learners and future workers, parents, and citizens, and young people need to be provided with the tools to develop their capabilities so they can make the most of opportunities.

This involves improving educational preparation for adolescence by providing quality basic education (including lower secondary) for all. It also involves meeting the growing demand for postbasic skills, by providing diverse and flexible learning options in upper secondary and higher education; by implementing a relevant curriculum that teaches practical subjects, thinking skills, and behavioral skills; and by connecting school and work. To be successful, these reforms must be abetted by teachers who are well-prepared and motivated as well as schools that are accountable for student learning.

Education opportunities are not enough when young people cannot benefit from them. Young people make important decisions about their own education, but face constraints in doing so. Enabling them to make better education choices requires developing their behavioral skills and involving them as stakeholders in their own education, as well as providing better information about learning options and the job market and providing the financial incentives to make better choices.

Learning opportunities need to be provided for all, including young people who failed to acquire basic skills the first time around. Society cannot afford to neglect them—without second chances, these young people and their families would be condemned to poverty. Governments should therefore develop a system of remedial education, equivalency programs, literacy programs, and skills training that takes into account the diversity of these young people.

### Educational preparation of youth for work and life is low

The demand for workers with postprimary education, particularly tertiary education, is increasing as a result of skill-based technological change and the growing importance of knowledge (chapter 1). Rising primary completion rates are substantially increasing the number of potential secondary-school goers. At the same time, many children in South Asia and Sub-Saharan Africa drop out before completing primary school (or never start).

The transition to secondary school remains a barrier around the world, even in countries with high primary completion rates. Why? Because of demand factors—low levels of preparedness, the perceived irrelevance of secondary schooling, and the high direct and indirect costs—and because of low physical access to secondary schools.
The transition to secondary school is especially a problem for the poor (figure 3.1). In middle-income countries such as Indonesia and Thailand, the poorest 40 percent experience a sharp drop in the proportion completing the transition from primary to secondary; in poorer countries such as Nicaragua and Senegal, the drop in completion rates begins earlier, before plunging even faster during the transition. In many countries, particularly in South Asia and Sub-Saharan Africa, gender differences tend to get accentuated in the transition to secondary school and remain large.

The educational preparation of youth for work and life is very low in developing countries, particularly among the poor. The average performance of adolescents in the poorest countries on Programme for International Student Assessment (PISA) tests—which evaluate 15-year-olds' abilities to apply basic skills—is approximately 20 percent lower than the Organisation for Economic Co-operation and Development (OECD) average of 500 (figure 3.2), and worse for the poorest quintile of the students in these countries. In some countries, such as Mexico, performance is substantially lower than in others at similar incomes.

These numbers are all the more worrying because the students in these assessments are a select group. Those who have already dropped out of school—likely the poorest and lowest performing—are not included. In Brazil, only slightly more than 60 percent of 15-year-olds are in school in grades 7 and above. These low levels of learning achievement in secondary schools reflect in part the failure of primary and secondary schools to provide the basic skills
needed for work and life. They also reflect inequalities in access to good schools. Most of the difference in test scores between the poor and the rich is explained by their attending different schools.

The many children who stop in primary school or drop out before completing it acquire only minimal skills along the way. In Mali, only about 20 percent of 15- to 19-year-olds had completed the primary cycle of six years of schooling—of those, only 60 percent could read a simple sentence (figure 3.3). In Nepal 15- to 19-year-olds who had completed the five years of the primary cycle could typically read a sentence—but among the close to 30 percent who make it no further than grade 3, fewer than 60 percent could read a sentence.

Rising demand for postprimary education and poor preparation for work and life pose three policy challenges:

- Expanding postprimary learning opportunities to meet increasing demand, while increasing the readiness for, and quality of, postprimary education. Although the measured expansion of secondary education opportunities (that maintain a minimum level of quality) is most relevant for countries with increasing demand for secondary education (Brazil, Mexico), improving learning achievement is most relevant for countries with high secondary education coverage (Hungary, South Africa).
- Enhancing young people's ability to make the most of these opportunities by alleviat-
Learning for work and life

Learning is a life-cycle process, in which the timing and continuity of investments matter. Investments in learning need to happen during childhood and adolescence; failures to invest at this stage are very costly to remedy later. Learning is most intense in childhood and adolescence, when physical and intellectual capabilities are growing rapidly. From a neurological perspective, childhood and adolescence are critical periods for the normal development of most skills—there is no good substitute for investments during these years (see definition 3.1 of skills and knowledge). For example, language skills are much more easily acquired by children than adults. Different abilities are formed at different stages of the life cycle—although language skills are hard to develop after adolescence, behavioral skills (such as motivation, persistence, self-confidence, and self-discipline) can still be developed through a person’s early twenties (box 3.1).

Because learning is cumulative, investments in learning during childhood and adolescence have larger returns than later investments because they increase the productivity of those later investments. For example, early childhood interventions can increase subsequent learning achievement. Also, the impact of job training programs on earnings is typically larger for those who have more schooling. Investments during adolescence are also needed to make childhood investments pay off. For example, the effect of preschool interventions on learning achievement may not persist without appropriate further schooling investments. In the U.S. Head Start preschool program, the initial improvements in test scores often vanish among children who attend poor quality schools.

Investments during early childhood reap significant dividends, and can reduce the intergenerational transmission of inequality. Many young children in developing countries suffer profound deficits in nutrition, health, and cognitive and socio-emotional development very early in their lives, with lifelong consequences for educational achievement, employment, and earnings. A study in Ecuador demonstrates that large differences in language acquisition among children from different socioeconomic backgrounds become larger as they mature, partly because of differences in child health and parenting skills. Programs that combine health, parenting skills, and preschool education are likely to be most successful, and rigorous evaluations of programs in Argentina, Jamaica, and the Philippines demonstrate their effectiveness in developing countries. Such programs must be combined with efforts to improve later education for those investments to have the greatest effect.

Early entry, adequate progress, and learning basic literacy and numeracy in primary school are keys to success in postprimary education. In many countries, however, youths are still attending primary school, particularly in Africa and Latin America. The proportions of primary students beyond the primary school age are 34 percent in Brazil, 28 percent in Kenya, and 27 percent in the Lao People’s Democratic Republic. Overage enrollment is mainly due to repetition in Brazil, late school entry in Kenya, and a combination of the two in Lao PDR. In rural Bangladesh, late school entry and grade repetition in primary school reduce the chances of going to secondary school and completing it. Making school entry at age 6 compulsory and secondary school more available increase the chances of starting secondary school.
Improving the quality of primary education requires a renewed emphasis on basic literacy and numeracy combined with some of the policies mentioned later in the chapter, such as student-centered teaching methods, teachers who are well-prepared and motivated, and schools that are accountable for student learning. Supplementary remedial education can also play an important role (see second chances section).

**Enhancing postprimary education opportunities**

The postprimary education system should serve the diverse needs of young people as learners and future workers, parents, and citizens. This section shows what is needed to do this:

- Provide quality basic education (primary plus lower secondary) for all, as well as a diverse and flexible menu of learning options, so that young people can fulfill their potential.
- Make school curricula more relevant by teaching practical subjects, thinking skills, and behavioral skills as well as blending the academic and vocational curricula in upper secondary. In addition, strengthening the connection between school and work facilitates the school-to-work transition.
- Hire motivated and well-prepared teachers and make schools accountable for student learning to ensure success of education reform.
- Implement cost-sharing strategies, public-private partnerships, and efficiency-enhancing mechanisms to finance the expansion and improvement of postprimary education.
Expanding options and improving the organization of postprimary education

Providing basic education for all. Countries can provide all youth with basic skills for work and life by deferring selection and specialization until after lower secondary and by making lower secondary school part of the basic and compulsory education cycle. International test scores show that early tracking significantly increases inequality in learning achievement—and reduces learning. The secondary education reform in Chile moved all vocational specialization to the upper secondary school. This allows time for building a solid academic base for later occupational specialization. Deferring selection and specialization can be combined with compulsory schooling laws, which have been shown to have a positive effect on educational attainment and other social outcomes.

In Tanzania and Tunisia, using entrance exams to strictly ration the number of students progressing to secondary led to overcrowding in primary school and lower student performance overall. Early tracking or selection may also create or perpetuate social exclusion, as in some Caribbean countries that sort students into better and worse schools according to test scores, each with a different uniform. Where there are fiscal constraints on expanding lower secondary, more places can be created by a combination of sharing costs (with a compensating demand-side mechanism for the poor) and working with the private sector (see finance section below). For example, Tanzania discouraged private schools, but Kenya allowed them and even provided some subsidies—and during the 1960s and 1970s secondary school enrollment in Kenya expanded much faster than in Tanzania.

Building schools can meet increases in demand for secondary education, but these investments will not necessarily increase school participation or reduce inequality in many developing countries. A study using data from 21 developing countries shows that most rural residents live within fairly easy reach of a formal primary school but not a secondary school. It finds there is typically a small negative relationship between school participation and distance to secondary school, and little evidence that increasing school availability reduces inequality in enrollment by household wealth or gender.

Diversifying education options while ensuring quality. Upper secondary and higher education have to accommodate diverse student needs, interests, and capabilities—diversity that increases as they expand and become mass systems. The vocational education sector in developing countries is small (22 percent of student enrollment) relative to that in OECD countries. Upper secondary is still heavily directed to more academic university degrees, with programs oriented to the labor market playing a marginal role. However, graduation rates are higher in systems geared to work (Malaysia) than in those geared to university (Argentina and Chile).

Higher education is also heavily concentrated on more academic university degrees, though this is slowly changing with the appearance of new institutions, including technical institutes offering short-term degrees, community colleges, polytechnics, distance education centers, and open universities. Shorter and more occupationally oriented programs have half or more of the students in China, Jamaica, Malaysia, and Zimbabwe.

The expansion and diversification of postprimary education systems can be greatly facilitated by reaching out to the private sector through public-private partnerships. Governments should encourage private participation while ensuring quality standards. The share of the private sector is larger in higher education (33 percent) than in upper secondary (25 percent). In upper secondary, the share has remained stable or declined in most countries, but it has increased in tertiary, especially in Brazil and Peru. Despite some positive trends, there is still more room for private sector involvement in postprimary education.

Public-private partnerships allow systems to expand in a fiscally constrained environment, particularly in the more expensive tertiary sector, and improve learning outcomes and efficiency overall by
increasing choices and injecting competition. For that competition to work, public institutions need sufficient autonomy and resources to manage for results (see finance section below) and private institutions need to be accountable for meeting well-defined quality standards.

Several studies conclude that governments should provide information and quality assurance while promoting diversity. Few developing countries have accreditation and evaluation systems for higher education, resulting in a proliferation of low-quality private providers (as in Cambodia). Chile and the Republic of Korea set quality standards lower at the entry point (licensing) to give new institutions the chance to grow, and later make the standards more stringent (accreditation) for both public and private institutions to allow fair competition.

A flexible education system. Diversified postbasic education systems need enough flexibility to allow students to experiment and develop their full potential. Open systems can facilitate student mobility by recognizing relevant prior experience, degree equivalencies, and credits earned elsewhere. Recent reforms in secondary education have upgraded previously terminal vocational tracks, allowing vocational education graduates entry to tertiary education after taking school-leaving examinations. For example, vocational graduates in South Africa and Tunisia can now qualify for any higher education institution.

For tertiary education, many institutions throughout the world have adopted credit-based courses, including single institutions (the University of Niger), networks of institutions (such as the Indian Institutes of Technology), and entire national university systems (as in Thailand). In Colombia, people already in the labor market can get university-equivalent certification through any accredited training institution. Many young people need to combine school and work, and they can be accommodated—through, for example, part-time education. Today, part-time tertiary education accounts for only 5 percent of enrollment in university in developing countries, and 13 percent in non-university programs.

For the noncompulsory and more expensive upper secondary sector, using competitive entrance examinations will help ease fiscal pressures, but financing mechanisms similar to those for lower secondary (described above) will also create more spaces. Those who do not pass the examination will need to be offered alternative learning options (vocational) and the possibility of going on to higher education. Well-designed higher education admission tests are likely to be beneficial, because educating the most capable students can foster innovation, driving the economy. Georgia recently reformed its tertiary entrance exam, which limited access and improved the quality of students, but a remaining challenge is to provide learning alternatives to those who failed to make the cut.

Improving the relevance and quality of postprimary education

The low learning achievement in developing countries shows that schools are failing to prepare young people for work and life. A high-quality education system must improve the relevance of school curricula by teaching students the practical knowledge, thinking, and behavioral skills demanded by the labor market; using teaching methods that lead to high learning achievement; and blending the academic and vocational curricula. It must, in addition, strengthen the connection between school and the local economy to facilitate the school-to-work transition and boost economic development. The success of these reforms relies on motivated and well-prepared teachers, who ensure a safe school environment, as well as schools that are accountable for student learning.

Improving the relevance of school curricula. In many developing countries, the secondary curriculum is not relevant to the social and economic needs of students. Nor is it taught in a way that maximizes learning attainment or keeps students engaged in school. Sometimes, it is relevant only to the needs of a few privileged students. In addition, few countries routinely assess their curricula for relevance and effectiveness. Comparative analysis of national secondary
curricula between 1985 and 2000 shows very little change. The tertiary education curricula also have many of the same problems. In some countries, however, both secondary and tertiary institutions have begun to teach more practical subjects and become more responsive to the labor market.

Although curricula and teaching methods have remained largely unchanged, labor markets are demanding workers who have strong thinking and interpersonal skills. Job tasks requiring problem-solving and communication skills have grown steadily since the 1970s in the United States while manual and routine cognitive tasks have declined. Surveys of employers and workers in several developing countries, such as India and Malaysia, also indicate an increasing demand for communication skills, which is unmet by current education systems. Entrepreneurship also requires thinking skills to solve problems and such behavioral skills as self-confidence and leadership. So, in today’s complex and changing environment, the challenge is to build skills that allow young people to think critically and creatively, to process information, to make decisions, to manage conflict, and to work in teams.

Teaching such life skills can be integrated into every aspect of the curriculum through discovery-oriented teaching methods that include interactive learning, applying knowledge to real-life problems, integrating teamwork and peer tutoring into the learning process, and inviting student input into the structure and subject matter of lessons. It can be difficult for teachers to use such methods while ensuring students learn the core material, and some developing countries have found it particularly difficult to implement this type of reform, so teaching life skills as a separate subject may be better (box 3.2). For example, Japan and South Africa have recently included life skills as a subject in their secondary school curricula.

The teaching of such skills should be accompanied by efforts to reform the traditional methods used to teach other subjects. Structured, student-centered teaching methods, which even inexperienced teachers can use successfully, are effective and well evaluated, in both developed and developing countries. The structured teaching model consists of presenting the material in a progression from simple to complex, pausing to check for student understanding, and eliciting active participation from all students. To improve teaching methods or develop a life-skills curriculum, teachers should have adequate materials and training, with routine assessments of student progress and of the teaching methods and life-skills curriculum. Information and communication technologies can also facilitate teaching and learning (chapter 8).

To provide the practical skills demanded in the labor market, new subject areas need to be added to the secondary curriculum without overloading it, including science, technology, economics, and foreign languages—accompanied by renewed emphasis on basic mathematics and reading. Computer literacy is becoming a baseline requirement for many jobs, and the demand for high-skilled information communication technology workers has increased. The command of international languages, particularly English, is becoming an asset for adopting technology and for communicating.

**BOX 3.2 Life skills programs and nonformal teaching methods in schools**

Young people need problem-solving skills, not only to succeed in the labor market but also to process information for a healthy life, to participate as citizens, and to care for their families. In fact, many of what are called “life skills” programs combine teaching of behavioral and thinking skills with practical information about health, citizenship, or financial literacy. Many governments have worked with nongovernmental organizations (NGOs) to provide nonformal life skills programs both to students in school and to youth out of school.

The programs sometimes use peer educators. For example, Student Partnerships Worldwide (SPW), working in several countries in Africa and South Asia, trains young people (those just finished with secondary school) to teach life skills and health education in schools using nonformal education methods. Some very preliminary evidence suggests that such programs may affect health knowledge (chapter 5), peer educators’ future outcomes, and academic outcomes. Such programs merit careful evaluation, and the U.S. National Institutes of Health is doing a clinical trial of an SPW program in Zimbabwe, which will provide clear evidence on health outcomes, to be finished in 2007. Some governments (India and Zambia) have also begun to cooperate with NGOs to train regular teachers in nonformal education. Life-skills programs that emphasize civic and peace education are operating in several countries, including the Arab Republic of Egypt, Georgia, and Liberia; they seem promising, although they have not been formally evaluated (chapter 7).

Source: UZ-UCSF [http://www.uz-ucsf.co.zw/research/researchprojects/current/rds.html].
with other countries, although basic literacy is best acquired in local languages. Teaching financial literacy narrows the knowledge gap between the rich and the poor and enables young people to make wiser financial choices.

The general and vocational curricula should be more integrated. The skills demanded by young people and labor markets go beyond and cut across the traditional division between general and vocational curricula. Postponing vocational education until upper secondary and connecting it to higher education are two ways to integrate vocational and general education. Also needed is greater blending of content, bringing more vocational content into the general curriculum (Botswana, Ghana, and Kenya) and more vocationally relevant academic subjects (science, mathematics, language) into the vocational curriculum. The curriculum reform in Chile moved vocational education to high school and increased the academic content of vocational education to a third of the total teaching time. Specialized courses were added to the general curriculum for students in the academic strand to choose from, while vocational specialties were streamlined, their content and practices redesigned to give students flexible skills.

Strengthening the connection between school and work. Strengthening the connection is the best way to make school more relevant to work and to facilitate the school-to-work transition. Career academies in the United States combine academic and technical curricula around a career theme and establish partnerships with local employers to provide work-based learning opportunities. The academies reduce dropout rates and improve school engagement among students least likely to do well in a regular school environment. They also improve the labor market prospects of young people, but sometimes they benefit young men more than young women. The successful German "dual system" combining part-time schooling with work has been tried in several countries in Asia, Africa, and Latin America. Success has been limited, however, because of the inability to create jobs for apprentices and sustainable employment thereafter. In Japan, full-time schooling is followed by full-time employment in enterprises closely connected with the school. (For more on apprenticeships, see chapter 4.)

Effective feedback from the labor market and regular consultations with employers and alumni are indispensable for adjusting curricula to meet changing needs, as in Chile, where vocational training institutes are governed by representatives of employers, workers, and the government (see chapter 4). Formal university-industry partnerships are rare in developing countries, though there are interesting experiences. Universities and research institutes have contributed much to the growth of the Chinese economy. In Beijing, such institutions collaborate with local industry through joint projects and technology transfers and establish firms (spin-offs) to commercialize their inventions. Some of those firms (Lenovo, Tongfang) are among the largest Chinese high-technology firms.

Increasing the preparedness and motivation of teachers. Without teachers who are motivated and well-prepared, reforms to improve the quality and relevance of curricula are unlikely to be successful. Teachers are often not well-prepared, however—either in their knowledge of the material or in their use of effective teaching methods, particularly when it comes to the learning needs of youth. Teacher absenteeism is significant (24 percent in India), and teacher shortages block the expansion of secondary education, especially in Africa. Teachers also sometimes perpetuate or exacerbate violence and harassment in schools, which affects education outcomes (box 3.3). Despite the imperatives, few countries have effective training, incentive, and accountability systems.

To ensure that teachers are well-prepared, education and training are important. Secondary school teachers need to know a large amount of material and be able to interact successfully with independent-minded students. There is little evidence of the impact of teacher training on student learning, but research suggests some lessons. Ideally,
solid preservice should be combined with regular in-service training that is designed to improve teaching practice as well as foster the sharing of experience among teachers and allow teachers to provide feedback on the effectiveness of curriculum reform. If there are fiscal constraints, research suggests that in-service training is especially effective and is sometimes less costly. Training should also take into account specific needs assessments—and be designed to help foster positive interactions with students, which increases the likelihood that students will exert effort and stay in school (discussed below).

Incentives, if well designed and well implemented, can motivate teachers and make them accountable for performance. Chile more than doubled average teacher salaries in the 1990s, and the quality of students entering teaching programs increased, suggesting that the level of teacher salaries matters. Performance-based incentives are, in principle, superior to across-the-board increases in teacher salaries—on both fiscal and efficiency grounds. But there has been little experience with them—few teachers are accountable for what they do in the classroom.

In practice, the impact of incentive programs in countries as diverse as Chile, India, and Mexico has been reduced by implementation constraints (resistance from teachers, indifference of headmasters and parents) and design flaws (small incentives, little link to actual performance). Also, while in some cases program-induced improvements in student outcomes come from better quality teaching, in other cases these improvements are the result of teachers misreporting scores, teaching to the test, or excluding low-achieving students. There is some evidence in support of performance awards based on student progress rather than levels of student performance, and awards based on school-level average progress—which promote team work—rather than progress at the class level. To ensure teaching quality, incentives need to be combined with quality training, good working conditions, some teacher autonomy, opportunities for professional development, and school autonomy in hiring teachers.

**Increasing system accountability for performance.** The *World Development Report 2004* shows that additional public spending on education will not improve learning unless motivated providers can take the required actions (see box 2.2). So frontline providers—school principals and teachers—should be given enough autonomy and resources to manage for results and be made accountable for those results. Two building blocks of accountability are providing information on performance to students, their families, and other stakeholders in specified performance indicators and results tied to incentives.

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**Box 3.3 Violence and harassment in schools**

The teacher beat me once ... so I waited for school to end and when the teacher left the school building I beat him up worse. I haven’t gone back to school since. Basti boy, Bangladesh

Violence and harassment in schools is common in many countries. Despite its negative impact on the school outcomes of all students, data are not routinely collected. The pervasiveness of sexual abuse, particularly of girls, by teachers and other students has been documented in some countries in Sub-Saharan Africa—6 percent of 10- to 24-year-olds in Kenya report having been sexually abused by a teacher. Corporal punishment of students, particularly boys, by teachers is common in many countries—25 percent of 10- to 24-year-olds in Kenya report being physically abused by a teacher, and a study in Egypt demonstrated that teacher abuse increases dropouts. In some countries, students are discriminated against and physically abused on the basis of caste (Dalit children in Uttar Pradesh, India), social status, or disabilities. Students in Latin American countries, who were consulted for this report, said that fear of violence in schools leads to dropping out.

South Africa, where violence in schools is widespread, has recently implemented some corrective policies including dismissing teachers who commit serious offenses, such as having sex with students, and prohibiting corporal punishment. There is still no system, however, for students to file complaints. Implementing such regulations may not be enough to change pervasive cultural attitudes. For example, nearly a third of young men in Johannesburg schools say that forcing sex on someone you know is not sexual violence and that women who were raped “asked for it.” About half of teachers surveyed in Kenya say that having sex with a student should not result in dismissal or other serious action.

Integrating training, incentives, and other accountability mechanisms is likely to be most effective. For example, a pilot in Ghana and Malawi is trying to address sexual violence in schools by improving codes of conduct for teachers; addressing the attitudes of students, community members, and teachers; and developing referral and support systems for students who lodge complaints.

Sources: Drèze and Gazdar (1997); Human Rights Watch (2001b); Interagency Gender Working Group (2005); Lloyd, Mensch, and Clark (2000); Lloyd (2003); World Bank (2005s); and World Bank (2003a).

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“Young person, Recife, Brazil
January 2006

*The teacher pretends to teach, the student pretends to learn, and the state pretends that it fulfills its role.*

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*The teacher pretends to teach, the student pretends to learn, and the state pretends that it fulfills its role.*

Young person, Recife, Brazil
January 2006
Georgia: Fighting corruption in higher education

For years, university entrance examinations were an opportunity for bribery. Corrupt officials favored candidates who either had personal connections or had bribed the members of the examination committee. Well-off students who paid the right professors could get advance tips on examination topics. This meant students were not selected on the basis of merit.

In 2005 a new law on higher education made the unified national examinations mandatory for all potential students seeking to enroll in a higher education institution in Georgia. A high level of security surrounded the testing process in July 2005. Candidates were identified by a barcode on each exam paper to ensure confidentiality in grading. Examination booklets were printed in a secure facility overseas. Each testing center was equipped with surveillance cameras and TV monitors that let students’ relatives observe the examination process.

“Young people are no longer afraid, when they take university exams, that other people will pay money and get in instead of them,” says Maka, a third-year law student in Tbilisi. Faculty have also reported significant improvements in the competence and commitment of students, allowing students to finish their education sooner.

The new exam is part of the broad slate of reforms to increase the quality of education, including a new national curriculum, building up teacher training capacity, and introducing per capita financing to schools.

Source: National Assessment and Examination Center (2005).

Financing the expansion and improvement of postprimary education

In selecting the right set of education reforms, countries must consider the state of their education systems (how well they prepare youth for work and life), the needs of their young people, and their overall development priorities. This choice is constrained by a country’s available resources and its ability to use innovative ways to finance large-scale reforms. Some countries will choose reforms that require relatively few resources and still have a fairly large impact. Others will take on comprehensive reforms that require a large amount of additional resources.

Financing the types of reforms recommended in this chapter is possible, even for poor countries, but choosing the right type of reform is critical. Investments in quality and relevance can lead to substantial improvements in enrollment and learning. One-time investments can have long-term impacts. For example, a recent project targeting poor lower secondary schools in Guyana included curriculum reform, student assessment, and training and materials for teachers and principals, which only required a one-time 6 percent increase in school expenditures. It was associated with large increases in test scores and in the number of students completing lower secondary school. The success led the government to adopt the changes in all lower secondary schools and to reform the upper secondary curriculum.

While some fast-growing developing countries can rely on economic growth to finance improvements in the education system, most other countries will need additional resources from a combination...
of cost-sharing, public-private partnerships, and efficiency enhancements—and some will need help from donors. Chile’s higher education system shows how blending funding sources can expand and improve tertiary education (box 3.5). Korea’s responsive education policy, strong demand for quality, and partnership with the private sector allowed the secondary education sector to expand without compromising quality (box 3.6).

**BOX 3.5 Chile’s higher education: Diversifying the sources of funding**

Chile financed a big expansion in higher education in recent years by charging students tuition, encouraging diversified funding sources, and allocating of public subsidies innovatively. Thanks to sizable private contributions, it increased tertiary enrollment to about 42 percent of the 18–24 age group while being among the Latin American countries that allocate the least public funding to tertiary education relative to GDP.

Significant student contributions have provided the fiscal space to reorient state subsidies to core public sector responsibilities. A priority has been to increase access to income-contingent student loans for students unable to finance their studies. Financing is determined by the student’s socioeconomic profile, while tuition fees are set according to the research and teaching efficiency of the institution they attend. The system thus gives institutions an incentive to improve their efficiency while enhancing access for less-privileged groups.

Public support incentives are designed to encourage universities to be responsive to both students needs and national priorities. About 7 percent of public support is allocated based on the ability of institutions to attract the students who receive the highest scores in the university admission exam. Universities receive funds by proposing projects to a competitive investment fund for improving the quality of technical, undergraduate, and graduate tertiary education. This system has generated reforms closely linked to national priorities: improving the quality of teacher education, reforming the undergraduate degree structure, and increasing the production of PhDs.

A remaining flaw in the financing system is the lack of accountability for results. The system allocates recurrent funds per student to traditional universities based on historical levels—but in 2006 pilot performance agreements are being negotiated between each institution and the ministry of education. The objectives are to link campus missions to national and regional priorities, university autonomy to public accountability, and institutional performance to government funding. The agreements, to run for three years, will contain funding commitments, agreed targets, and indicators to monitor progress.


**BOX 3.6 Korea’s secondary education: Expansion without sacrificing quality**

Korea’s secondary schools do well on many fronts. Access is easy and equitable: gross enrollment at the secondary level is at 90 percent, for both boys and girls. Korean students score at the top in such international evaluations as PISA and Trends in International Mathematics and Science Study (TIMSS). Schools are adequately funded—more than 2.4 percent of Korea’s GDP is spent on secondary education, a third of that privately.

Where did such achievements come from? First, building a strong education sector was part of Korea’s economic development strategies as early as the 1950s. Dynamic and motivated institutions promptly implemented policies to expand education. Second, from the earliest days the focus was on access and quality for all, motivated by the desire to bring educated workers into the workforce. Third, parents contributed to the expansion’s costs because of the high value they placed on quality education.

In Korea, compulsory basic education includes primary and lower secondary. Primary education is free, but parents must pay tuition for secondary schools. One in five lower secondary students and more than half of high-school students attend private schools. Forty percent of high school students are enrolled in technical and vocational schools.

Korea focused on one education cycle at a time, starting with basic education. In the 1950s and 1960s, when public funds mainly targeted primary education, secondary schools financed almost half their expenses through parent-teacher associations. However, the rapid expansion of primary education put enormous pressure on secondary schools, and student competition for good secondary schools increased. In preparation for entrance exams—“examination hell”—students often repeated grades, and families paid up to a quarter of their income for private tutoring.

In the face of criticism, the government implemented a national equalization program in 1968, eliminating entrance examinations and instituting a lottery for schools in high-demand. Secondary school enrollment soared, and private providers stepped up to provide the needed capacity. The equalization program guaranteed any deficit in operating cost (but not in capital cost) of all private schools. By 1971, most private schools were receiving direct financial assistance, subsidies, and tax exemptions. In return, they gave up control over key decisions (curriculum, tuition rates, and teacher salaries).

The equalization program for lower secondary, while improving enrollment, removed the competition among the elite schools, and quality at the top declined. Examination hell resurfaced at the end of the lower secondary cycle, and with declining quality; students preparing for entrance exams relied on private tutoring even more. In response, the government adopted an equalization program for upper secondary in 1974, opening high school entry. The program also aimed to narrow the quality gap between urban and rural high schools and increase enrollment in vocational schools to meet demand from the fast-growing manufacturing sector. Without any curriculum change, however, vocational education remained largely a terminal track, and enrollment did not change much.

Although the combination of private funding and public control worked well in the earlier years of expansion, concerns about quality grew. In response, the government carried out a series of reforms in secondary education starting in 1999 and increased public funding to the sector by 7 percent annually until 2003. It relaxed controls over school management, instituted school councils to facilitate parental involvement, and legalized teachers unions. The curriculum reform introduced foreign languages and information technology at earlier ages and emphasized student-centered learning. There are also efforts to improve vocational curricula and link vocational high schools with technical colleges.

Sources: Gill and Chon-Sun (2000) and Kim (2002).
postprimary education by reducing subsidies and charging fees for tertiary education.

**Improving efficiency.** Efficiency gains can be achieved by using formula funding to education institutions, particularly when they have greater autonomy. More developing countries are moving from traditional line-item budgeting to direct formula funding, which channels funds to schools for operating expenditures according to some known rule, such as enrollment. With block grants, as opposed to earmarked grants, schools have discretion over the use of funds (as with autonomous schools in Nicaragua). School autonomy over personnel management and process decisions (hiring teachers, choosing textbooks, allocating budgets within schools) is related to superior student performance.

Formula funding, particularly block grants, can bring several efficiency benefits—increasing transparency and accountability, reducing corruption, making funding more predictable (which allows better planning), and increasing flexibility (for block grants). It can also be combined with other efficiency-enhancing mechanisms, such as competitive funding and performance-based funding—but it requires good management capacity.

**Cost sharing.** Appropriate cost sharing and demand-side financing can generate the needed resources equitably. Governments should finance more of the compulsory phase of secondary education, because of higher social benefits and lower unit costs relative to later education. Individuals, their families, and communities should finance more of postcompulsory education, particularly tertiary education. Contributions from those able and willing to pay can promote engagement and accountability. To ensure equitable access, fees and other cost-sharing mechanisms need to be accompanied by well-designed and balanced demand-side financing packages (covered later in this chapter). Such packages include needs-based grants at the lower secondary level, as well as grants that are needs- and merit-based, loans, and savings schemes at the upper secondary and tertiary levels.

**Public-private partnerships.** Public-private partnerships can expand and improve postprimary education. In addition to alleviating fiscal constraints, they improve learning outcomes and efficiency by increasing choice and competition. Analysis of PISA data shows that private competition is associated with higher test scores, and systems combining private operation with public funding do best. Partnerships vary depending on the services procured and, though still uncommon in developing countries, a few lessons are emerging.

Contracting with schools to enroll publicly funded students (used extensively) has rapidly expanded access to education while avoiding large public capital costs. Voucher-type programs have been implemented in a few developing countries, including Chile, Colombia, Côte d’Ivoire, and the Czech Republic. Their positive impact for beneficiaries has been established (Colombia) but the overall effects are still inconclusive. Vouchers are also found to improve performance in public school through increased competition (the Czech Republic).

Contracting a private actor to operate a public school can have a positive impact on enrollment. Colombia’s Colegios en Concesión turns over the management of some public schools to private institutions through a competitive bidding process. Concession schools are paid less per student than regular public schools, must accept all students, and must meet outcome targets for test scores and dropout rates. They are carefully monitored and evaluated—dropout rates have been lower in concession schools, and the competition has also reduced dropout rates in nearby public schools. Contracting for support services (meal provision, facility maintenance) is used extensively, usually with good results. Contracting for professional services (such as curriculum design) is also easy to specify and contract for management services is difficult to implement, not least because of the challenge of identifying measurable and verifiable performance criteria. A few countries are experimenting with contracts for private financing and construction of schools.
Better education choices by young people

As young people mature, they take more control of their education, but some constraints prevent them from benefiting from their learning opportunities. They lack the motivation to learn because they have poor behavioral skills and not much of a say in their own education. They lack information on postprimary education opportunities and the labor market—and have limited access to resources. They face competing options to schooling—work and family—as well as alternative learning options. Helping young people make better education choices requires better decision-making skills, incentives to exert effort, and their involvement as stakeholders in their education. Financial incentives that permit better choices (such as conditional cash transfers or vouchers) and better information about learning options and work possibilities (such as school-based career advisory services) lead to better education decisions.

Motivating and involving students

As young people reach adolescence, they start deciding how much effort to spend on studying and whether to go to school (see figure 2.4). Their decisions indicate their preferences for education—preferences influenced by peers, parents, teachers, and schools that shape their environment. Their ability to successfully act on those preferences is determined by their behavioral skills and psychological well-being. Many young people gradually develop control over their education decisions, while others—young women, orphans, those with disabilities, and those from stigmatized groups—face additional barriers to effective decision making.

Well-designed policies can affect both the preferences for education and the incentives to learn. For example, outcomes can be improved by affecting how peers influence each other, by increasing young people’s connectedness to schools, by directly rewarding effort, by developing their decision-making capacity, by responding to their input in the school-level policy-making process, and by reducing social exclusion. For younger adolescents more dependent on guardians, policies should also take into account the preferences and parenting skills of guardians.

Parents affect student behavior, beyond simply influencing the decision to attend school, by affecting a young person’s preference for education through the home environment, and by helping to develop their children’s behavioral skills. In India, part of the relationship between maternal literacy and child schooling reflects the effects of maternal schooling on the study hours of children. In Rwanda, a guardian’s preference for education explains part of the correlation between the education of guardians and children. The strongest evidence comes from the positive impacts on education of programs that emphasize parenting quality to build behavioral skills of children, either directly or through mentors.

Improving the incentives to learn. Social mechanisms (such as peer influence and the social accountability of teachers) and direct economic incentives can influence the effort to learn. Some evidence suggests that the efforts of students, teachers, and parents are jointly determined; thus, to be successful, interventions will often need to take into account the role of peers, teachers, and parents and their preferences and incentives. It is the independent influence of peers on students, however, that has been the most rigorously evaluated, and research shows that even randomly selected peer groups (such as classmates or roommates) affect the behavior of students and education outcomes.

Influencing peer interactions by sorting students into different groups can have an important impact on both academic and social outcomes. In fact, many countries sort students into schools based on their ability, and in countries where there has been ethnic conflict, students are sometimes sorted into classes based on ethnicity. There is some evidence indicating that diversity of student achievement or social groups within a school or classroom might negatively affect student achievement in secondary school. A study in China demonstrates that the diversity of academic achievement has a negative effect on the test scores of...
Poorly performing secondary students. Other evidence suggests, however, that policies to sort students in classes by ability are usually ineffective, because ability varies by specific task and students progress at different rates. Some types of social interactions between young people from different groups can also have positive effects on outcomes such as trust and tolerance.

It is likely that what matters is not the level of diversity, but the classroom context—whether it is competitive or cooperative. Controlled experiments indicate that classroom activities that require cooperation among students from different ethnic groups can improve tolerance (cross-group friendships) and empathy across groups. Such cooperative policies in socially and academically diverse classrooms also improve test scores, as well as behavioral skills such as self-confidence.

A merit scholarship program for girls in Kenya shows how economic incentives that take social mechanisms into account can influence effort. The test scores of the girls who had a good chance of getting a scholarship improved, which can be explained by the economic incentive of the scholarship. The test scores of boys and lower-ability girls also improved as did student and teacher attendance, perhaps as the result of peer influence or the complementarity of student and teacher effort in the classroom.

Teacher attendance may have increased as a result of providing the correct economic incentives for parents to hold teachers socially accountable. The program also can be more cost-effective than some typical education programs (figure 3.4).

Increasing students’ engagement with schools is one way to raise student effort in school and reduce the likelihood of dropping out. If students identify with their schools, the importance of other social identities can be reduced allowing schools to shape student preferences for the effort to study. This effect may be best quantified by research on school climate and school connectedness, often determined by asking students if they feel like they belong in school, feel connected to it, or like it. The answer to this question matters, and asking it can capture several important aspects of education that are difficult to measure (such as how teachers interact with students). Data from more than 40 countries show a strong association between school climate and test scores, and evidence from the United States and the Caribbean shows that school connectedness predicts school dropout and health outcomes.

Can such factors be affected by policy? Yes. Reforms specifically designed to increase students’ connectedness with schools and teachers, such as the Seattle Social Development Project in the United States, improved academic achievement and other student behaviors. (Poor schools in many countries have high connectedness through simple efforts to engage students.) Often such reforms are comprehensive and rely on a combination of policies similar to those recommended throughout this chapter:

- Training teachers to enhance students’ identification with school through student encouragement, student input into lessons, group learning, and group academic competitions.
- Increasing youth participation in school policy.
- Teaching behavioral skills, which can increase student confidence and motivation.
- Teaching through drama, sports, and arts.

Decision-making capability—building behavioral skills and reducing social barriers. Even if students value education and prefer to study, they may not have the capability to act on their preferences, perhaps because they lack behavioral skills or psychological capacity. Yet motivation, persistence, self-discipline, cooperation, and effective decision making are rarely taught in schools. This is a major gap, because the impact of behavioral skills on education outcomes and the ability of schools to teach those skills have been empirically demonstrated.

A student’s ability to make decisions can also be affected by his or her mental health. Research from developed countries indicates the negative effect of mental health disorders on school attainment. While in general mental health has been less studi...
ied in developing countries, posttraumatic stress disorder is known to affect as much as a third of the youth population in post-conflict countries, and a study from Algeria, Cambodia, Ethiopia, and Gaza demonstrated its effect on schooling. Thus, safeguarding mental health can be an important investment in school outcomes.

Negative social perceptions can affect students’ decision-making capabilities. Social and cultural norms in many countries exclude some groups from education, primarily girls and young women, although ethnicity, caste, and disability are also dimensions of exclusion. Extensive ethnographic research has long found pervasive attempts by teachers and administrators to discourage students from continuing in school if they belong to traditionally excluded social groups (including the poor). This can affect education decisions by lowering young people’s self-perception or by leading them to believe (sometimes accurately) that schools and labor markets will not reward their effort. Evidence from Kenya demonstrates that teacher attitudes about adolescent girls’ ability to learn predicts their dropout decisions. In Uttar Pradesh, India, an experiment indicates that students from the lowest castes perform worse when a student’s caste is announced before taking a cognitive skills test—indicating that low-caste students believe that teachers who care about caste will not reward them for high performance.

Programs may aim to increase the benefits to young women or their families of overcoming social barriers (through financial incentives such as targeted merit scholarships and conditional cash transfers) or they may aim to reduce the effect of social barriers on decisions by trying to raise self-perception (through, for example, setting up bank accounts for girls, as in Bangladesh). Programs may also be designed to reduce the social barriers themselves (information campaigns, training of teachers). In some environments, especially where physical violence is a concern, programs should be careful to target not only the excluded, but groups who perpetuate social exclusion.

Young people as stakeholders in school policy. The World Development Report 2004 recognized “client power” in improving the delivery of basic public services such as primary education, with parents and communities viewed as the clients of the education system. Young people are the beneficiaries of the education system and, starting in adolescence, they often begin to make important decisions about their education, and so become actors in their own right (chapter 2). Also, secondary and tertiary institutions usually serve a much broader area than primary schools, making traditional community management less effective as an accountability tool.

Students can exercise their client power through many institutional mechanisms. They can set up students councils, be elected to school boards, or be consulted more broadly on the design of rules, policies, and curricula at the school or classroom level. Students can also provide feedback about teachers. In most countries, however, student participation is limited or nonexistent. Nor are there many evaluations of student participation. The studies typically focus on the personal outcomes of participants rather than on the impact of student-influenced policies on the quality of school life or academic outcomes. Student participation can also have an impact on behavioral skills (as students become decision makers) and other forms of civic engagement.

Student participation improves school environment and relations. Many education providers are reluctant to allow student participation, but one careful analysis of 75 studies (mostly in England) found that even in secondary schools where school management and parents were initially reluctant to institute reforms, no school reversed the reforms, and both teachers and students reported better interactions and improved student behavioral skills as a result of more student participation. A major challenge is that some education providers are willing only to allow token or symbolic participation, which prevents students from having a substantial impact on policy.

Some developing countries have significant student participation, at least in tertiary institutions. South Africa’s Student
Leadership Council defended student rights during apartheid and provided training for future political leaders (including Nelson Mandela). Recent reforms of universities in Russia and secondary schools in the former Yugoslav Republic of Macedonia have increased the role of students in school management, giving them as much as 30 percent of the voting rights on some university councils. In a survey of the alumni of one university in Russia, most listed such participation as the single most useful aspect of their education.

Providing information on opportunities for learning and work

Postprimary education decisions are based on private information on the supply and quality of education opportunities available to young individuals, and an understanding of how they translate into education and labor market outcomes. Imperfect information about education makes schools and teachers less accountable and young individuals less able to make good choices and influence school quality, while the uncertainty young people face about the future returns to education leads to inefficiencies and underinvestments.

Good information on learning opportunities leads to better choices. It allows individuals to monitor the performance of schools and teachers and to influence school quality. Information on learning options can also have a real impact on choices, particularly for the poor. Yet there are very few information programs around the world. The U.K. Aimhigher program targets disadvantaged 13- to 19-year-olds, raising their awareness of higher education opportunities well in advance. It posts information on higher education on a web portal, and it provides mentoring and visits to institutions of higher learning. An initial evaluation shows positive effects on promotion rates and test performance—and mixed results on intentions to go on for higher education.

Providing financial incentives to alleviate constraints to better choices

Resources matter for schooling decisions when young individuals and their family...
lies face imperfect credit markets that prevent them from borrowing against future income. Young people may also be financially constrained when their parents have sufficient resources or access to credit but are unwilling to finance investments in education. Also, young people in postprimary education face competing options to schooling—work and family—as well as alternative learning options.

Credit constraints in schooling.
In most developing countries there is a strong relationship between poverty and school progress, particularly in the transitions to lower and upper secondary school (figure 3.5). Is that link between income and schooling explained by credit constraints? Not necessarily, or at least not entirely. Other factors correlated with income also explain the differences in school progress between the poor and the rich, including inequality in access to physical facilities.

The school attainment differences between the poor and the rich are also explained by the difference in skill readiness for secondary and higher education. The rich tend to attend schools of higher quality than the poor and have a better environment for skills formation. The quality of schooling affects the motivation for continuing in school and the academic readiness for subsequent education. A large part of the association between income and college attendance in the United States is due to long-term factors that affect readiness for college by increasing cognitive and behavioral skills, not to short-term financial constraints at the time of the college decision. The policy implication is to shift the focus from tuition subsidies to getting individuals ready for college through learning investments before college.

However, more young people in developing countries are likely to face credit constraints in gaining access to secondary and higher education than in developed countries. Credit markets are less developed and direct financial support for schooling is often much more limited, justifying the need for policies to address them. Many studies look at the relationship between income and schooling, but few look explicitly at how credit constraints affect the demand for education. Such constraints determine college attendance in Mexico, though the effect is small, and in rural Pakistan they explain secondary school completion and postsecondary school attendance more than secondary school entry.

Competing options and schooling. In low- and lower-middle-income countries, many of those of secondary school age work (figure 3.6). With age, school participation diminishes while work participation increases. In poor countries such as Cambodia, the trade-off between school and work becomes more of a problem at the age of secondary school entry—43 percent of boys are already working by ages 10–12. Conditions have been improving there, however, as young people stay longer in school and start work later. Most working children can combine work responsibilities with schooling, though with age, working students become a smaller group relative to full-time workers—by ages 13–15, 62 percent of Bolivian working males are already out of school. Young people from the poorest quintile are less likely to attend school exclusively, and more likely to work, than those from the richest. In some countries, girls are less likely to be working outside the home,
but they are more likely to be engaged in domestic work (for the countries in figure 3.6 the distribution of school and work is similar for boys and girls).

Working can impair schooling and learning, particularly at younger ages. A study conducted in Vietnam finds that if children ages 8–13 work while in school, it reduces school enrollment and educational attainment five years later. In rural Bangladesh, working while attending primary school has a sizable negative effect on the transition to secondary school—and starting to work while attending secondary school has even larger negative effects on secondary school completion.

A study of 11 countries in Latin America and the Caribbean finds sizable negative effects on both mathematics and language test scores among primary school students. (For more on child labor, see chapter 4.)

Girls who marry early or bear children at an early age are also more likely to have less schooling. The secondary school dropouts attributed to pregnancy range between 10 and 20 percent in most countries in Africa. The relationship also works the other way: in Guatemala, school attainment increases the age at which young women first marry or become a parent.

Conditional cash transfers. Addressing credit constraints requires identifying the target population, and then designing the appropriate package of demand-side financing mechanisms for postprimary education that also account for the opportunity costs from competing choices. Credit constraints on the demand for education at the lower secondary level can be addressed through needs-based grants (scholarships, conditional cash transfers, vouchers), given the externalities associated with basic education. Even when lower secondary education is free of school fees, students and their families must incur other direct and indirect private costs, making a case for grants targeted to the poor. At the upper secondary and tertiary levels, credit constraints can be alleviated with a combination of well-targeted grants, loans, and savings schemes.

In designing such a package, it is also important to think of the education system as a whole—to avoid imbalances and bottlenecks. For example, the success of Oportunidades in Mexico and Bolsa Família in Brazil increases the pressure on the post-compulsory system. It is thus necessary to anticipate the rising number of individuals completing basic education and willing to study further.

"They [young people] don’t go to school because they have a family to take care of, they cannot continue to rely on the good will of their own parents."

Young person, Peru
January 2006

Source: Authors’ calculations based on Fares, Montenegro, and Orazem (2006a).
Conditional cash transfers can increase the demand for schooling both directly (through increased income) and by reducing the incidence of work (by compensating for the forgone income from work). Introduced in the late 1990s, particularly in Latin America, they provide cash to poor young people conditional on school attendance, and are quickly becoming popular in other parts of the world.\textsuperscript{100} Mexico’s Oportunidades, the best documented, has increased secondary school attendance rates by 8 percent, the transition to secondary school by nearly 20 percent, and grade attainment by 10 percent, with significantly larger effects for girls than for boys.\textsuperscript{101} The impact on enrollment is mainly due to the condition for attendance.\textsuperscript{102} Oportunidades is not inexpensive, but the net benefit is substantial.\textsuperscript{103} Efficiency can be increased by targeting and calibrating the size of the grants.\textsuperscript{104}

Part of the positive impact of conditional cash transfers on school enrollment comes from a reduction in work. But the transfers alone do not appear to be enough to reduce work significantly, which is important for policy makers concerned about child labor and how child labor affects academic performance. A substantial number of children continue to combine both work and school under Oportunidades. The program increases the number of children in school and reduces the number of children who are working, but does not necessarily reduce the hours worked of children who also attend school. Also, Oportunidades increases the likelihood that young people will stay in school when a household experiences a shock, but does not prevent parents from resorting to child work in response to a shock.\textsuperscript{105} Evidence from rural Brazil suggests that after-school programs may be a good complement to the conditionality on school attendance.\textsuperscript{106}

School vouchers. A promising tool to address credit constraints and school quality, school vouchers are publicly provided for students to enroll in the school of their choice. Beyond the potential effect of vouchers on their beneficiaries, vouchers can increase competition among schools and thus increase the quality of the system. They also allow enrollment to increase without additional public capital costs. However, they can have a detrimental effect on the (lower quality) schools that (higher performing) voucher recipients leave, at least in the short run.

A few developing countries have used vouchers, including Chile, Colombia, and the Czech Republic. Colombia’s voucher program offered vouchers to poor individuals to attend private schools and had a positive impact on learning, which persisted over the long run.\textsuperscript{108} More evidence is needed, though, on the overall impact of vouchers, including the impact on nonbeneficiaries. Vouchers for secondary or even tertiary education should be targeted to the poor (with possible refinement for merit at the upper levels). Choice should be open to any accredited school (public or private), supported by publicly provided information on these schools.

Loans. Well-designed loan programs, combined with grants targeted to need and merit, can allow postcompulsory education to expand equitably. Grants, when affordable, are likely to be more appropriate for upper secondary education than for higher education—the ratio of social to private benefits is likely to be higher in upper secondary, and grants in upper secondary are likely to be more progressive. To improve cost-effectiveness, they should be specifically targeted to the poor who are most likely to benefit from the grant on the basis of merit.\textsuperscript{109} The higher cost of tertiary education makes student loans particularly useful, but well-designed loans are hard to implement in low-income countries.
Income-contingent loans are superior to conventional loans (box 3.7). They generate the needed resources in the face of limited fiscal capacity. By deferring payments until individuals start working and reach a certain income, they have lower default rates, promote more equitable access and loan repayment, and increase efficiency by addressing uncertainty about future earnings and facilitating consumption smoothing. However, they are hard to implement and may be a realistic option only for some middle-income countries.

**Individual learning accounts.** The easy implementation and attractive features—induced savings, consumption smoothing, and a low public burden—of individual learning accounts make up a promising financing option for middle-income countries. Individual learning accounts, which are becoming more popular in OECD countries, encourage savings for education while providing vouchers to individuals interested in pursuing further education. The amount an individual is entitled to depends on the amount saved and the kind of training desired. In Brazil, a graduation incentive for primary and secondary education, Poupança Escola, was introduced as part of the first version of Bolsa Escola in the Federal District. Oportunidades in Mexico introduced Jovenes con Oportunidades, through which conditional cash transfer beneficiaries accumulate points from the last year of lower secondary until the end of secondary school. Credit points are converted into a savings account and deposited into individual accounts in the National Savings Bank, which beneficiaries can tap for further study or to start a business if they complete upper secondary before turning 22.

Young people lack adequate information, financial resources, academic readiness, and decision-making skills. Addressing these complementary constraints requires policies that integrate information, mentoring, academic support, and financial incentives (box 3.8).

**BOX 3.7 Income-contingent loans**

A well-designed loan system has three characteristics—income-contingent repayments, an efficient interest rate, and adequate size.

**Income-contingent repayments.** A conventional loan involves repayments of a fixed amount per month, with the risk that low-income borrowers may default, while income-contingent repayments are a percentage of the borrower’s earnings—often collected alongside income tax or social security contributions, and thus have built-in insurance against an inability to repay because the loan repayment falls if a borrower’s income falls. They thus assist borrowers by protecting them from uncertain returns to human capital investments and promote equity because this uncertainty is more of a deterrent for the poor. They assist lenders by using the government’s power to collect taxes as a substitute for physical collateral. After Australia introduced income-contingent loans in 1989, participation in higher education increased, particularly among women.

**Efficient interest rate.** The interest rate should be broadly equal to the government’s cost of borrowing. Some countries, such as Australia and the United Kingdom, offer loans at a zero real interest rate, but because of the resulting fiscal pressures loans are too small, access is limited, and university income is reduced. Interest rate subsidies are also deeply regressive because graduates, rather than students, make repayments. Targeted interest subsidies may still be an option, however, for people with low earnings or who are out of the labor force. In some loan programs, unpaid debt is eventually forgiven.

**Adequate size.** Loans should be large enough to make education and training feasible, but small enough so that most individuals can repay, with a cap both in annual amount and duration. Income-contingent loans have a long repayment period and small monthly payments so they are friendlier to other borrowing (say, to start a business), because lenders typically look at monthly income net of loan repayments. The purpose of a loan is to allow young people to redistribute resources to themselves over their lifetimes, so loans should in principle be available to all qualified applicants. Without a government guarantee, private sector lenders would charge a high risk premium, so if governments face serious cash-flow constraints it may be necessary to restrict loans to the poor.

**Beware the implementation requirements.** Policy makers invariably underestimate the institutional requirements. A particular error is to focus on lending policy, with inadequate attention, time, or resources for loan administration. A country should not embark on a loan scheme without:

- a reliable system of identifying individuals, which is the responsibility of national government;
- the capacity to keep records (amount borrowed), a responsibility of the loans administration;
- the capacity to collect repayments, ideally through the tax or the social security system; and
- the capacity to track income, ideally through income taxes or social security contributions.

Given the requirements, it is not surprising that successful income-contingent loans in advanced economies—including Australia, New Zealand, the Netherlands, Sweden, and the United Kingdom—are not echoed in poorer countries. Chile and South Africa have such schemes on a small scale, with repayments collected by universities, a method that has proven unsatisfactory. Both schemes have had some success, but would be fiscally costly on a larger scale. Thailand is planning to introduce an income-contingent loan scheme in 2006, the success of which will depend greatly on the effectiveness of income tax collection. Designing a cost-effective repayment mechanism in poorer countries should be at the top of the policy-maker agenda.

Sources: Barr (2004) and Chapman (forthcoming).
Offering second chances

Poverty, economic shocks, and bad schools force many young people to leave school without having acquired the basic skills they need for work and life. Large numbers also begin school late or never start. Allowing these youths to remain illiterate or semi-literate and unskilled throughout their lives is costly for them, their families, and their communities. Second-chance programs have effects on behavior beyond schooling and work that should be considered in evaluating their full effects. For example, reduced crime accounts for a substantial part of the benefit of the Job Corps program in the United States.111

Many countries operate a variety of programs to get out-of-school youths back into school or in informal training courses—and illiterate young adults into literacy programs. Few countries, however, have a system of second chances that meets the diverse needs of young people. The high cost of operating such a system may be one reason. Another may be the need for innovative solutions and effective partnerships. Few countries have pilot tested and evaluated such programs.

The needs of out-of-school youths are diverse because they leave school at different points in the schooling cycle, with different levels of skill attainment. Some have never attended school and are functionally illiterate. Others have dropped out before completing basic education. Still others have completed basic education but did not acquire basic skills. Even among youths who have the same skills (or lack thereof), the second chances likely to be appealing and effective depend on the age of the young person.112 Second chances also need to be tailored to the local environment, which might be rural or urban in either a low- or middle-income country.

This diversity adds to the challenge of providing a system of well-targeted second chances. Addressing diversity, while scaling up enrollments, is greatly facilitated by reaching out to the private sector and NGOs. Government in these programs may be most effective as a standard setter, regulator, and funder (along with international donors), and less as a provider.

A policy and organizational framework for second chances—clearly linked to the formal school system and informed by the demands from the labor market and society—is often missing. In its place are numerous programs that focus on disadvantaged youths but are not linked to each other or to the school system.

Young people still in school:
Remedial education

For those still in school, one policy response has been to offer poorly performing students supplementary instruction. Programs identify at-risk students at the primary level and provide better grounding for them when they reach the secondary—but identifying who needs such instruction is a key step. In some developed countries, such as Australia, Canada, and the United States, the results of standardized tests trigger a supplementary tutoring program. This may be challenging to implement in many developing countries because standardized testing is nonexistent or much less frequent, so rather than using standardized tests, the successful Balsakhi program in India allowed teachers to informally identify students that were falling behind.

In many countries, however, the growing numbers of students who take after-school tutoring may be driven largely by teach-
ers who seek other sources of income, with families bearing the costs. Teachers have a perverse incentive to create demand for their time in after-school tutoring by resisting improvements in their regular classroom hours. For this reason, Hong Kong (China) and Turkey prohibit teachers from providing supplementary tutoring for their own students.113 Such a policy should accompany any effort to provide remedial education.

Well-designed remedial programs have proven to be successful in improving school outcomes for students of different ages and in very diverse environments, and often help the most disadvantaged students.

- In 1999, Israel implemented a remedial education program to boost the percentage of students in the secondary academic track who earn matriculation certificates. The program targeted 10th through 12th graders who needed additional instruction to pass the matriculation exams, usually determined by failing marks and teacher assessments. The program increased the probability of participating students earning a matriculation certificate by 22 percent.114

- In India a large remedial education program for younger children also had positive results.115 Young women from the community teach basic literacy and numeracy skills to primary school pupils who have not mastered the expected competencies. It could be that class size matters more for children falling behind their peers: not capable of following the standard curriculum, they need individual, nonthreatening attention from a teacher.

**Young people who are out of school**

**Equivalency programs.** To appeal to out-of-school youth, second-chance programs must take into account why young people dropped out or never attended school, the challenges they will face to stay in a program, and how they can be integrated into the formal education sector or find employment. All these vary by age, skill, and the local environment. Equivalency, literacy, and job training programs may serve different youth populations, but their common aim of providing competencies for work and life requires a more integrated approach: literacy and equivalency programs that include life skills and vocational training, and vocational training programs that include life skills.

Equivalency systems use more practical curricula, more flexible schedules, and less formal instruction methods than regular schools. They depend on a strong partnership between the formal education sector, private providers of programs, and prospective employers (box 3.9). Without this partnership, the graduates of equivalency systems will be left holding diplomas that allow neither reintegration into the regular school system nor employment in jobs requiring a certain level of competency.

The mode of delivery must take into account why young people dropped out. For example, to bring programs closer to homes in rural areas of Mexico, the Telesecundaria program offers lessons by video, while in the urban slums of Bangladesh, programs rent rooms rather than build schools to solve a supply shortage. Knowing that even small costs can be a barrier to enrollment for the poorest, successful programs provide textbooks, notebooks, and pencils. To accommodate the pressure for adolescents
to work, the Tutorial Learning System in Colombia allows students in rural areas and their facilitators to determine the preferred schedule and pace. This greater flexibility should not, however, come at the expense of educational quality.

Aspects of the school environment—social support, curriculum, learning methods—must be properly adapted because they affect both why young people dropped out of the formal school system, and whether they will stay in an equivalency program. For younger adolescents the support of parents can reduce attrition and boost student performance, so involving parents in the early stages of a program is likely to pay off. In addition, programs that emphasize social support and emotional connections—by keeping the same group of students and teacher together over a multiyear program (Colombia’s Tutorial Learning System)—tend to have lower dropout rates than programs whose flexibility comes at the expense of such support and continuity (Nonformal Education Project in the Philippines).\textsuperscript{116}

Successful equivalency programs that hope to reintegrate people in the formal education system often use teaching methods that are similar to those recommended above for formal schools—student-centered learning, regular assessment, and remedial sessions to involve students in their learning progress (box 3.9). Programs for older youth, however, often use very different approaches. The Mexican National Institute for Adult Education (INEA) has developed an innovative education model for out-of-school individuals 15 or older to learn how to complete the equivalent of primary, lower secondary, or upper secondary education. It provides a curriculum based on acquiring skills for work and life through a flexible system of modules—individuals can choose among the modules and the length of the program is attuned to their needs, covering subjects such as health and civic education and vocational skills.

Literacy programs. The poorest countries in the developing world, and large pockets of disadvantaged groups in better-off countries, have out-of-school youths who are illiterate. Despite the magnitude (137 million youth), the illiteracy problem has been largely neglected by governments and donors, but there are signs of renewed interest—literacy is now part of the Millennium Development Goals and the Education for All goals.

The past neglect is partly due to poor results of literacy programs, but there is room for adapting programs to the needs of participants. Many countries carried out literacy campaigns in the 1960s through 1980s through government-led, top-down brief courses that offered no follow-up. The uptake of eligible participants was limited, and about 50 percent of them dropped out. Of those who stayed on, about half passed literacy tests, and about a quarter eventually regressed to illiteracy. So only a quarter of participants acquired stable literacy skills. Dropout rates fell and completion rates improved for these programs in the 1990s, but the literacy outcomes were still modest.\textsuperscript{117}

A key aspect of the improvement was the shift to more contextual and demand-driven models. Attracting enrollees and keeping them interested is a big challenge. Many countries operate adult literacy programs that teach not only reading, writing, and arithmetic but also job and life skills relevant to the local context. Several programs in Africa involve the local community, churches, and businesses. They apply active learning and other participatory methods for instruction in local languages, and they include postprogram follow-up, such as reading activities, to solidify literacy skills. Examples include the Senegal Pilot Female Literacy Project and the Ghana Functional Literacy Project, which require at least 300 hours of instruction over 18–21 months. The cost of the Ghana program is $24 per enrolled learner per cycle and $43 per successful literate graduate per cycle. (None of these programs has been subject to a rigorous impact evaluation.)

Job training. Vocational training programs for out-of-school youth can be more cost-effective by improving targeting, and ensuring that programs are complemented with other services and tailored to the needs of local labor markets. Evidence from developed and developing countries shows low rates of return to most training programs, and few programs pass cost-benefit tests.\textsuperscript{118} Vocational training is most effective for those...
at the high end of the wage distribution but often has less effect for those at the bottom, illustrating the complementarity of skills.\textsuperscript{119} Programs also tend to be more effective when they include on-the-job training and employer sponsorship. Vocational programs for youth are most likely to improve the employment and earnings prospects of participants when training is provided as part of a comprehensive package that includes employment services, counseling, and life skills.\textsuperscript{120} Examples include the Jovenes and Entra 21 programs in Latin America (see chapter 4 for more on training programs).

### Table 3.1 Summary of youth education policies

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Proven successful</th>
<th>Promising but unproven</th>
<th>Unlikely to be successful</th>
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</thead>
<tbody>
<tr>
<td>Universal lower secondary to provide basic skills</td>
<td>Compulsory schooling laws (R. B. de Venezuela)</td>
<td>Moving vocational tracks to upper secondary (Chile)</td>
<td>Early tracking and selection (Tanzania and Tunisia)</td>
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<tr>
<td>Diversification with flexibility of postbasic education</td>
<td>Allowing private sector entry and private-public partnerships (Colombia)</td>
<td>No terminal vocational tracks (South Africa and Tunisia)</td>
<td>Unregulated private sector (Cambodia)</td>
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<td></td>
<td>Providing quality assurance and information (Chile and Rep. of Korea)</td>
<td>Transferable credit-based courses (Thailand)</td>
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<td></td>
<td>Fostering competition (autonomy, performance-based funding) (Chile)</td>
<td>Part-time schooling (Argentina and Russian Federation)</td>
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<td></td>
<td>Teaching quality</td>
<td>Making the curriculum more relevant</td>
<td>Teacher incentives based on narrow test scores (Chile, Kenya, and Mexico)</td>
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<td></td>
<td>Continuous, needs-based teacher training with follow-up</td>
<td>Practical, thinking, and behavioral skills (South Africa)</td>
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<td></td>
<td>Well-designed and negotiated performance-based pay (Chile)</td>
<td>Blending of vocational and general curricula (Chile)</td>
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<td></td>
<td></td>
<td>Better connection to work and local economy (China's university-local economy linkages, U.S. Career Academies and Germany dual system)</td>
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<td>School Accountability</td>
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<td>Disseminating information on school performance (Chile)</td>
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<tr>
<td>Improving quality and relevance of education for work and life</td>
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<tr>
<td>Capabilities</td>
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<tr>
<td>Motivating students</td>
<td>Developing behavioral skills (U.S. Big Brother/Big Sister and Philippines Make a Connection)</td>
<td>Including students in school policy decision making (Georgia and Russian Federation)</td>
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<td></td>
<td>Improving school connectedness with students (United States)</td>
<td>Young person–based conditional cash transfers (Bangladesh stipends for girls)</td>
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<tr>
<td></td>
<td>Improving incentives to exert effort (merit scholarships for girls in Kenya)</td>
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<tr>
<td>Providing better information</td>
<td>Information on education opportunities (U.K. Aimhigher)</td>
<td>School-based career guidance services (Poland and Turkey)</td>
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<tr>
<td>Financial incentives to alleviate constraints to better choices</td>
<td>Conditional cash transfers (Mexico Oportunidades)</td>
<td>Income-contingent loans (Australia and Thailand)</td>
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<td></td>
<td>Vouchers (or beneficiaries) in Colombia</td>
<td>Individual learning accounts (Mexico)</td>
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<td>Second chances</td>
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<tr>
<td>Remedial education</td>
<td>Testing to determine eligibility (Israel)</td>
<td>Supplemenary teaching parallel to regular classes provided by the same teachers (Cambodia)</td>
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<td></td>
<td>Combining with other services (information, financial incentives, mentoring) (U.S. Upward Bound Program)</td>
<td>Individual, self-paced programs (Philippines)</td>
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<td>Equivalency programs</td>
<td>Group classes with flexible schedules (Colombia)</td>
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<td></td>
<td>Simplified and practical curriculum, life skills (Mexico)</td>
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<td>Mechanisms to smooth transition to formal education or work (Bangladesh)</td>
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<td>Literacy programs</td>
<td>Beneficiary participation in design (Bangladesh)</td>
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<td></td>
<td>Combination with skills training (Senegal and Ghana)</td>
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<td>Built-in follow-up mechanisms (Bangladesh)</td>
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<td>Partnerships with private sector and NGOs (Bangladesh and Brazil)</td>
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<tr>
<td>Vocational training</td>
<td>Combining with life skills (Jovenes and Entra 21 in Latin America)</td>
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</table>
Governments can help improve the skills of young people for work and life by implementing policies that meet their needs. The balance and sequencing of education policies across the three dimensions—postprimary education opportunities, tools to enhance education decision making, and second-chance education options—as well as prioritization among them (basic skills rather than postbasic skills) depends on the state of a country’s education system (how it performs in preparing youth for work and life), its level of development, its overall development priorities, and the priorities of its young people. For example, young people consulted in Bangladesh demanded more part-time schooling, while those from Georgia set the teaching of decision-making skills as a priority. This Report proposes the following key areas of policy action (table 3.1):

- **Improve educational preparation for adolescence by building a strong foundation and providing quality basic education (including lower secondary) for all.** Relevant to most developing countries, this should be a priority for low-income countries where large numbers of young people do not attain the basic skills needed for further study, work, and life.

- **To meet the growing demand for postbasic skills, provide diverse and flexible postbasic learning options; a relevant curriculum that teaches practical subjects, thinking skills, and behavioral skills; and connection between school and work—all abetted by teachers who are well-prepared and motivated.** This should be a priority for middle-income countries where most young people are equipped with adequate levels of basic skills and there is an increasing demand for postbasic skills (from primary school or from the labor market).

- **To enable young people to make better education choices, develop their behavioral skills, involve them as stakeholders in their own education, and provide them with financial incentives and good information.** This applies to all countries, but financial incentives should be a priority for countries where many young people do not go to secondary school even though the facilities exist.

- **To meet the learning needs of young people who failed to acquire basic skills the first time around, develop a system of remedial education, equivalency programs, literacy programs, and skills training that takes into account their diverse needs and economic conditions.** This is a priority for countries with large numbers of young people who are out of school and lack basic skills, particularly countries that have “lost generations” of young people.