What Matters Most for Equity and Inclusion in Education Systems: A Framework Paper

WORLD BANK GROUP

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ABSTRACT

The purpose of SABER-Equity and Inclusion (E&I) is to help countries ensure that all children go to school and learn. This paper is part of a suite of "What Matters" papers published under the Systems Approach for Better Education Results (SABER) initiative. SABER was launched by the World Bank to help governments systematically examine and strengthen the performance of their education systems so that all children and youth can be equipped with knowledge and skills for life. SABER is organized around a dozen different domains that collect data on country policies in education. This paper is about E&I in education systems.

The paper first provides a quick diagnostic of where countries stand in terms of E&I; why E&I matters for the eradication of extreme poverty, shared prosperity, and development; and how the SABER E&I domain is structured. Three policy goals are then emphasized for E&I in education and discussed in subsequent respective chapters: (1) establishing an enabling environment and providing resources needed for an education system to be equitable and inclusive; (2) providing general conditions that enable all children to start school ready to learn and remain in school; and (3) ensuring that all children, especially vulnerable groups of children, learn in school. A longer and more detailed version of the materials summarized in this framework paper is available separately (Wodon forthcoming (a)).

ACKNOWLEDGMENTS

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AT	assistive technology
BTVET	business, technical, and vocational education and training
CWD	children with disabilities
DALY	disability-adjusted life year
E&I	equity and inclusion
ECD	early childhood development
EFA	Education for All (international initiative)
FTI	Fast Track Initiative
HIV/AIDS	Human Immunodeficiency Virus
ICF	International Classification of Functioning, Disability, and Health
MDG	Millennium Development Goal
OECD	Organisation for Economic Co-operation and Development
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PPP	purchasing power parity
PROGRESA	Programa de Educación, Salud y Alimentación (Mexico)
Q1–Q5	household welfare quintiles 1 to 5
RCT	randomized control trial
SABER	Systems Approach for Better Education Results
SBHC	school-based health center
SLHC	school-linked health center
SMART	specific, measurable, achievable, relevant, time oriented
SRH	sexual and reproductive health
STIs	sexually transmitted infections
T1–T3	community welfare terciles 1 to 3
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHS	Uganda National Household Survey
UNGEI	United Nations Girls' Education Initiative
WHO	World Health Organization

CHAPTER I
WHY A SABER E&I DOMAIN?

The purpose of SABER-Equity and Inclusion (E&I) is to help policy makers and practitioners think about how to ensure that all children go to school and learn. This chapter explains where we stand on E&I, why E&I matters, and how SABER E&I is structured. This "What Matters" framework paper is part of a suite of similar papers published under the Systems Approach for Better Education Results (SABER) initiative. SABER was launched by the World Bank's Education Global Practice. The initiative is designed to help governments systematically examine and strengthen the performance of their education systems so that all children and youth can be equipped with knowledge and skills for life. SABER is organized around a dozen different domains that aim to collect data on country policies in education. The objective is to provide rapid diagnostic tools to help governments assess the quality of their education policies—and in some cases, policy implementation—through the lens of global evidence-based good practice. This paper is about what matters for E&I in education systems. This chapter first provides a brief diagnostic of where countries stand in terms of E&I. Next, it discusses why E&I matters for the eradication of extreme poverty, shared prosperity, and development. Finally, the chapter explains the rationale for choices made regarding what the paper does and does not cover. A longer and more detailed version of the materials summarized in this framework paper is available separately (Wodon forthcoming (a)).

Where Do We Stand on E&I in Education?

The basic rationale for a SABER E&I domain is the fact that despite substantial progress towards education for all, massive challenges remain for vulnerable groups. The international community signed onto the Education for All (EFA) Initiative 25 years ago. EFA and other commitments were confirmed in 2000 at the World Education Forum in Dakar, and again in the Millennium Development Goals (MDGs), and most recently, at the Incheon World Education Forum. The six EFA goals were to provide: (1) comprehensive early childhood care and education; (2) free and compulsory primary education, especially for girls; (3) access to education and life-skills programs for young people and adults; (4) equitable access to continuing education for adults and adult literacy, especially for girls; (5) gender equality in education; and (6) quality of education and measurable learning outcomes. Progress has been achieved on the six initial EFA goals, but a lot remains to be done. The latest Global Monitoring report published by UNESCO (2015) synthesizes the remaining challenges (a summary of key findings is provided in annex 1). Three challenges at the core of the SABER E&I framework presented here are worth emphasizing:

- *Many children never enroll in school or enroll late:* Some 58 million children of primary school age remain out of school today. Among those, 43 percent are expected to never enroll in school under present conditions; another 35 percent are expected to enroll late.
- *Many children drop out of school without completing their basic education:* Another 63 million children of lower secondary school age are out of school, in most cases because they dropped out.
- *Even more children do not learn enough while in school:* At least 250 million children of primary school-age either fail to make it to grade 4 or do not achieve a minimum level of learning.

Why Does E&I in Education Matter?

Equity is fundamental to the twin goals adopted by the World Bank and its education strategy: eradicating extreme poverty and building shared prosperity. It is also a key area of focus for the post-

2015 framework. Within the Bank's Education Global Practice, promoting E&I is a core component of the Education Sector Strategy 2020 (World Bank 2011a), which aims to help countries improve the capacity of their education system to improve learning, including that of the most disadvantaged populations. As shown in figure 1.1, "investing for all" is one of the three pillars of the strategy, the other two pillars being "investing early" (through early childhood development) and "investing smartly" (through a systems approach). At the global level as well, equity is a guiding theme of the newly adopted Sustainable Development Goals. Goal 10 calls for reducing inequality within and among countries and includes a range of policy targets to ensure equal opportunities and achieve greater equity in development, in which education plays an important role.

Figure 1.1 Pillars of the World Bank Education Strategy

Source: World Bank (2011a).

E&I in education is essential to enable individuals and their families to emerge from extreme poverty. Without E&I in education, many children will not be able to acquire a minimum level of education. This often has dramatic consequences not only for future earnings, but also for other dimensions in life.

- *Education and earnings:* Education is known to have high returns for individuals. Estimates of the returns to schooling have been a mainstay of education literature for at least 40 years, with hundreds of studies and many reviews conducted. A recent example, Montenegro and Patrinos (2014), suggests that each year of additional education may increase wage earnings by up to 10 percent, which in turns leads to a reduction of the probability of households living in extreme poverty. In empirical analyses of the correlates of household consumption, the education level of the household head has large and statistically significant effects on consumption and thereby, the probability of the household being poor or extremely poor.
- *Education and other dimensions of life:* A better education is often associated with better health, a higher probability of labor force participation, a lower total fertility rate for women, a higher likelihood of participation in associative and civic life, a better ability to cope with idiosyncratic or covariate shocks, and the list goes on. Parental education also has strong intergenerational effects, affecting opportunities for their children.
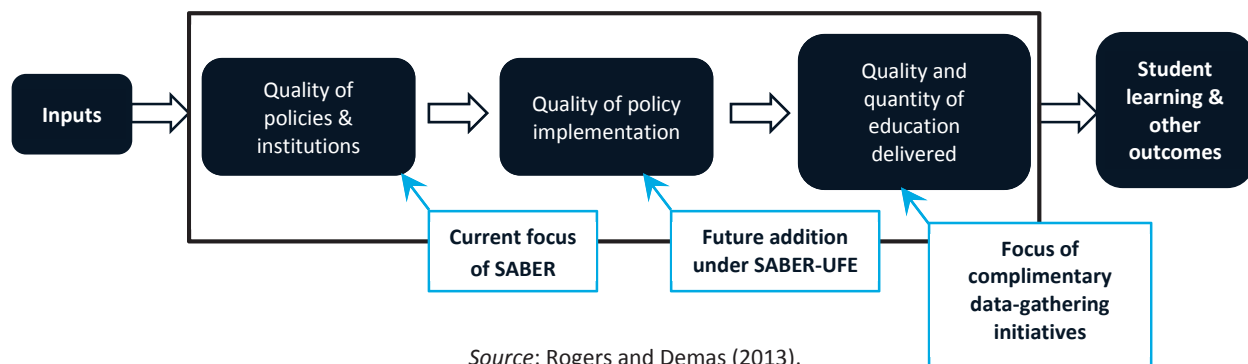
E&I in education is also essential for shared prosperity and sustainable development. Disparities in education are one of the major drivers of income inequality, both within countries and internationally. Without basic education, those in the bottom 40 percent of a nation's income distribution are unlikely to

be successful in a globalized economy. As the World Bank World Development Report 2012 notes, fair and inclusive education is one of the most powerful levers available to make society more equitable (World Bank 2011b). A well-educated workforce is also a powerful tool for promoting economic growth (Hanushek and Woessmann 2011, 2015). E&I in education enhances the ability of vulnerable groups— such as the poor, girls, ethnic minorities, and people with disabilities—to contribute to and benefit from the economy, and thus contribute to economic growth (e.g., Hanushek and Kimko 2000; Commission on Growth and Development 2008). These multiple potential positive benefits of education fail to materialize if children are excluded from school or if they do not learn in school.

How Does SABER E&I Fit within the Broader SABER Initiative and Other Work on E&I?

SABER E&I is part of the broader SABER initiative, which has implication for this domain. SABER is designed to help governments systematically examine and strengthen the performance of their education systems so that all children and youth can be equipped with knowledge and skills for life. The initiative is based on the premise that while improving the quality of education requires actionable information, synthetized knowledge about education policies and institutions is often not available to policymakers and education stakeholders (Rogers and Demas 2013). SABER aims to fill the gap in the availability of policy data, information, and knowledge about factors that influence educational quality and about ways to improve learning (figure 1.2 shows how SABER conceptualizes education systems). SABER relies on diagnostic tools and policy data to evaluate country policies through the lens of global evidence-based standards, helping countries determine which changes and policies could be implemented to improve learning. The SABER benchmarking tools thereby provides standards of good practice against which countries can rate themselves. Much of the focus so far in SABER has been on policy intent, but work is also being done on policy implementation and the quality of education provided to students.

Figure 1.2 SABER and the Results Chain for Learning

| Inputs | → | Quality of policies & institutions | Quality of policy implementation | Quality and quantity of education delivered | Student learning & other outcomes |

Current focus of SABER

Future addition under SABER-UFE

Focus of complimentary data-gathering initiatives

Source: Rogers and Demas (2013).

A key consideration for the SABER E&I framework relates to whether E&I interventions are already covered by other SABER domains. The structure of the SABER policy domains is visualized in figure 1.3. A total of 13 domains have been completed or are under development. Ideally, the various SABER domains should not overlap too much so as to avoid duplication. In practice, most domains focus on learning, as opposed to whether or not children are in school. By contrast, SABER E&I focuses on children out of school as a separate category from children in school who are disadvantaged in terms of learning.

Figure 1.3 Where SABER E&I Fits in the Overall SABER Initiative

SABER Policy Domains

Education Cycles
- Early Childhood Development
- Workforce Development
- Tertiary Education

Quality Resources & System Support
- Student Assessment
- Teachers
- ICT
- School Health & School Feeding

Governance & Finance
- School Finance
- School Autonomy & Accountability
- Education Management Information Systems (EMIS)
- Engaging the Private Sector

- Education Resilience
- Equity & Inclusion

Learning for All

Focus of this "What Matters" framework paper

Source: Adapted from Rogers and Demas (2013). *Note:* ICT – information and communication technology.

A number of promising interventions to improve E&I in education have already been covered by other SABER domains, which reduces the need to discuss those interventions in detail in SABER E&I. Of the tool's 13 planned domains, 10 have been completed and implemented in terms of data collection in a number of countries. These domains are, in alphabetical order: Early Childhood Development (ECD); Education Management and Information Systems; Education Resilience Approaches; Engaging the Private Sector; School Autonomy and Accountability; School Finance; School Health and School Feeding; Student Assessment; Teachers; and Workforce Development. The EMIS domain was also recently completed and is currently being applied in country. Many of these domains include aspects directly related to E&I (as illustrated in table 1.1):

- *Age-specific domains.* There are three domains related to education cycles. The ECD domain (Neuman and Devercelli, 2013) has been implemented in about 50 countries. It covers interventions that assist children to be ready to learn and to enroll at the appropriate age. It also includes a policy lever specifically focused on the equity of coverage of ECD interventions. The workforce development domain (Tan 2013) has also been implemented in many countries. It is organized around the themes of strategy, system oversight, and system delivery. It does consider programs that matter for E&I, such as second-chance programs for young people who have dropped out of the education system. The tertiary education domain is still under development, but it will consider issues of equity in tertiary education.
- *Student assessment.* This domain (Clarke 2012) discusses four types of assessment that evaluate student learning: classroom assessments, examinations, large-scale national assessments, and

large-scale international assessments. Proper student assessment systems are essential for learning as what is not measured often is not learned.

- *Teacher policies.* This domain is especially important for learning outcomes (Vegas et al. 2013). It has been implemented in an even larger number of countries than the ECD and workforce development domains. It is organized around eight policy goals: setting clear expectations for teachers; attracting the best into teaching; preparing teachers with useful training and experience; matching teachers' skills with students' needs; leading teachers with strong principals; monitoring teaching and learning; supporting teachers to improve instruction; and motivating teachers to perform. These goals cover many interventions that have an E&I dimension, whether implicitly or explicitly.
- *School finance.* This domain (Vegas and Coffin 2013) was one of the first to be launched, but has not been applied in many countries, probably in part because it covers in a summary way many issues discussed in more detail in other domains. Other domains tend to be used more frequently to look at particular policy issues. This domain has strong links with E&I and is organized around six policy goals: ensuring basic conditions for learning; monitoring learning conditions and outcomes; overseeing service delivery; budgeting with adequate and transparent information; providing more resources to students who need them; and managing resources efficiently.
- *School autonomy and accountability.* This domain (Demas and Arcia 2015) also matters for learning outcomes. It is one of the more recent domains and is organized around five policy goals: school autonomy for budget management, school autonomy for personnel management, role of school councils in school governance, school and student assessment, and accountability to stakeholders.
- *Education resilience.* From the point of view of E&I, an important vulnerable group is comprised of children in conflict-affected areas and contexts of adversity. Contexts of adversity affect both the probability of a child going to school and his or her ability to learn while there. Given that the SABER Education Resilience domain (Reyes 2013) covers those issues, this area also does need not be covered in detail in SABER E&I.
- *Engaging the private sector (EPS).* The literature suggests that many private schools provide valuable services to students and often have better accountability mechanisms. Low-cost private schools can be an important strategy, especially for E&I, in areas where public schools are of low quality, unavailable, or not growing quickly enough to accommodate a growing population in selected peri-urban areas. Given the existence of this domain (Baum et al. 2014)., policies related to the private sector need not be covered here in detail The EPS domain is organized around four policy goals: encouraging innovation by providers; holding schools accountable; empowering all parents, students, and communities; and promoting diversity and supply.
- *Other domains.* The other domains listed in figure 1.3 that were operational at the time of writing this report are SABER EMIS and SABER school health and feeding. The EMIS domain is less focused on interventions for vulnerable groups, but it considers the availability and use of information related to learning and E&I. The School Health and Feeding domain includes a discussion of school feeding and services needed by adolescent girls, among others. It focuses on E&I to a large extent, but in a more narrow way and in more depth in its area of focus than in the SABER E&I domain. The ICT domain is under development, but is expected to incorporate issues related to E&I in ICT.

Table 1.1 Examples of Programs and Policies for E&I Considered by Other SABER Domains

Program or policy	Domain
Existence of an equitable, transparent budgetary process for implementing ECD services	ECD
Financial support to disadvantaged groups	EPS
Availability of more public resources for students from disadvantaged backgrounds	SF
Accessibility and wide dissemination of data	EMIS
Ensuring efficiency and equity in funding for workforce development	WfD
Scope of healthcare, nutrition, social protection, and other ECD programs	ECD
Equity in access to essential ECD services	ECD
Level of coverage and/or access to essential ECD services	ECD
Payments for schooling as small share of income of low-income families	SF
Ownership (existence of all kinds of schools)	EPS

Source: Abdul-Hamid and Wodon (2016).

In addition to the treatment of E&I issues by other SABER domains, work on E&I in education is being carried out by multiple agencies apart from the World Bank. E&I in education is recognized as essential not only by the Bank, but also by many other international organizations, with a number of initiatives undertaken by, among others, the Organisation for Economic Co-Operation and Development (OECD); the United Nations Educational, Scientific, and Cultural Organization (UNESCO); United Nations Children's Fund (UNICEF); and United Nations Girls' Education Initiative (UNGEI) (see annex 2 for examples). When other agencies are leading the way on specific E&I issues, such issues need not be replicated in SABER E&I.

Organization of the SABER E&I "What Matters" Paper

Given the need to avoid overlap with both other SABER domains and the work being carried out by other multilateral organizations, SABER E&I was designed with two principles in mind: simplicity and modularity. There would be little value added in SABER E&I that replicated the analysis of other World Bank SABER domains or of initiatives being implemented by other organizations. In addition, while many different types of interventions could be considered to promote E&I in education and different types of programs are often required to meet the needs of various disadvantaged groups, there is a need to keep frameworks simple. As noted by Crouch and DeStefano (2015), most education systems across the developing world have implemented multiple reform efforts over the last three decades, often with limited gains in education outcomes. The two authors argue that the complexity of reform efforts, combined with limited capacity to implement them, largely explains the limited outcomes. This suggests that designing a comprehensive SABER E&I diagnostic tool that considered many different types of E&I issues in substantial depth would not only be challenging, but also might not be very helpful. Such a tool would be difficult to implement at the country level in a systematic way across many countries. Therefore, SABER E&I emphasizes a simple, country specific, and modular approach.

- *Simplicity.* SABER E&I is based on a few simple ideas, such as the fact that countries should prepare diagnostics of E&I in education, as well as strategies to improve E&I. These strategies should aim to achieve two main goals: to ensure that all children are in school and that they learn while there. These simple principles guide the choice of policy goals and levers in the SABER E&I domain.
- *Country specificity.* While most other SABER domains have somewhat detailed data collection tools that can be implemented in a similar way across countries and contexts, this is not the case for SABER E&I. Instead, applications of the SABER E&I framework to countries will rely on country-specific studies. This choice reflects the fact that E&I issues tend to differ markedly between countries. A tool that would try to do justice to the many factors undermining E&I would be too complex and costly to administer across countries. Instead, as already done in certain other

domains such as resilience, SABER E&I provides a general framework for thinking about E&I issues. At a later, second stagethe framework will be implemented through specific E&I country case studies.

- *Modularity.* The drawback of a simple and somewhat general framework is that it may lack depth. For example, while SABER E&I mentions the issue of disability, for in-depth work on this issue, more detailed guidance may be needed. This drawback will be alleviated by the preparation of a series of guidance notes to accompany the framework paper, each of which will address a critical factor that leads to E&I in education systems.

This SABER E&I "What Matters" paper is organized around three policy goals. As is the case with other SABER domains, the E&I domain is organized around core policy goals and associated policy levers. Its three goals, discussed separately in subsequent chapters, are:

- *Establishing an enabling environment and providing adequate resources for an equitable, inclusive education system*. This first policy goal considers the extent to which countries have E&I strategies, the diagnostics that the strategies are based upon, and how the strategies have been developed and are being implemented. It also examines the availability of resources, especially funding, for promoting E&I; the enabling framework, including legal and regulatory provisions; and the role of information management systems to inform an E&I strategy.
- *Ensuring that all children are ready to learn and in school.* This second goal essentially relates to educational attainment. This goal corresponds to the idea that all children should enroll in school and that greater educational attainment is, in principle, better for children. The policy levers associated with this goal refer to general enrollment and attainment conditions, not to policies for specific vulnerable groups, for the reason explained below.
- *Ensuring that all children, especially vulnerable groups, learn in school.* Learning is the aim of schooling and the benchmark for effective schooling. If children don't learn, education will not help them much in later life, apart from the socialization function that it performs, and may leave many children disinterested in going to school. This policy goal relates principally to the quality of the education provided, but focuses on the learning achievement of specific vulnerable groups with particular needs. Programs and policies for vulnerable groups often have an impact on both their enrollment and attainment. They are considered under this policy goal because students from such groups often won't attend school without such programs and policies. That is, the fact that children would not learn if they came to school is part of what leads them not to attend. Vulnerable groups considered in this paper include children from minority and indigenous populations, children with disabilities, girls at risk of marrying early, and more generally adolescent girls—all characteristics that can lead to disadvantage in school. This list is clearly not exhaustive, but it helps illustrate the types of policies and programs that can be implemented to meet the needs of specific vulnerable groups.

CHAPTER II
ESTABLISHING AN ENABLING ENVIRONMENT
AND PROVIDING ADEQUATE RESOURCES

Ensuring E&I in an education system is a complex task that requires countries to develop a strategic roadmap. Achieving E&I in education is complex because the factors that lead to its absence I are often multiple and may differ between or even within countries. In some contexts, girls may be at a disadvantage. In others, this may be the case for boys. Ethnic minorities may lag behind in some countries, but not in others. Children with disabilities tend to be at a disadvantage in most contexts, but the adequacy of policies in this area differs from one country to the next. In addition, there are often multiple agencies in charge of implementing policies and programs for E&I in education. Beyond the Ministry of Education (or, in some cases, the Minist*ries* of Education), other ministries also play roles that impact education, for example, by providing health services for adolescent girls, social assistance programs to families in extreme poverty, or acting as the interface between educational institutions and the labor market. Finally, programs and policies that improve education outcomes for disadvantaged children in one country may not necessarily work in another. Because of this complexity, countries should design and implement strategies specific to their individual contexts in order to ensure learning for all (World Bank 2011a). They must also create an adequate enabling environment and make available appropriate resources to achieve their stated objectives.

The first policy goal of the SABER E&I framework is to establish an enabling environment and ensure that resources are available for E&I in education. This policy goal identifies whether or not E&I in education is a recognized priority and whether financial and other resources, such as analytic expertise, are available to achieve strategic objectives. Five policy levers are considered: (1) the existence of a strategy for E&I in education, with appropriate coordination mechanisms that clearly define the responsibilities and accountability of ministries and agencies that play a role in promoting E&I; (2) the availability of an E&I diagnostic for education; (3) the adoption of targets and the availability of financial resources to achieve those targets; (4) a regulatory and legal framework for E&I, including the recognition of different types of education providers; and (5) the existence of adequate information systems to: monitor how vulnerable groups are served, evaluate program and policy performance, and scale up proven interventions while phasing out unsuccessful ones. Each of these five policy levers is discussed in the following sections.

Lever 1: Strategy and Coordination Mechanism for E&I in Education

Multiple interventions are required to promote E&I. These interventions involve different agencies and ministries. Effective coordination mechanisms are therefore required for E&I interventions. Within a given country's ministry of education, several departments are likely to be in charge of different types of programs, so that coordination will be required within the ministry itself. Many countries have several ministries that deal with education by level. In addition, other ministries and agencies have a role to play. Ministries of labor and social protection, for example, tend to be in charge of some of the second-chance programs that target children who have dropped out of school; they also have the main responsibility for implementing assistance and cash transfer programs. The provision of basic infrastructure in schools is typically the responsibility of a ministry of public works or its equivalent; however, the provision of water, sanitation, and electricity tends to be managed by separate ministries (e.g., one for water and sanitation, another other for electricity). Health policies, both for children in early childhood and for adolescent girls

with respect to sexual and reproductive health, are generally managed by ministries of health. Apart from these and possibly other ministries, such as those for women's affairs and agencies for specific vulnerable groups, the private sector is also a key player in E&I by providing faith-inspired and private secular education institutions. Overall, the multitude of organizations that affect E&I in education calls for strategic vision and coordination mechanisms (box 2.1).

Box 2.1 Coordination Mechanisms: Two Examples

Because E&I strategies in education require the coordination of services provided by multiple agencies, coordination mechanisms are required. Take the case of conditional cash transfer programs offered by multiple agencies in Mexico. PROGRESA (later renamed *Oportunidades*), a governmental social welfare program, became a means-tested proxy for distributing conditional cash transfers to support education *and* health. The program was introduced in early 1997 in response to a rise in poverty rates after a national currency crisis. Geared towards improving secondary school enrollment and attendance, especially among girls, it also aimed to improve maternal and child health, reduce child malnutrition, and provide incentives for family preventive health care. The PROGRESA program integrated these objectives so that children's learning would not be affected by poor health, malnutrition, or the necessity of working. At the same time, it sought to ensure that parental ability to pay for health, nutrition and education expenses would not constrain children's development.

The main components of the program consisted of: (i) educational grants to foster enrollment and regular school attendance (continued receipt of the grants was conditional on individual child attendance reports by school teachers); (ii) basic health care for all household members, with a strengthening of preventive medicine through health sessions (attendance at the sessions was a prerequisite for receiving full payment of the monetary transfers); and (iii) monetary transfers and food supplements to improve the family's food intake, particularly that of children and women, but also of older individuals, with food supplements provided for malnourished children and pregnant and lactating mothers.

While PROGRESA illustrates how different interventions can be packaged together, institutional arrangements for ECD policy in Jamaica provides a good example of a coordination among multiple ministries and agencies. As noted by Denboba et al. (2014), the government of Jamaica established the Early Childhood Commission (ECC) in 2003 as an official agency to oversee ECD programs and policies. Operating under the Ministry of Education, the ECC assists in the preparation, monitoring, and evaluation of ECD plans and programs. It acts as a coordinating agency to streamline ECD activities, manages the national ECD budget, and supervises and regulates early childhood institutions.

The ECC is supervised by a Board of Commissioners and operates with seven subcommittees that represent governmental and nongovernmental organizations. All relevant sectors are represented on the Board. The seven subcommittees that provide technical support to the ECC Board are in turn comprised of 50 governmental and nongovernmental agencies. While simpler structures could be considered to coordinate interventions related solely to E&I in education, some form of coordination among government agencies is needed.

Source: Compiled by the author.

Principles put forward in poverty reduction strategy papers (PRSP) suggest how strategies for E&I in education can be prepared. Poverty reduction strategies were implemented by many countries in the 1990s and, to a lesser extent, today as part of a required process to access debt relief. Given that the PRSPs were focused on the poor and often other vulnerable groups, a number of principles recommended in these papers may also apply to E&I in education. Paraphrasing Klugman (2002) on PRSPs, strategies for E&I in education should be (i) country driven and country owned, predicated on broad-based participatory processes for their formulation, implementation, and outcome-based progress monitoring; (ii) results oriented, that is, focusing on outcomes that would benefit vulnerable groups; (iii) comprehensive in
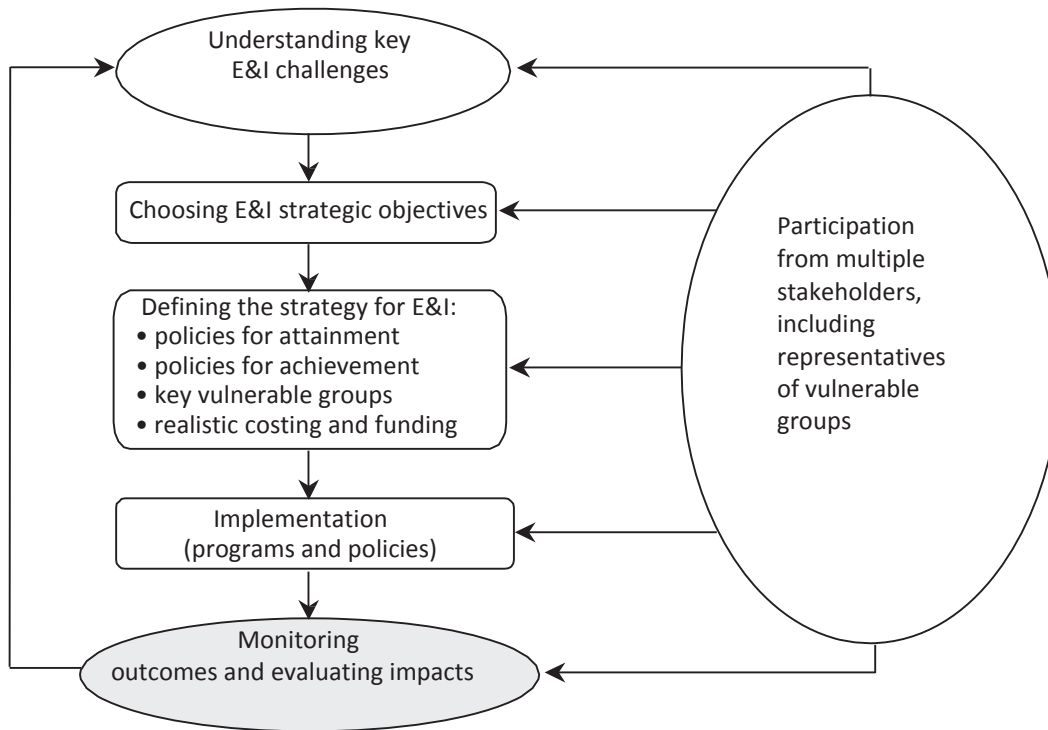
scope, recognizing the multidimensional nature of E&I issues in education and the need to identify specific measures to promote it; (iv) partnership oriented, providing a basis for the active and coordinated participation of development partners (i.e., bilateral, multilateral, nongovernmental), as well as the private sector, in supporting E&I; and (v) based on a medium- and long-term perspective, recognizing that sustained progress towards E&I cannot be achieved overnight. While a specific strategy for E&I in education can be prepared, an alternative is to consider E&I part of a broader education strategy. This is often the approach used by Ministries of Education, but the same principles apply.

Processes for developing E&I strategies in education are likely to differ depending on the country, but a number of core steps are recommended. Strategies for E&I in education could be relatively simple or more sophisticated, depending on a country's capacity and needs. Strategies could stand by themselves or could be embedded in broader education sector strategies. How such strategies are prepared and how often they are updated and revised will also depend on country circumstances. But in general, each strategy should: (i) assess major areas where E&I is insufficient, as well as the main determinants of the lack of E&I in the education system; (ii) set "SMART" targets for E&I in education;[1] (iii) prioritize public actions for E&I in education; (iv) establish systematic monitoring of E&I indicators as well as evaluating the impact of government programs and policies for E&I in education; and finally (v) ensure that the strategy is developed, implemented, and monitored in a participatory way. The various phases of the preparation of an E&I strategy are likely to be very similar to those followed in the preparation of poverty reduction strategies, as shown in figure 2.1 and as noted by Klugman (2002). Four basic questions should be asked:

1. **Where are we now?** An E&I strategy is expected to be grounded in an understanding of the extent, nature, and various dimensions of the challenges to E&I and their causes.
2. **Where do we want to go?** The Ministry of Education and other stakeholders should reach some kind of consensus through broad-based consultations on the goals and targets for E&I in education.
3. **How are we going to get there?** This question constitutes the heart of the strategy and involves the selection and prioritization of public actions—namely, programs and policies.
4. **How do we know we are getting there?** A systematic approach to monitoring E&I outcomes and intermediate indicators is key to the integrity of the overall approach; this is where an education management and information system (EMIS) plays an essential role.

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[1] SMART – specific, measurable, achievable, relevant, time oriented.

Figure 2.1 Process for Preparing a Strategy for E&I in Education

Source: Adapted from Klugman (2012).

Lever 2: Availability of an E&I Diagnostic to Inform the E&I Strategy

An E&I strategy should be grounded in an understanding of the extent and nature of the various challenges to equity and inclusion in a given country's education system. Strategies for E&I in education should be based on a diagnostic of E&I issues. This requires appropriate data, analysis, and a process to achieve consensus on the diagnostic findings. Figure 2.2 outlines the data, analysis, and overall steps needed to consider the diagnostic, again drawing inspiration from the PRSP process.

Figure 2.2 Steps for Conducting an E&I Diagnostic

Is there an agreed-upon diagnosis of E&I in education?
YES   NO

Is there agreement on the definition of E&I and key vulnerable groups?
YES   NO ➡ Convene a national forum to agree on concepts and definitions
Provide technical input to national forum

Are there studies on:
– who the key vulnerable groups are?
– why some groups never enroll, enroll late, are not ready to learn, or drop out?
– why some groups have difficulties learning in school?
YES   NO

Are data sources well known?
YES   NO ➡ Convene coordinating committee among data collection agencies

Are there good data for studying E&I? (Every country has at least some data sources.)
– Administrative EMIS data?
– Household and school facilities surveys?
- Student assessment data?
– Qualitative and participatory studies?
– Other surveys and data sources?
YES   NO ➡ Identify essential data to be collected
Strengthen capacity for participatory work
Strengthen links between quantitative and qualitative data

Is there domestic capacity to study E&I inside and outside of government?
Are here resources for analytical work?
YES   NO ➡ Plan technical assistance linked to training and capacity building
Seek financing as needed and coordinate donor assistance

Conduct E&I diagnostic/assess whether there is consensus on the diagnosis
YES   NO ➡ Help convene a national forum to agree on the E&I diagnosis
Provide technical input to national forum

BEGIN TO IDENTIFY PRIORITY AREAS FOR PUBLIC ACTION
Source: Adapted from Klugman (2002).

Lever 3: E&I Targets and Financial Resources Needed to Achieve Targets

Once an E&I diagnostic is available, the next step IS for the Ministry of Education and other stakeholders to set targets for E&I in education. A target is a value of a specific indicator that should be attained by a particular date, such as achieving universal primary enrollment by a certain date. As noted by Christiaensen, Scott, and Wodon (2002) in the case of PRSPs, such targets are meant to help the Ministry of Education and other agencies focus their resources and efforts. When Ministries of Education know

that that they will be evaluated on the basis of whether or not they have met specific targets, especially in the area of E&I, these targets may serve as incentive mechanisms that affect their behavior in at least three ways:

1. *Resource mobilization.* Resource mobilization targets resources (human and financial) needed to achieve certain goals. Targets represent challenges and indicate priorities; they may serve as catalysts to focus the efforts of various agencies to meet shared goals. Mobilizing resources has been a primary function of targets set by the international donor community, such as the Sustainable Development Goals (SDGs). In domestic settings, targets are frequently used to galvanize support for key initiatives. It is important to set ambitious, yet realistic targets, which implies that they must be both technically and fiscally feasible. Indeed, if targets are perceived either as too easy or too difficult to attain, mobilization will be weakened. When they are too easy, targets will not be viewed as sufficiently challenging and fail to stimulate a response. When they are too difficult, they will be seen as infeasible and unworthy of additional effort.

2. *Resource allocation and consensus building*. The process of setting targets helps reveal priorities and allocate resources. Other things being equal, Ministries of Education and other agencies involved in meeting equity and inclusion goals will focus their activities on areas where targets have been set, rather than on "targetless" areas. The process for setting targets should therefore be participatory and galvanize broad stakeholder support for targets, such that Ministries of Education can be held accountable for reaching them or not. Ideally, monitoring progress toward targets should generate information that is fed back into the policy debate about the proper targets. In this way, the process becomes iterative, with contributions from experts, policy makers, and representatives of vulnerable groups suffering from a lack of E&I in education systems. Targets also indicate priorities for the allocation of public expenditures. It follows that the larger the number of targets, the weaker their role in setting priorities for resource allocation. Having too many targets erodes the significance of any single target. Finally, setting priorities and targets presupposes knowledge of the relationship between the targets and the inputs (and associated costs) necessary to reach them. While it is clearly impossible in practice to obtain perfect knowledge of this relationship, such knowledge is not required to foster a culture of accountability and an orientation toward performance when allocating resources, which comprise the third key objective of targets.

3. *Accountability.* Targets introduce accountability. They provide benchmarks against which the performance of Ministries of Education can be judged. The effectiveness of targets as performance benchmarks, however, depends on the consequences that ministries and other agencies experience when they meet or miss targets. In addition, in order for targets to act as credible benchmarks for performance evaluation, they must be realistic, command broad support, and able to disentangle the effects of poor implementation from those of external shocks. Also, it is important to recall that failure on one criterion may be balanced by success on another. It is thus essential to take a balanced and comprehensive view in evaluating a ministry's performance in reaching targets. For example, targets for certain vulnerable groups may be met, while targets for another group, such as adolescent girls, may not be. Similarly, learning targets may be met while enrollment targets may not. This process helps in correcting the focus of government efforts.

Target setting is intrinsically linked to a government's budgetary process and fiscal constraints. Attaining targets must not only be technically feasible, but also fiscally feasible. Feasibility must be taken into account in the budget of the Ministry of Education so that accurate cost estimates are prepared. How much will it cost to reach E&I targets? The effect of public (and private) expenditures on education outcomes is a function of both the amount spent on specific interventions and their effectiveness. The fiscal feasibility of E&I targets can thus be gauged by a government's capacity to increase public spending and its scope for enhancing the efficiency of that spending. It is important to consider both dimensions—funding capacity and the capacity to improve efficiency—when evaluating the fiscal feasibility of E&I targets. A third set of issues involved in gauging the fiscal feasibility of targets concerns a government's capacity to implement the programs and policies necessary to attain the targets.

Estimating the cost of reaching E&I targets is important, but raises methodological issues. There is a lively debate as to whether more public spending for education leads to better outcome (annex 3), yet it is clear that adequate resources are needed to achieve E&I in education. This leads to the question of how to assess budget needs once targets are set, or during the process of setting the targets. In theory, the cost of attaining E&I targets depends on three sets of parameters: (1) the shape of the education production functions (holding technical efficiency constant); (2) the level of technical efficiency of the education sector (holding inputs constant); and (3) factor prices of the various inputs. Part of the difficulty in estimating the cost of reaching targets is that all three sets of parameters are likely to be changing simultaneously, at least over the medium term. Indeed, some determinants of cost, such as the level of technical efficiency, are themselves objectives of policy, so they should not be treated as fixed parameters over the entirety of a planning period. In practice, detailed country information and knowledge, as well as a dose of common sense and experience, are needed to reach realistic cost estimates, typically using simulation tools (box 2.2).

Box 2.2 Costing Tools for Education Ministries

Costing tools have been used for many years in education–the question is how to adapt the tools for E&I targets. Typical inputs of standard education costing tools include demographic data (i.e., demographic cohorts), delivery system data (e.g., length of schooling cycles; distribution of age at entry for the primary cycle; repetition, promotion, and drop-out rates by cycle or by grade), supply-side cost parameters (e.g., teacher wages, teacher-student ratio, administrative costs, etc.), as well as parameters for demand-side interventions (e.g., stipend or CCT value and coverage) and investment costs (i.e., cost of the construction of new classrooms, teacher training, etc.). Changes in the distribution of age at entry, as well as repetition, promotion, and drop-out rates, can then be used to simulate attainment outcomes and the attendant budget costs and needs.

These tools are not, however, very good at specifically taking into account E&I targets. One tool that allow for flexibility in simulating education outcomes (including, to some extent, learning) for specific vulnerable groups is the Simulations for Equity in Education (SEE) Model. The SEE project is a collaboration between UNICEF and the World Bank (2013) to identify cost-effective strategies for reaching children who are excluded from or underserved by education systems. SEE is intended to help countries develop cost-effective, pro-equity education strategies, and to serve as a tool for developing evidence-based documentation of and advocacy for such strategies. The model enables users to assess the likely impact of specific policies for specific vulnerable groups. In addition, a database on the effectiveness of education interventions evaluated in the literature on education has been developed to inform users of the model. SEE is intended to be used as part of the consultative processes of Ministries of Education and local development partners in the context of preparing and/or monitoring national education sector plans (ESPs.

Source: Author.

Simple cross-country comparisons can be useful for assessing whether enough resources are invested in public education, but the choice of indicators used for comparisons can affect results. For example, public spending on education as a share of GDP is often used to compare countries' investments in their education sectors. Broadly speaking, countries that invest substantial shares of GDP in education tend to have better education outcomes (OECD 2002). However, comparisons of education spending as a share of per capita GDP may not provide an accurate picture of spending per student in public schools. In some cases, both measures—public spending as a share of GDP, and public spending per student in public schools—may yield different assessments. It is therefore important that a benchmarking exercise look at both measures and the reasons why they can lead to divergent conclusions about the adequacy of education spending (Wodon forthcoming (a)).

Beyond overall budget envelopes, it is also important to assess who benefits from public spending. The extent to which different groups of children, different schools, and different geographic or administrative areas benefit from public education spending differs considerably. At a basic level, the fact that certain groups (of children, schools, or areas) do not benefit from similar resources may signal inequity, given that those most in need often receive the least funding.

1. *Differences in expenditure between children*. Benefit or expenditure incidence analysis is often used to report the share of public spending allocated to various population groups, for example, by welfare quintile. The results suggest that children from better-off backgrounds often receive a larger share of education spending than do vulnerable children. (See annex 4 for a brief introduction to this kind of analysis).

2. *Differences in expenditure between schools*. Schools in underprivileged areas tend to be less well-equipped in terms of basic infrastructure; they also have more difficulties in attracting teachers.

As a result, the quality of instruction provided in those schools is weaker than in other schools, contributing to poor learning outcomes and, in some cases, a drop in enrollment.

3. *Differences in expenditure between administrative areas*. Allocation or even funding mechanisms can make large differences in the resources made available to schools in different areas of the same country. The United States is an example of how funding mechanisms can lead to inequality in education resources among states and even among counties within states. Specifically, the United States has a federal government structure, but education policy and funding is largely set by the states. As such, there is no blanket, federally enforceable right to an education. Thus non-obligatory federal inputs and occasional financing simply feed into state-controlled and -funded education systems, producing great extremes in the availability of education resources among states.

In channeling resources to vulnerable groups, one alternative is to target interventions to individual children or households. Targeted programs can help vulnerable children enroll in school, remain in school, and learn. Cash transfers to poor families have, for example, proved effective in increasing enrollment and completion rates (Schultz 2004; Fiszbein and Schady 2009). While most cash transfers that target poor people have traditionally been conditioned on school enrollment and attendance (and, in many cases, regular visits to health centers), unconditional cash transfers can also be beneficial. Among conditional cash transfers (CCTs), different types of conditionalities can be considered. For example, some programs that aim to improve educational attainment condition the transfers on delaying marriage until 18. When using such programs, good targeting mechanisms, typically, means testing or proxy-means testing, are important for ensuring that resources reach those most in need and that the impact per dollar spent is high (see, for example., Grosh et al. 2008). In terms of resources, the policy consideration is that providing such programs sufficient resources enables them to achieve substantial coverage with limited leakage of funds to groups for whom their benefits do not affect schooling decisions.

Another alternative for channeling resources is to target interventions to schools that vulnerable groups attend or could attend if not yet enrolled. Conceptually, two types of equity dimensions can be considered in school finance (Underwood 1995, cited by Vegas and Cofin 2013). Vertical equity calls attention to the need for unequal treatment of unequals, while horizontal equity calls for equal treatment of equals. Vertical equity can be invoked to provide additional resources to vulnerable groups. But horizontal equity still matters in order to level the playing field among schools more generally. For example, differences in pupil-teacher ratios or other inputs among schools can be large, an eventuality that should be avoided. Simple tools can assess how equitably resources are distributed depending on need, for example, by comparing the amount of resources received per study by schools, with the number of students at serving as a proxy for student need. This type of comparison is frequently conducted with respect to pupil-teacher ratios, with in this area an important role to be played by education management information systems to promote E&I, as will be discussed below. As for interventions themselves, several types of programs can be considered, depending on the issue and vulnerable group being targeted.

1. *Affordability.* School finance systems can provide additional resources to targeted schools in the form of school feeding.[2] Capitation grants have also been used to avoid a situation in which schools must rely on parent payments to cover operational expenditures. By reducing the need

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[2] In developing countries, school lunches tend to be available to all students in schools that receive funding for this intervention, whereas in developed countries, means-testing is often used to select beneficiaries**.**

for PTA and other fees, capitation grants make schooling more affordable for low-income households.

2. *Learning.* As noted in the SABER School Finance framework paper (Vegas and Cofin 2013), funding formulae based on student need in OECD countries are commonly used to distribute resources intended to improve learning (Fazekas 2012). Another option, noted in the SABER Teacher framework paper (Vegas et al. 2013), consists of providing higher salaries or other incentives to encourage more teachers to teach in rural and remote and/or underprivileged areas. Similar incentives exist in some developed countries.

3. *Special needs.* Children with disabilities (CWDs) often require specific support, either through the creation of special schools or adjustments that make existing schools accessible to them. A differentiated approach is advised. As noted by Vegas and Cofin (2013), it is better to follow a "least restrictive environment" philosophy to welcome CWDs, so that this student group can be educated together with other children when feasible, a practice that generates other benefits, such as socialization (WHO and World Bank 2011). Yet overall, as will be explored in chapter 3, the evidence is not fully conclusive on whether special or mainstream schools are most effective in teaching CWDs (Farrell et al. 2007; Foster and Emerton 1991; Fuchs and Fuchs 1994).

Finally, additional distinctions are useful when elaborating policies that make resources available to vulnerable groups.

1. *Cash or kind, earmarked or not.* In principle, providing cash to schools is better than contributions in kind because schools can then use the resources for their most pressing needs (Roza, Guin, and Davis 2008; Thomas Fordham Institute 2006). However, when providing resources in cash, it is especially important to have systems in place to ensure accountability and transparency in the use of funds (Das et al. 2004). Also, when providing cash, various degrees of prescription can be imposed on its use—whether lump-sum grants , specific earmarks, or other grants can impose more or less precise stipulations on how the monies may be used.

2. *Formulae.* Amounts transferred to schools can be based on historical data adjusted for inflation and other needs, or based on more detailed budgets put forward either annually or on a pluri-annual basis by schools and calculated (for example) according to the number of students enrolled. Other approaches include providing equal lump-sum payments to all schools (which helps smaller schools to a great degree, but such payments are often used only for minor administrative and other expenses), or making payments based various formulae, many of which factor in the number of students in schools (e.g., under capitation, all schools receive the same amount per student). Various formulae can be considered for allocations made directly to schools or to higher administrative entities, such as school districts. More complex formulae may take into account the degree of vulnerability of specific areas, which can help in addressing inequities experienced by location, gender, poverty, or other factors. Formulae can also have built-in incentives. Whenever formulae are used, they should be made public for purposes of transparency and accountability.

3. *Public record.* Making information on cash transfers to school public reduces the risks of corruption or misallocation because it enables parents and students to hold local authorities and schools accountable for the resources received (Reinikka and Svensson 2004; World Bank 2003).

Lever 4: Legal and Regulatory Frameworks for E&I in Education

Education is considered a human right under international conventions, which explicitly cover many vulnerable groups.[3] The legal understanding of education and ensuing state obligations has expanded over the last 70 years. Early international instruments that enshrined the right to education stipulated succinctly that everyone had the right to free compulsory basic education.[4] The right to education has been progressively extended to cover residents apart from citizens, to focus on attendance and the reduction of dropout rates, and to require states to actively provide educational guidance.[5] Moreover, education is now more than a question of reading, writing, and arithmetic; it is directed toward a child's full development and incorporates notions of respect for human rights, fundamental freedoms, parents, cultural identity, a free and equitable society, and the environment.[6] Regional conventions go even farther—addressing the training of teachers;[7] supporting regional morals, traditional values and cultures;[8] and ensuring the mechanisms necessary to provide ongoing education for every citizen.[9] Increased attention has also been placed on developing vocational instruction, with the Council of Europe's Revised European Social Charter of 1996 affirming the right to vocational guidance and training for all, setting the minimum age of employment at fifteen years of age, and protecting student education).[10] On the one hand, the trend is towards general assurances of equality and inclusivity and, on the other, towards understanding a government's obligations to provide a real and practical right to education, taking into account increased social and cultural diversity.

International and regional conventions have expanded the obligations of state parties, as has national law, which has been used in many countries to promote E&I in education. It is no longer sufficient to say that the right to education is proffered; education must be equitable and inclusive not only in its offerings, but also in the manner in which vulnerable groups are both made aware of their rights and their active inclusion into the education system. A state's responsibility to offer an education is not fulfilled simply by building a structure with teachers. It must ensure that its education system is functional—for example, through teacher training; accreditation and hiring; and the monitoring and evaluation of students, instructors, and schools. In some cases, this is mandated implicitly or explicitly by the national constitution, for example, through mandated resource allocations (box 2.3). A state must also ensure school attendance, for instance, by providing necessary supplements for transportation, books, and uniforms, as appropriate—as well as by implementing interventions to prevent dropouts.

Box 2.3 Constitutional Protection of the Right to Education

In Brazil *t*he right to free compulsory education is guaranteed in the Federal Constitution (Art. 208.I, Brazilian Const.), as is specialized schooling for CWDs (Art. 208.III), and for "all [of] those who did not have access to it at the proper age" (Art. 208.I). The constitution also centralizes teacher-training (Art. 209), requires minimum curricula (Art. 210) and a pluri-annual national education plan (Art. 214), and guarantees assistance to primary school students (i.e., for school materials and transportation; Sec. 1.1.2), as well as other support (i.e., for food and health assistance; Sec. 1.3.1).

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[3] This section is adapted in large part from Daly and Wodon (2016).

[4] Art. 26(1), *Universal Declaration of Human Rights*, 1948; Art. 13 & 14, *International Covenant on Economic, Social and Cultural Rights*, 1966.

[5] Art. 28, *Convention on the Rights of the Child*, 1989.

[6] Art. 29.1, ibid.

[7] Art.1.h, Council of Europe, *Revised European Social Charter*, 1966.

[8] Art. 11.2(c), *African Charter on the Rights and Welfare of the Child*, 1990.

[9] Art. 41.6, *Arab Charter on Human Rights*, 2004.

[10] Art. 9 & 10, and Art.7, *Council of Europe Revised European Social Charter*, 1996.

The Brazilian constitution engages all levels of government in organizing the educational system, obliging the union, the states, the Federal District, and the municipalities to cooperate (Art. 211), while giving teeth to subsidiarity by placing accountability with competent authorities. Finally, the constitution guarantees that "[t]he Union shall apply, annually, never less than 18 percent, and the states, the Federal District, and the municipalities, at least 25 percent of the tax revenues, including those resulting from transfers, in the maintenance and development of education" (Art. 212). In addition, it provides for the allocation of public funds to religious and philanthropic schools (Art. 213).

In Indonesia, the national constitution stipulates, "Every person shall have the right to develop him/herself through the fulfilment of his/her basic needs, the right to get education and to benefit from science and technology, arts and culture, for the purpose of improving the quality of his/her life and for the welfare of the human race" (Art. 28C(1)). Education is free and compulsory (Art. 31; Act No. 20 (2003)), organized nationally but implemented by local authorities (Art. 31(3)). As in Brazil, the constitution mandates that "a minimum of 20 percent of the state budget and of the regional budgets to fulfil the needs of implementation of national education" (Art. 31(4)).

Sources: Constitution of the Federative Republic of Brazil, 3rd ed., 2010; Constitution of Indonesia (*Undang-Undang Dasar Republik Indonesia),* 1945.

A number of legal instruments can be used to promote E&I in education, depending on the country context. These legal instruments can be used to ensure that the needs of vulnerable groups are met. While the list provided below is by no means exhaustive, it is indicative of potential levers that national governments can keep in mind:

1. *School districts.* School district lines should be drawn to ensure that catchment areas are expansive, nondiscriminatory, and diverse—ideally, in terms of socioeconomic, cultural, ethnic, and other factors. Additional measures can be implemented to allow for transfers of students with the goal of further facilitating the diversification of school communities and to give appropriate attention to both gifted children and children suffering from functional limitations.

2. *Legal identity for transient populations*. Some vulnerable groups, such as nomads and street children, are at risk of not being served by education systems, in part due to their inherently transitory existence. This complicates matters of notice and provision of aid to the individuals themselves, as well as to community schools. Procedures must be adopted to ensure, first, that the creation of a legal identity is neither contingent upon, nor tied to, any physicality, location, or nonmoveable asset;, and, second, that vulnerable groups are encouraged to register their children at birth and signal their presence in the community in which they reside.

3. *Subsidiarity and local autonomy.* Under the principle of subsidiarity, the central authority should a play supporting role vis-à-vis local authorities in matters of education, when feasible. This is especially important because education provision must be sensitive to local cultures. Local authorities must be sufficiently empowered through formal legal instruments (either through legislation or regulations, or through policy and plans adopted by the executive) to act independently of central authorities. They must also be offered support from central authorities where needed.

4. *Tangential legal guarantees support enrollment and learning*. The benefits of an education can only be beneficial if a child is in a position to absorb, digest, and comprehend what is he or she is taught, that is, if the student is physically and mentally prepped to learn. To this end, tangential legal guarantees ought to be implemented to ensure that the child can benefit from the education provided. Laws against child labor, child marriage, and human trafficking are such guarantees, as are programs that reduce the cost of schooling.
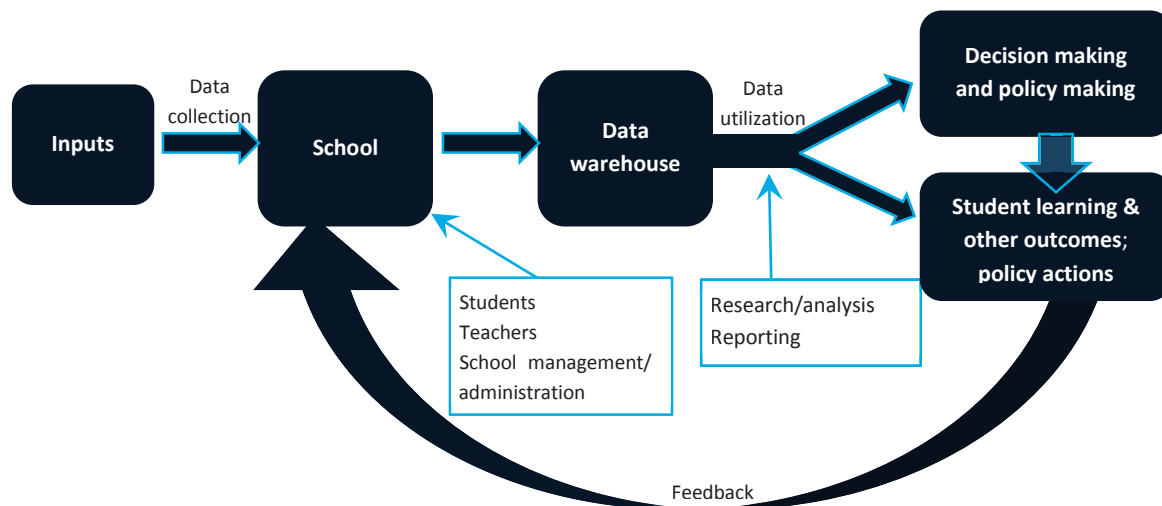
Recognition provided to private providers of education, including faith-inspired schools, is also an important aspect of the legal and regulatory framework. Faith-inspired schools account for a substantial share of students in developing countries. Many of these schools provide a service that is valued by parents, often at low cost in comparison to private secular schools (Barrera-Osorio et al. 2009; Parra-Osorio and Wodon 2014). Recent studies by Wodon (2014, 2015) shed light on the role of faith-inspired schools in Sub-Saharan Africa. The study suggests that the market share of such schools is substantial. Their cost for households is higher than that of public schools, but much lower than that of private secular schools. Most importantly, parental satisfaction with these schools is often high. Especially with respect to Islamic schools, and to some extent, Christian schools, teachings about faith and values are a key reason why some parents send their children to these schools (see, for example, Gemignani, Sojo, and Wodon 2014 on Burkina Faso). In the absence of faith-inspired schools, some children, including adolescent girls, may be at risk of dropping out or not enrolling in secondary school. In a study on Burkina Faso, Gemignani and Wodon (2015) look at obstacles to the educational attainment of girls in three communities. In one community, the inability to afford school was the main issue for households were not sending girls to secondary school. But in the other two, interactions between gender roles, faith, and culture played the more fundamental role in limiting girls' educational opportunities. There was a widespread perception in the two communities that adolescent girls should simply not go to public secondary school. While this perception is deeply rooted, one solution might be the expansion of Islamic schools, where religious education is provided in addition to secular topics. Communities may feel more ownership of such schools and have more confidence that the behavior of teachers and boy students would not lead to inappropriate behaviors that would affect girls.

The fact that some parents prefer faith-inspired or private secular schools must be taken into account when thinking about how to make an education system inclusive. An inclusive education system should be able to provide choice for parents in terms of the schools to which they send their children. This simple principle suggests that stronger public-private partnerships with faith-inspired schools, as well as private secular schools, can be beneficial. As pointed out in the SABER Engaging the Private Sector domain (Baum et al. 2014), diversity in school choice is a positive attribute of education systems, as long as schools follow basic norms in terms of the curriculum and abstain from religious extremism.

Lever 5: Education Management Information System for E&I

Education Management Information Systems (EMIS) play an important role in monitoring the extent to which education systems promote E&I. An EMIS is a system for collecting, processing, and disseminating data. An EMIS makes it possible to set targets for and track the results of an education system. Thus, a well-functioning EMIS is a critical component of an effective and equitable education system. As shown in figure 2.4, data analysis should, by means of a feedback loop, lead to improvements in schools—ideally at the school level. Yet this process this is rarely operationalized. In other words, beyond data collection and analysis, an EMIS should lead to dynamic and continuous adjustments in service delivery. Such a system should produce data not only for potentially complex statistical analysis used to inform policy decisions, but also for stakeholders in the system, including parents. Ideally, the latter should be given an opportunity to access school data through user-friendly interfaces. At intermediate levels, that is, between the school and the national policy-making levels, an EMIS should provide data and analysis capability for school zones or districts. All of these processes also apply to monitoring and promoting E&I in education systems (Abdul-Hamid 2014).

Figure 2.4 EMIS Information Cycle

Source: Abdul-Hamid (2014).

An EMIS can help improve student learning, as well as inform efforts to increase enrollment and reduce the dropout rate, through at least three mechanisms: accountability, case management, and strategy.

1. *Accountability.* An EMIS provides essential information for accountability, thereby ensuring that incentives embedded in school-based management and other accountability reforms are operational at the school and other levels. As mentioned earlier, public availability of data can by itself make a difference, as suggested by Reinikka and Svensson (2004) in their work on leakage of funds in Uganda. But for an EMIS to have the greatest impact, apart from meeting data and analysis requirements, a clear understanding of how decision making takes place in the education system is needed in order to identify key pressure points (Crouch, Enache, and Supanc 2001).

2. *Case management.* As illustrated by the case of Cecil County in Maryland (Abdul-Hamid, 2014), where teachers are provided with individualized data on assessments (grades), `discipline (suspensions), and attendance (absences), an EMIS can provide valuable data to identify at-risk students and adopt measures such as remedial education to help them students to succeed.

3. *Strategy, programs, and allocations.* EMIS data and analysis are crucial for informing strategy for an education system as a whole, including in matters of programs and policies for E&I.

Apart from an EMIS, National Education Accounts (NEAs) can also be useful for monitoring the level and allocation of public and other education spending. Data on public education spending and other types of funding for the sector are often difficult to get, especially in developing countries. Budget allocations are available at broad aggregate levels, but often not at the local level. Budget execution data are even less readily available than budget allocation data. Detailed assessments of how resources are used and allocated are often hard to put together. In order to provide better data on public and private education spending, National Education Accounts (NEA) can be useful. In particular, they can assess whether vulnerable groups receive the resources they need (see Chawla 2005; Salamanca and Flórez 2008; van der Gaag and Abetti 2011). Yet, while work has started on NEAs in a few countries, by and large most countries do not have NEAs at their disposal.

CHAPTER III
ENSURING THAT ALL CHILDREN
ARE READY TO LEARN AND IN SCHOOL

Some 120 million children of primary and lower secondary age remain out of school today. Data on out-of-school children are available for children of primary and lower secondary school age in a recent global report published by UIS and UNICEF (2015). Some 58 million children of primary school age (typically between 6 and 11 years) were out of school in 2012. Among adolescents of lower secondary school age (typically between 12 and 15 years), 63 million were out of school that year. Progress in reducing the number of out-of-school children was achieved between 2000 and 2007, but has stalled since. At the senior secondary level, the share and number of children out of school are substantially higher, but global data have not yet been computed by UIS and UNICEF for these groups. The likelihood of being out of school is higher for specific groups of children, including those with a disability, the very poor, girls in comparison to boys (in most but not all countries), and those from socially disadvantaged ethnic minorities, among others.

Within countries, multiple groups of children are vulnerable, but some are much more vulnerable than others. Vulnerable children include children in extreme poverty, those with a disability, children living in remote rural areas or urban slums, girls in comparisons to boys (in many but not all countries), and orphans, among others, with some groups combining multiple sources of disadvantages (UNESCO 2010). Not all of sources of vulnerability have the same impact on educational attainment. As shown by Nguyen and Wodon (2014), being extremely poor has, on average, a much larger negative effect on educational attainment than being a girl (as compared to a boy) or living in rural areas (as compared to urban areas).

The second policy goal of SABER E&I is to provide general conditions for all children to enroll in primary school ready to learn and remain in school, and ideally, complete their secondary education. This chapter considers the risks of never enrolling in primary school, enrolling late, not being ready to learn, and dropping out before completing either the primary or (ideally) secondary cycle. The three policy levers associated this policy goal are: (1) improving child readiness for primary school, especially among vulnerable groups; (2) reducing the cost of schooling and improving affordability for the poor; and (3) ensuring that schools are not located too far away from where children live so that they can indeed enroll. Factors related to specific vulnerabilities or risks that affect the decision to enroll and remain in school are covered in the next chapter because policies and programs to tackle those risks tend to be focused and specific, and are often of a different nature from the more generic policies considered in this chapter.

Box 3.1 Children in Conflict-Affected Countries and Contexts of Adversity

From the point of view of E&I, children in conflict-affected areas and contexts of adversity are an important vulnerable group. More than a third of out-of-school children are in conflict-affected countries (UNESCO 2011a; UIS and UNICEF 2015), where schools are often destroyed and attending the schools still in operation can be life threatening. Many more children face adversity. According to the Global Coalition to Protect Education from Attack, for example, more youth in Central America die today from violence than was the case during the civil wars, despite the peace accords. The ability of children and families in contexts of adversity to be resilient depends on complex social processes, as shown in a recent study of student performance in a school for Palestinian refugees (Abdul-Hamid et al. 2014). Contexts of adversity affect both a child's probability of going to school and of being able to learn. Yet because another SABER domain—Education Resilience (Reyes 2013) covers those issues extensively—this area does need not be covered in detail by SABER E&I, particularly in terms of the types of interventions needed.

Source: Compiled by the author.

Lever 1: Ensuring that Children Enter Primary School Ready to Learn

Investing in young children is one of the best investments that countries can make to address inequality, break the cycle of poverty, and improve a wide range of outcomes later in life. As noted, among others, by Denboba and others (2014) and Sayre and others (2015), investing in young children is one of the smartest investments for both long-term growth and development and E&I. Many children grow up in disadvantaged circumstances: 40 percent of children below five years of age are either stunted or live in poverty (Grantham-McGregor et al. 2007). Deprivation leads to lower performance and cognitive ability in school (Vegas and Santibáñez 2010). Access to health services, basic water and sanitation, adequate nutrition, childcare, and preschools is also limited for those children (Grantham-McGregor et al. 2007). By the time these children enter primary school, they already face significant gaps in development. Intervening during their early years can mitigate the negative effects of poverty and generate better opportunities for children (Naudeau et al. 2011; Heckman 2008). These risk factors set children on a path to lower achievement throughout life. Investments in children's early years generate higher returns than do investments later in life (Heckman and Masterov 2007) and can have very high cost-benefit ratios (Engle et al. 2011). By contrast, failing to ensure high levels of access to ECD services may produce significant irreversible damages for individuals. In other words, investments in ECD are an essential component of a strategy for E&I.

A wide range of interventions can help prepare children for primary school by improving early childhood development (ECD), with different frameworks available to policy makers. Young children should possess the school-readiness skills necessary for effective learning in school: physical health and well-being, social competence, emotional maturity, language and cognitive development, communication skills and general knowledge (Janus and Offord 2000). A new guide on stepping up early childhood development interventions complements existing frameworks by identifying 25 essential interventions for young children. These interventions, suggest Denboba and others (2014), can be conceptualized as five packages of services provided at different times in the life of the child: (1) a family support package that should be provided throughout the ECD period, (2) a pregnancy package, (3) a birth package, (4) a child health and development package, and (5) a preschool or early learning package (for an assessment of the coverage of these interventions in Indonesia, see Denboba and Wodon 2015). The preschool package covers the period from three to six years of age and includes two interventions: pre-primary education and the transition to primary school. While the discussion here focuses on these two interventions, all 25 have shown to have high returns.

- *Pre-primary education.* Young children need sustained access to supportive, nurturing environments that provide a high degree of cognitive stimulation and emotional care throughout their early years. There is substantial evidence that attending a pre-school increases the likelihood that children will enter primary school at the right age, progress faster through grades without repetition, remain in school instead of dropping out, and learn better while in school Currie and Thomas 1999; Jaramillo and Tietjen 2001; Reynolds et al. 2001; Njenga and Kabiru 2001; Feinsten 2003; Bartlett, Arnold, and Saptoka 2003; Heckman and Masterov 2007; Berlinski Galiani, and Manacorda 2008; He, Linden, and MacLeod 2009; Martinez, Naudeau, and Pereira 2012). Beyond access to preschool, the quality of pre-primary education is equally critical. Children will only benefit from better access to early childcare and education programs if the latter meet quality standards. When they do, the programs are linked to lifelong benefits for individuals and society, including reducing both the risk of incarceration and the need for remedial education or

rehabilitative actions at a later time, as well as improving welfare in adulthood (Schweinhart et al. 2005).

- *Continuity to primary school.* During the period of time when children move from either home or an early childhood program into primary school, they experience demanding changes (Arnold et al. 2006; Fabian and Dunlop 2007). For the transition to be smooth, children need to be ready for school and, equally important, schools need to be ready for the children (Myers and Landers 1989). Failure to establish basic literacy skills during the first year or two of school may create inefficiencies that reverberate throughout a child's progression in the education system (Abadizi 2006). Ensuring continuity between early childhood and primary school counters the potential fade-out of the impact of preschool. Quality improvements in early primary grades (i.e., integrating the ECCE/early primary experience, teacher training on classroom strategies for young children, smaller class sizes, etc.) can improve learning outcomes, school attendance, pass rates, and grade promotions while reducing dropout and repetition rates (Arnold et al. 2008). Well-trained and high-quality experienced teachers in early grades of primary school can also help close the readiness gaps that young children may face (Schady et al. 2015).

Lever 2: Reducing the Cost of Schooling and Improving Affordability for the Poor

At the primary level, in terms of the number of children of primary age who are out of school, the risks of never enrolling or enrolling late are substantially larger than the risk of dropping out. Late entry into school, or no entry at all, remain prevalent in many low-income countries, especially in Sub-Saharan Africa. As noted by UIS and UNICEF (2015), children out of school can be divided into three groups: those who have attended school in the past but dropped out, those who have never attended school but are expected to enroll at some point, and those who have never enrolled and are not expected to enroll. Among the 58 million children of primary school age who are out of school worldwide, 42.6 percent are not expected to ever enroll, while 34.5 percent are expected to enroll later, and thereby late. Only 22.9 percent have enrolled, but dropped out (UIS and UNICEF 2015). These statistics underscore the fact that apart from dropping out, never enrolling, or enrolling late are serious problems.

Multiple factors lead students to never enroll in school or enroll late, but out-of-pocket and opportunity costs are often a key factor. In order to consider interventions that can help reduce the share of children who never enroll or enroll late, it is useful to document the main reasons parents cite in household surveys as to why their children never enrolled or enrolled late. While subjective parental perceptions may suffer from bias, they are still useful indicators of the barriers faced by children and families. For example, data are provided for Uganda by Wodon, Nguyen, and Tsimpo (2016) on the main reasons for never enrolling or enrolling late in school: cost—both the opportunity cost as well as the out-of-pocket cost of schooling. Enrollment in public primary schools is free, but households still have to bear the cost of other expenses, including uniforms and materials such as exercise books and pencils. For some households, this may not be affordable. Apart from out-of-pocket costs, the opportunity cost of schooling also makes it too expensive for some. Many children who never enrolled simply have to work. Other forms of vulnerability also play a role, including those experienced by children with a disability and orphaned children, as well as children who have been displaced or are in situations of insecurity. Some children never enroll in school because of an apparent lack of interest, which points to the importance of the quality of education provided to encourage enrollment. As already mentioned, many children in low-income countries enroll in school late, in part because of perceptions that they may not be ready to learn. Some children live too far away from available schools to enroll. Finally, for adolescent girls, the issues of child marriage and early

pregnancies should not be underestimated (Parsons et al. 2015; Perlman, Adamu, and Wodon 2016; Wodon, Nguyen, and Tsimpo 2016; and Wodon 2016d).

A simple way to reduce cost barriers and improve affordability is to make education in public schools free, at least at the primary and lower secondary levels, while ensuring its quality. Many governments have eliminated user fees for basic education (Avenstrup 2006; Oketch and Rolleston 2007a, 2007b; Nielsen 2009; Nishimura, Yamano, Sasaoka 2008; Sifuna 2007; and World Bank and UNICEF 2009).[11] There is evidence that reducing the cost of schooling has a positive impact on enrollment (Kattan 2006; Kadzamira 2003; Grogan 2008; Fredriksen 2009; Maikish and Gershberg 2008; Holla and Kremer 2009). In Burundi, for example, the abolition of user fees in public schools led to large gains in enrollment for the poor (Sommeiller and Wodon forthcoming). However, such increases in enrollment have to be managed in order not to reduce the quality of the education provided or the accountability of schools (Fiske and Ladd 2008; World Bank 2003; World Bank and UNICEF 2009). When eliminating fees, it is also important to ensure that schools have enough resources to provide a quality education.

Other ways to improve affordability include providing conditional or unconditional cash transfers, as well as other economic incentives, such as school lunches, school uniforms, or school materials. Cash transfers are a straightforward way to provide incentives for school enrollment by offsetting direct and opportunity costs. In addition, given that for the very poor, even small out-of-pocket costs may lead children to not go to school, interventions such as free uniforms or school material can also help. Providing other benefits for children through school lunches or food distribution also improves enrollment.

1. *School lunches, school-based food distribution, and other in-kind benefits.* Feeding programs often lead to gains in enrollment, including among students who did not enroll previously. Studies suggesting positive impacts on enrollment and a reduction in drop-outs include Ravallion and Wodon (2000), Ahmed and Del Ninno (2002), Dreze and Kingdon (2001), and Finan (2010). When budgets are tight, however, it is important to target programs to poor areas, as the impact of the programs on enrollment and nutrition is likely to be substantially smaller in better-off areas. Other programs, such as free school uniforms or materials, can also boost enrollment.

2. *Conditional cash transfers.* Many conditional cash transfer programs have traditionally targeted students close to completing primary schooling and considering a transition to secondary school (this was the case for Progresa/Oportunidades in Mexico), but the programs can also target younger children. Even when they target older children, CCT programs may have positive spillover effects on the entry of young children into primary school. The literature on conditional cash transfers is extensive (e.g., Skoufias 2005; Filmer and Schady 2008; Angelucci et al. 2010; Garcia and Hill 2010; Barrera-Osorio et al. 2011; Behrman, Parker, Todd 2011; Galiani and McEwan 2013). A syntheses of much of this literature is provided by Fiszbein and Schady (2009). Typically, conditional cash transfers (and often unconditional transfers as well) tend to have positive impacts on enrollment and educational attainment.

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[11] The impact of those reforms has varied from one country to another. For example, in Uganda free primary education was introduced in 1997. This reform contributed to a very large increase in the gross primary school enrollment rate. In Tanzania, the positive repercussions of free education, introduced in 2001, have been slower to appear. This is due, among other things, to a lack of school infrastructure. In Kenya also, free primary education— introduced in 2003—appears to have resulted in a limited increase in the net enrollment rate, at least in the first few years after the reform.

Box 3.2: Second-Chance and Life Skills Programs

While reducing barriers to schooling can reduce the share of children out of school, some children are still likely to drop out. For those children, second-chance programs provide essential opportunities. Many of these programs, such as literacy courses, equivalency degree programs, and vocational courses, can make a major difference to their beneficiaries (see, for example, Attanasio, Kugler, and Meghir 2011 on Colombia). One survey for Sub-Saharan Africa identified 154 such programs in 39 countries serving 3.5 million children in 2006. This may sound encouraging, but it remains small in comparison to the 52 million African youths who were out of school in 2009 (DeStefano et al. 2006). Some second-chance programs have not been successful (there is heterogeneity in the quality of the programs). In addition, as with other programs for disadvantaged populations, they often suffer from limited political and financial support. To be successful, the programs must establish strong links both back to the formal education system and forward to available job opportunities (Jimenez, King, and Tan 2012).

While second-chance programs should emphasize productive skills, the importance of life skills—especially for girls—should not be overlooked in contexts where child marriage is widespread. As noted by Perlman, Adamu, and Wodon (2016), a number of interventions can empower girls with information, skills, and support networks. The idea is to help girls know themselves, their context, and their options, including through safe spaces. Safe spaces may be schools or other community settings where a mentor-led group of adolescent girls can safely meet on a regular basis. They have been shown to be effective in a variety of settings in facilitating the acquisition of life skills and developing the social networks that girls need for healthy, safe, and productive transitions to adulthood (e.g., Erulkar and Muthengi 2009; Acharya et al. 2009; Zibani and Brady 2011; Catino, Colom, and Ruiz 2011; Austrian and Muthengi 2013). Life skills—including decision making (e.g., critical thinking and problem solving), community living (e.g., communications and negotiation), and personal awareness and management (self-awareness and self-esteem)—can help girls better navigate the multiple disadvantages they face. More importantly, these skills empower them to define and more effectively express their goals and aspirations, particularly those related to marriage, childbearing, and livelihood. The Maharashtra Life Skills Program of the Institute of Health Management in India—a one-year life-skills course—found that those girls who fully attended the program were less likely to marry young (before 18) and developed a wider awareness of themselves and the external environment in which they lived (Pande et al. 2006). If girls' own aspirations change, this may not only empower them, but it may also change how their parents, relatives, and communities perceive them. It may also change their perception of the value of investing in the education of girls. Finally, safe spaces can also be platforms for the acquisition of other skills and knowledge that may lead to better employment opportunities.

Source: Compiled by the author.

Lever 3: Ensuring that Children Can Reach Schools in a Reasonable Time

In low-income countries especially, most young children go to primary school on foot. Building schools sufficiently close to communities helps avoid risks of both non-enrollment and late enrollment. Walking—which does not require out-of-pocket costs but involves opportunity costs in terms of time—is the most common way for students to reach primary and secondary schools. Many studies have demonstrated a close link between the distance to schools and the likelihood of never enrolling, enrolling too late in comparison to the normal age of entry into primary school, or dropping out. This includes (among many others) studies for Afghanistan (Burde and Linden 2013), Burundi (World Bank 2007a), Comoros (UNESCO 2012), Madagascar (World Bank 2008), Mali and Niger (Estache and Wodon 2014), Pakistan (Lloyd, Mete, and Sathar 2005), Senegal (Estache and Wodon 2014), Tanzania (UNESCO 2011b), Togo (UNESCO 2013), and Uganda (Tsimpo and Wodon forthcoming (a). While in many counties the expansion of the public education sector has reduced the distance to schools, in some remote areas those distances may remain too high, especially at the secondary school level and for business, technical and vocational education and training (BTVET) opportunities that may lead to skilled employment.

A case study can help to illustrate the impact of distance to schools on enrollment in primary, secondary, and BTVET schools. In Uganda walking is the most common mode of travel to primary and secondary schools. Children from poorer households and rural areas have to travel longer distances to go to school than children from urban and better-off households. On average it takes children 35 minutes to reach their primary school and 45 minutes for secondary schools, but for some students, the time required is much longer. Regression analysis suggests that when primary, secondary, or BTVET schools are located more than 45 minutes or an hour away from the center of a community, this decreases the probability of enrollment by 6 to 12 percentage points in rural areas for primary schools. For secondary schools, the impacts are large for girls, but not statistically significant for boys (many parents are not willing to let girls travel long distances by themselves due to both cultural norms and the higher risks of harassment and sexual abuse faced by girls). For BTVET schools, the impacts are statistically significant only for boys (few girls attend those schools), and are slightly smaller, in part because BTVET schools tend to enroll mostly better-off students who may have other means of transportation. Overall there are clear effects of the time required to go to school on enrollment (Tsimpo and Wodon forthcoming (b)).

One solution to reduce long distances to schools is to build more schools; another is to improve public transportation systems. When schools are not available nearby, and when it may not be cost effective to build new schools, providing public transportation is an alternative way to reduce travel time and increase enrollment. Estache and Wodon (2014) provide estimates of the impact on primary school enrollment and completion rates of the distance to schools and to public transportation in rural areas, broken out for boys and girls. Estimates are provided for Mali, Niger, and Senegal, using national surveys for those countries. Proximity to schools is a key determinant of school enrollment. In addition, there are gains from a shorter distance to public transportation. These gains are slightly larger for girls than for boys—probably because parents are reluctant to ask girls to walk long distances to reach a school (the impact of public transport on the demand for care is even larger).

CHAPTER IV
ENSURING THAT ALL CHILDREN AND ESPECIALLY VULNERABLE GROUPS
LEARN IN SCHOOL

Many students are not learning enough in school. Student achievement can be measured in an internationally comparable way through international student assessments such as TIMSS (Trends in International Mathematics and Science Study), PIRLS (Progress in International Reading Literacy Study), and PISA (Programme for International Student Assessment). While many countries that participate in those assessments tend to be middle- or high-income, enough lower-middle-income countries participate to permit an assessment of the level of learning of students in those countries in comparison to the levels achieved in higher-income OECD countries. The data reveal that the average student in a low- or lower-middle-income country is faring very poorly. For example, the TIMSS 2011 report for mathematics (Mullis et al. 2012) indicates that the average student in poorer countries is learning at the level of children in the third to fifth percentiles of the distribution of students in OECD countries.[12] In other words, most children in school are learning very little. This is confirmed by many other studies. As just one example, *in* Mali, more than 30 percent of youths who had completed six years of schooling could not read a simple sentence, and in Kenya, the same was true for 50 percent of youth. In Peru, only about 50 percent of children in grade 2 could read at all (Crouch 2006).

Within countries, children from underprivileged backgrounds fare worse. Large differences in test scores are observed by socioeconomic status in the performance of students on international student assessments such as PISA, TIMSS, and PIRLS. As one illustration among many, estimates for Jordan suggest that the education of a child's parents, the level of wealth of the child's family, and whether or not the family has many books at home affect performance (Savadogo and Wodon, 2016). Marginal effects are obtained using a hierarchical model and controlling for a wide range of other child, family, and school characteristics. The average score for Jordanian students on the 2012 PISA round was 386 for mathematics, 409 for science, and 399 for reading. A higher level of education of a child's mother or father is associated with gains in scores ranging from 10 to 16 points. Children in Jordan from richer households performed 25 to 32 points above children from the bottom quartile. Having less than 100 books at home is associated with lower performance. Taking these and other effects cumulatively, children from disadvantaged socioeconomic backgrounds tend to fare much worse than better-off children.

At the same time, gaps faced by vulnerable children are not irremediable. Consider, as an illustration, figure 4.1. The figure displays average student performance in Spanish at the school level in Peru as a function of a socioeconomic index. A number of interesting observations can be made about the data:[13]

- As expected, students in schools in better-off areas do better, on average, than those in worse-off areas, with many private schools serving better-off areas and thereby, better-off students.

- The variance in performance is lower for schools in better-off areas. This could be due to various factors, but it is likely that accountability mechanisms play a role, with parents in these areas able to ensure that the schools achieve better performance than other schools.

- At the lower end of the socioeconomic index, performance is lower and variability in performance higher in poor areas, with some schools performing as well as schools in better-off areas. The gap
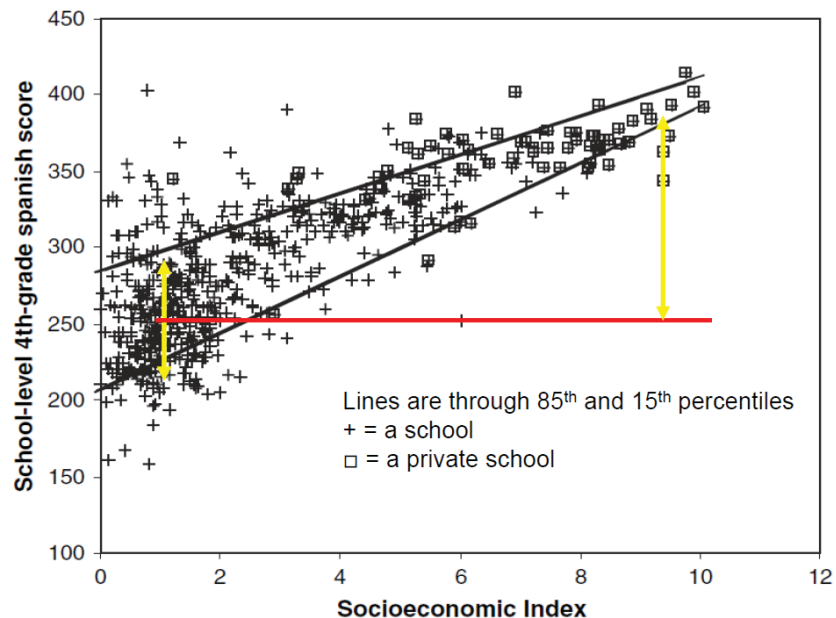
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[12] It should be noted that the poorer countries in the TIMSS sample are by no means the poorest in the world.
[13] The author is grateful to Luis Crouch for pointing to this study and its relevance for this paper.

in performance between schools at the 85th and 15th percentiles in worse-off areas is greater than half of the average gap between schools in poor and better-off areas.

- Overall this suggests that if less well-performing schools in poor areas could be brought up to the level of better-performing schools in those areas, large gains in performance for disadvantaged students could be achieved in these schools and for the country as a whole.

Figure 4.1 Socioeconomic Index and Spanish Performance across Schools in Peru, Grade 4

Source: World Bank (2007b).

The third policy goal under the SABER E&I framework is to ensure that all children in school, especially vulnerable groups, learn while in school. While the previous chapter considered the risk that children will not enroll in school, enroll late, or not be ready to learn, and drop out, this chapter considers the risk that students will not learn even though they are enrolled in and attend school. The three policy levers under this policy goal are: (1) ensuring that basic conditions for learning in school are met; (2) implementing interventions that increase student learning; and (3) meeting the needs of specific vulnerable groups. The first two policy levers emphasize a few broad interventions that are necessary for learning generally, even if they may benefit vulnerable groups the most. The third policy lever looks at interventions targeting specific vulnerable groups of children who need more help.

Lever 1: Ensuring that Basic Conditions for Learning in School Are Met

Analyses of the drivers of student learning are often conducted with education production functions that relate student performance (the dependent variable) to inputs (the independent variables). The literature on education production functions suggests that a lack of basic amenities and other school inputs affects student learning negatively. There has been some debate about the magnitude of those effects. One of the first studies in the field (Coleman et al. 1966) suggested that family background and peers had a much larger impact on achievement than school inputs. In many settings it can be argued that education provision is inefficient and that most school inputs make only a relatively small difference for

achievement (Hanushek and Woessmann,2011). For example, Hanushek (1986) reviewed results from 147 education production functions and concluded, based on many insignificant effects or inconsistent direction of effects, that the relationship between school expenditures and student performance was weak. Nevertheless, the view that inputs, even as they are typically provided, do not make a difference has been challenged, and numerous studies suggest an impact of inputs on outcomes (as an example, see Case and Deaton 1999). In a meta-analyses of education studies, Card and Krueger (1992) as well as Fuller and Clarke (1994) and Greenwald, Hedges, and Laine (1996) found that school resources are associated with gains in educational attainment and earnings (see also Baker 2012).

A review of the evidence from production functions suggests that the availability of basic school infrastructure and pedagogical supplies matter for student learning. Basic school infrastructure is often lacking in developing countries (see, as an example, Wodon 2016b, on Paraguay). Glewwe et al. (2014) review a set of 79 good empirical studies, 43 of which are deemed to be of high quality. Table 4.1 provides the key results from the review as it relates to basic school infrastructure and pedagogical supplies. In the table, the main figures are the number of estimates available in the studies; they point to a particular relationship (positive, neutral, or negative) between inputs and student learning. The figures in parentheses are number of papers or studies from which the estimates are drawn (some papers may have different sets of estimates based on different regressions). The evidence suggests that textbooks and similar materials do increase student learning, albeit to a lesser extent than is often believed, in that relatively few impact estimates are both positive and statistically significant. The availability of basic furniture (i.e., desks, tables, and chairs) does seem to have a more systematic positive effect, but this is not the case for computers and other electronics.[14] Electricity seems to play a positive role, as do school libraries and high-quality walls, roofs, and floors. Overall, it appears that basic school infrastructure and the availability of pedagogical supplies tend to have, at least on average, a positive impact on learning.

At a minimum, schools should be provided with able teachers, basic infrastructure, and instructional materials. All three school inputs have been associated with gains in student learning.

1. *Teachers.* When teachers excel, teacher effectiveness is probably the most important school-based predictor of student learning. Several consecutive years of outstanding teaching can offset the learning deficits of disadvantaged students (Rockoff 2004; Hanushek et al. 2005; Hanushek and Rivkin 2010). According to the SABER Teachers framework paper, paper, good teachers, and teacher policies are the most important ingredients for student learning under the control of schools and ministries of education (Vegas et al. 2013). Teacher training plays an especially important role in order to make the classroom more engaging for students (for a case study on Nepal, see Wodon 2016e).

2. *School infrastructure.* As already mentioned, adequate school infrastructure is associated with better learning (Glewwe 2013; Harbison and Hanushek 1992; Lavy 1996; Miguel and Kremer 2004). In addition, adequate infrastructure may help in attracting students and improving enrollment; it also makes it easier to recruit teachers and reduce absenteeism (Chaudhury et al. 2006).[15]

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[14] The evidence on computer-aided education is mixed, but programs integrating computers in the classroom can have positive impacts if appropriate teacher training is provided (see, for example, Karmacharya, Sharma, and Wodon forthcoming).

[15] On the role of incentives to reduce teacher absenteeism, see also Duflo, Hanna, and Ryan (2012).

3. *School materials:* The SABER School Finance paper also emphasizes the fact that teaching and learning materials, including libraries, textbooks, and where feasible computers, are also essential, and are often more cost effective than other inputs to improve learning (Pritchett and Filmer 1999; Glewwe, Kremer, and Moulin 2007; Jamison et al. 1981; Heyneman, Jamison, and Montenegro 1984).

Table 4.1 Impact on Test Scores of School Infrastructure and Pedagogical Supplies

	Negative		Zero or insignificant and no sign given	Positive		Total studies
	Significant	Insignificant		Insignificant	Significant	
			79 good-quality studies			
Textbooks/workbooks	4 (3)	13 (8)	7 (5)	10 (7)	26 (10)	21
Desks/tables/chairs	0 (0)	0 (0)	13 (1)	7 (5)	8 (4)	8
Computers/electronics	1 (1)	9 (5)	1 (1)	8 (3)	7 (4)	8
Electricity	0 (0)	3 (2)	0 (0)	6 (5)	6 (2)	6
School infr. index	0 (0)	1 (1)	7 (1)	1 (1)	13 (4)	6
Blackboard/flip chart	0 (0)	2 (2)	13 (1)	3 (3)	7 (3)	6
Library	1 (1)	3 (2)	7 (1)	1 (1)	10 (5)	6
Roof/wall/floor	0 (0)	1 (1)	0 (0)	3 (2)	2 (1)	4
			43 high-quality studies			
Textbooks/workbooks	1 (1)	8 (4)	3 (1)	6 (4)	3 (2)	8
Desks/tables/chairs	0 (0)	0 (0)	0 (0)	4 (3)	3 (2)	4
Computers/electronics	1 (1)	9 (5)	0 (0)	8 (3)	4 (3)	6
Electricity	0 (0)	3 (2)	0 (0)	3 (2)	0 (0)	3
Blackboard/flip chart	0 (0)	2 (2)	0 (0)	2 (2)	2 (1)	3
Library	0 (0)	1 (1)	0 (0)	1 (1)	4 (2)	3
Roof/wall/floor	0 (0)	1 (1)	0 (0)	3 (2)	2 (1)	4

Source: Glewwe et al. (2014).
Note: Figures are the number of estimates; figures in parentheses are the number of papers/studies. Table includes all school infrastructure characteristics with at least two separate papers/studies.

Lever 2: Implementing Interventions that Increase Student Learning

The literature on learning is vast, but systematic literature reviews have been conducted to identify the types of interventions that are most effective in improving learning outcomes for students. Probably tens of thousands of articles have been published on factors affecting student learning. Even when one restricts the literature to rigorous impact evaluations carried out in developing countries, the number of studies remains large. Fortunately, a number of literature reviews have recently been carried out to provide a synthesis of the messages of this literature. Even better, there is an interesting review of the reviews by Evans and Popova (2015) that is very helpful in assessing whether the existing reviews are based on the same studies and whether they provide similar messages as to what seems to work and what does not work to improve learning outcomes in developing, especially low-income, countries. In their review, Evans and Popova considered six systematic recent literature reviews listed in table 3.3. In total, the six reviews identify 227 rigorous studies that measure the impact of various interventions on learning outcomes in developing countries. A bit more than half (134) are randomized control trials (RCTs). The others are quasi-experimental studies. As noted by Evans and Popova, there is quite a bit of divergence in the recommendations made by the studies, as summarized in table 4.2. At least two reasons led to these somewhat different conclusions reached by the authors of the various reviews:

1. *Different samples.* Only three studies were included in all six reviews, and 70 percent of the studies were included in only one review. The reasons for such divergence in compositions include different selection criteria (e.g., considering RCTs only, or only studies for Africa for one of the reviews), but also probably different research methodologies and levels of comprehensiveness.

2. *Different categories and interpretations.* The same programs may be classified in different ways in the various reviews, and interpretation of "success" may vary depending on the criteria used.

Table 4.2 Systematic Reviews Reviewed by Evans and Popova and Their Recommendations

Literature review	Promising areas to improve learning
Conn (2014)	Pedagogical interventions and student incentives
Glewwe et al. (2014)	Desk, tables, and chairs; teacher subject knowledge; teacher presence
Kremer, Brannen, and Glennerster (2013)	Pedagogical interventions to match teaching to student learning; accountability; incentives
Krishnaratne, White, and Carpenter. (2013)	Materials
McEwan (2014)	Computers or instructional technology
Murnane and Ganimian (2014)	Providing information about school quality and returns to schooling; teacher incentives (in low-performance settings); specific guidance to low-skilled teachers

Source: Evans and Popova (2015).

Despite some divergence in findings, existing literature reviews point to some common sets of interventions that are likely to improve learning. Evans and Popova (2015) suggest that three types of interventions tend to be recommended across multiple reviews: (1) pedagogical interventions that match teaching to individual student learning levels; (2) individualized, repeated teacher training associated with a specific method or task; and (3) accountability-boosting interventions. They list a number of specific interventions in each of these three broad areas that have proven successful (see table 4.3). This does not mean that other interventions cannot be successful or are not required, but these were the interventions for which there seemed to be a consensus on effectiveness. Importantly, many of the interventions listed in table 4.3 can be considered to incorporate an E&I focus because they are to a large extent designed to enable teachers to focus on those students who have the most difficulty, adapting both the level and mode of instruction to their needs.

Table 4.3 Interventions with Some Consensus on Effectiveness in the Literature Reviews

Area of intervention	Specific interventions
Pedagogical interventions that match teaching to Individual studentlearning levels	1. Assign students to separate classes based on initial ability so that teachers can focus instruction at the level of learning of individual students (Duflo, Dupas, and Kremer 2011) [4 reviews].
	2. Use mathematics software to help students learn at their own pace (Banerjee et al. 2007) [5 reviews]; by contrast, simply distributing computers does not lead to gains.
	3. Train teachers to use an initial reading assessment and then continually assess student performance (Piper and Korda 2011) [2 reviews].
Individualized and repeated teacher training associated with a specific method or task	1. Train teachers and provide them with regular mentoring to implement early-grade reading instruction in local language (Lucas et al. 2014) [3 reviews].
	2. Combine student reading groups with in-school supervision to provide ongoing guidance to group leaders (Cabezas, Cuesta, and Gallego 2012) [2 reviews].
	3. Help teachers learn to use storybooks and flash cards (He, Linden, and MacLeod 2009) [1 review]; by contrast, similar programs introduced without teacher preparation tend to be less effective (He, Linden, and MacLeod 2008) [3 reviews].

Accountability-boosting interventions	1. Provide teachers with incentives to be present in school (Duflo, Hanna, and Ryan 2012) [4 reviews] and perform (Muralidharan and Sundararaman 2009) [3 reviews], but design the incentives to improve learning while reducing the risk of countervailing teacher responses (Glewwe, Ilias, and Kermer 2010) [5 reviews].
	2. Supplement civil service teachers with locally hired teachers on short-term contracts (Duflo et al. 2012) [4 reviews], (Banerjee et al. 2007) [5 reviews].

Source: Evans and Popova (2015); see also World Bank blogs by Evans (http://blogs.worldbank.org/team/david-evans) [accessed February 15, 2016].

Box 4.1 How Can Petty Corruption by Teachers Be Reduced?

Inappropriate behavior by teachers may take many forms, but one of the most common is petty corruption, which affects vulnerable student groups more than other groups, given their limited resources. Illegitimate fees or petty corruption in service delivery are widespread in developing countries. Using data for Sierra Leone based on surveys, including questions on illegitimate fees paid by households, Wodon (2014) suggests that 5.4 percent of total household income may be used for such payments, but the proportion is much higher for the poor (11.9 percent) than the non-poor (4.0 percent). In the case of public education, gratifications or apparently illegitimate fees were paid by almost 40 percent of the households.

In a separate survey in Cameroon, households were asked whether they had paid nonregulatory fees for education— the language was meant to identify illegitimate fees or petty corruption. The lowest proportion of households declared that they paid illegitimate fees to private faith-inspired schools, 15.5 percent; the proportion was much lower among the poor. For private secular schools, the proportion was a bit higher, 17.1 percent, and for public schools, again a bit higher at 20.4 percent. For households that rely on a combination of schools, the proportions were higher, but this makes sense because when a household uses more than one type of school, it is likely to interact with a greater number schools and staffs, and thereby more likely to pay illegitimate fees. Enforcement of sanctions against teachers who accept illegitimate fees can help reduce the prevalence of the practice and its high cost for poorer households.

Source: Wodon (2014).

The rationale for the third type of interventions, stems from the idea that they provide a shorter route to accountability. A simple framework was proposed on ways to make service providers more accountable to the poor in the 2004 World Development Report (World Bank 2003). Two routes towards accountability were distinguished. The short route runs directly from users (the children in school and their parents) to service providers (the schools). The long route is much more indirect because users must hold service providers accountable through the state, often with little chance of success, especially by vulnerable groups. Accountability-boosting interventions such as school-based management reforms aim to give some teeth to the short route by empowering parents and communities in the management of the schools. As discussed by Barrera-Osorio et al. (2009), various approaches have achieved different degrees of success, possibly with larger impacts over time, given that changes in behavior take time to take hold. In addition, it is also important to ensure that the risk of elite capture of school-based management reforms is minimized by giving voice to the most vulnerable in local communities.

The magnitude of the gains that can be achieved by recommended interventions are, however, not the same for all interventions. Moreover, sequencing matters. Crouch and DeStefano (2015) suggest that there may be a dichotomy in the size of the gains that various types of reforms and interventions can be expected to generate. They argue that the impact of broad-based reforms and interventions (i.e., structural reforms, reforms related to accountability and incentives, and the provision of more inputs)

tend to have smaller impacts than interventions that focus on specific pedagogical practices. The types of reforms that the authors had in mind for the various categories are illustrated in table 4.4. They did not conduct a systematic review to reach this conclusion; rather, they considered a number of evaluations of broad-based reforms published in the World Bank Policy Research Working Paper series (Blimpo, Evans, and Lahire 2015; Andrabi, Das, and Kwaja 2015; Dahal and Nguyen 2014; Yamauchi 2014 Pradhan et al. 2011; Das et al. 2011; Serra, Barr, and Packard 2011; Muralidharan and Sundararaman 2013; Goyal and Priyanka 2013), as well as a broader set of studies reported by Bruns, Filmer, and Patrinos (2011). In general, the impact of the reforms was modest. They found only one evaluation of a pedagogical intervention in the series by L. Wang (2011) which also found modest impacts. But they considered a number of other studies on focused reforms, including some mentioned above in table 3.3 by Evans and Popova (2015). The impact of the focused interventions was typically larger. This does not mean that broad-based reforms are not needed—they may very well be a prerequisite in order to implement more focused pedagogical reforms at scale in national education systems. Teachers and schools must be accountable for those reforms to succeed as well. But it is important to note that the two types of reforms may have impacts of different orders of magnitude and that broad-based reforms may take longer to bear fruit, as already mentioned.

Table 4.4 Difference in the Average Impact of Broad-Based and Focused Reforms and/or Interventions

Magnitude of impacts	Examples of reforms
Broad-based reforms and interventions with effect sizes often below 0.2 SD, but may increase with time	Structural reforms: public-private provision, decentralization, school autonomy, results-based teacher pay, school-based management
	Accountability and incentives, including local voice and choice
	More inputs, whether for infrastructure or monetary incentives
Focused reforms and interventions with effect sizes around 0.45 SD	Pedagogical practices: improved teaching methods that meet the children where they are, vastly improved textbooks based on rigorous research, use of the children's mother tongue, and combinations these options

Source: Crouch and DeStefano (2015).

Lever 3: Meeting the Needs of Specific Vulnerable Groups

Because characteristics of vulnerable children are not the same in all countries, it is difficult to highlight programs for all vulnerable groups, but examples of interventions for a few groups can be provided. As mentioned earlier, the factors that lead to lack of E&I in education systems are varied. In many countries girls are at a disadvantage, but in certain others, boys lag behind. Ethnic minorities may lag behind in some countries, but not in others. Children with disabilities are often at a disadvantage, but the quality of country policies in this area varies. And some countries may have specific types of vulnerable groups that are not present (at least to a large extent) in other countries. In order to highlight how the needs of specific vulnerable groups can be met, this section provides examples of interventions for a few vulnerable groups. The groups considered here are illustrative only and the list of groups cited is not meant to be exhaustive. For example, issues related to children from migrant households, LGBT households, households affected by conflict or violence, and many other likely vulnerable groups are not listed.

Minorities, including indigenous groups speaking a different language at home

A first group of often vulnerable children consists of children from minority and indigenous groups who may speak a different language at home. Children from minority and indigenous groups can have several sources of disadvantage that hinder their success in school. These disadvantages can include speaking a different language, parents who may see available education opportunities as threatening the culture that

they want to give to their children, the possibility of not remaining in the same location throughout the year (for example, due to nomadism), and a generally low perception of ethnic minority groups and indigenous populations in the society, which may lead to social exclusion. Multiple studies have demonstrated that without specific interventions, children from minority and indigenous groups tend to fare worse in school than other children (Mc Ewan 2004; McEwan and Trowbridge 2007; Hall and Patrinos 2012; Wodon, Backiny-Yetna, and Ben-Achour 2012; Jacob, Cheng, and Porter 2015).

Several types of programs and policies can help children from minority and indigenous groups succeed in school. Some of the interventions that have been evaluated with empirical data include the following:

1. *Bilingual education or mother-language instruction.* Bilingual education or education in the language spoken by children at home can improve enrollment as well as learning (Benson 2000; Hovens 2002; Bender et al. 2005, 2007; Walter and Chuo 2010; Alidou et al. 2006; Panda et al. 2011; UNICEF 2011). In Namibia, primary enrollment for Ovahimba, Ovazemba, Ovatjimba, and Ovaherero children was increased through schools that give children the possibility to receive education in their vernacular language, wear their traditional dress, and maintain their traditional hairstyle and ways. Because the schools were located near the communities, children were able to go to school while still contributing to the family livelihood. The program received positive feedback from learners, teachers, and community leaders (Fergus and Sorvald 2014).

1. *Trust and flexibility.* Coming from a minority group can reduce children's self-esteem and, in turn, lower enrollment and graduation rates. In Canada, children studying in their heritage language as well as in English or in French had higher self-esteem than children studying just in French and English (Wright and Taylor 1995). Especially when children from minority and indigenous groups attend regular schools, establishing relationships of trust, possibly through contractual arrangements, matters. In a study for the United Kingdom, the need to establish trust with gypsy populations was essential for ensuring that the children would go to school and learn (Bhopal 2004). Keeping school procedures flexible also helps, for example, admission arrangements (e.g., making it possible to register students on a short-term basis), as do innovative educational tools. Finally, the availability of a "safe place" for children in the school can help them build confidence. In Canada, post-secondary bicultural education courses have been developed to prepare those engaged in early childhood education for aboriginal students (Ball and Pence 2001).

More generally, students from disadvantaged minorities may need remedial or tutoring services. Remedial education can make a difference for student achievement (see, for example, Banerjee et al. 2007). Tutorial programs can be considered one form of remedial education. In the United States, the "No Child Left Behind" Act adopted a dozen years ago led to a renewal of interest in tutoring because public schools that did not make sufficient progress in learning assessments for two consecutive years had to provide tutoring services to children. The literature on tutoring and out-of-school-time programs (for example, see Heinrich and Burch 2012) suggests that to achieve impact it is best to: (1) provide consistent and sustained instructional time for a total of at least 40–45 hours; (2) provide tutoring to small groups of students, preferably less than ten at a time; (3) follow a curriculum that is rich in content and takes into account the specific needs of students, while also closely related to what students learn during the regular school day; (4) ensure that tutoring sessions are active and varied (for example, by combining structured and unstructured instruction, as well as individual and collective work time) and target the development of specific skills; (5) foster positive relationships between tutors and students; and finally (6) foster collaboration between teachers and tutors with the support of administrators, including for constructive evaluation. Examples of programs that have achieved positive impacts include Higher Achievement, which

provides intensive tutoring in small groups of two or three students with a trained volunteer mentor. An evaluation by Herrera, Grossman, and Linden (2014) suggests the tutoring program had a statistically significant positive impact on mathematics proficiency and reading comprehension after one year in the program. The mathematics impact lasts four years after enrollment in the program. Another program, evaluated by Tepper Jacob et al. (2014), is Reading Partners. Results suggest the program resulted in gains in reading proficiency. From a policy point of view, there are legitimate questions about the cost effectiveness of some tutoring programs. This must be looked at carefully, but when programs are staffed in part or in full by volunteers, they are more likely to be cost effective. When profit motivated, tutoring may act as a substitute for good-quality teaching, as observed in the case of Nepal (Jayachandran 2014). But in many settings, it can be beneficial.

Children with a Disability

There is no doubt that the disadvantage faced by children with disabilities is massive. Filmer (2008) suggests that children aged 6–17 face a school participation deficit associated with disability of 50 percentage points in 3 of 13 countries, with the gap larger than deficits related to characteristics such as gender, rural residence, or socioeconomic status. Large gaps are also reported in the *World Report on Disability* (WHO and World Bank 2011). In Ghana, Adoho, Tsimpo, and Wodon. (2014) find that the risk of not being enrolled is two-and-a-half times larger for children with a severe disability than for children without a disability. In regression analysis the differential in the probability of schooling remains 27 percentage points after controlling for a wide range of other child and household characteristics that affect schooling.

A range of programs and initiatives can be implemented to improve education opportunities for children with disabilities (CWDs). Some of these programs are reviewed in a recent guidance note issued by the U.K Department for International Development (n.d.). One alternative consists in having special schools for CWDs, especially when they have severe disabilities. Another alternative, which is preferred unless the disabilities are severe, consists in welcoming CWDs in regular schools by adapting the schools to their needs. Some common interventions include the following:

1. *Specialized teacher training.* Having well-trained teachers is necessary to welcome CWDs in regular schools. This requires both pre- and in-service training. In Mongolia, CWD training for teachers helped increase CWD enrollment in preschools and primary schools (Save the Children 2008). In a qualitative study for Uganda teachers who had not received such training, the teachers mentioned lack of training as a factor in negative attitudes towards CWDs, as well as ignorance about how to serve the children (Arbeiter and Hartley 2002). Nationally recognized and accredited CWD training programs can be especially beneficial.

2. *Special-needs assistants.* In Northern Ireland, special-needs assistants helped welcome CWDs into schools (Moran and Abbott 2002, 2006). The U.K. Department for International Development (2010) review also emphasizes the need for special-needs assistants.

3. *Flexible teaching and assessment methods.* Guidelines on Inclusion in Education from the United Nations emphasize flexible teaching and learning methods, as well as flexible curriculum, textbooks, and examinations and assessment procedures to better serve CWDs. Surveys and interviews with stakeholders in over 75 countries suggest that standardization and lack of adaptation in evaluating CWDs are obstacles to their integration, preventing students from pursuing their educations (Instituto Universitario 2009).

4. *Access to school and assistive technologies.* Apart from making schools and facilities accessible to CWDs (for example, through access ramps and separate bathrooms when feasible), teachers and administrators in Bangladesh emphasized the need for free transportation from home to school (Ackerman, Thormann, and Huq 2005). Assistive technologies can provide CWDs access to otherwise inaccessible educational content (Instituto Universitario 2009).

At a broader policy level, a simple benchmarking tool from NICEF highlights six criteria for inclusion with respect to CWDs. These criteria, phrased in the form of questions, are related, respectively, to law/policy, the physical environment, materials and communication, human resources, attitudes, and information systems. (The benchmarking tool can be found in annex 5). The criteria are: (1) law/policy—is there a law/policy establishing the right of all children to receive an education, with an explicit mention of CWDs, as well as a national plan on inclusive education? (2) physical environment—do schools have accessible classrooms and/or reasonable accommodations that remove all physical barriers (including accessible toilets and recreation areas)? (3) materials and communication—are assistive devices and materials available in most regular schools? do books and other materials include positive references to CWDs? (4) human resources—do most teachers and school administrators receive training on inclusive education and do schools have access to specialists on inclusive education for consultation? do most children have access to speech, physical, and occupational therapists, as needed? (5) attitudes—do teachers and school administrators support including CWDs in regular schools and are they willing to make significant adjustments to ease their inclusion, with curricula and classroom management allowing for flexibility in addressing individual students' needs? and, finally, (6) EMIS—does the routine EMIS contain data on CWDs, using ICF (International Classification of Functioning, Disability, and Health)–based definitions of disability, and are reports are produced on enrollment of CWDs?. These criteria echo the findings from the evaluation of interventions in this area.

Girls at risk of child marriage

Many adolescent girls are vulnerable to dropping out and not learning in school because of child marriage and early pregnancy. In Sub-Saharan Africa and South Asia, close to one in two girls still marries before the age of 18 (Nguyen and Wodon 2015). In many countries, laws have been adopted to prevent marriage earlier than age 18, but the laws are often not enforced. They are needed, but insufficient. The causality between child marriage and education indeed goes both ways. Child marriage reduces a girl's education prospects (Field and Ambrus 2008), but a lack of education opportunities or education of low quality, together with limited employment prospects for better-educated girls, are some of the factors that leads to child marriage. This is why Brown (2012) suggests looking at "tipping-point" policies in education, including programs that reduce the cost of girls' transition from primary to secondary school. When considering policies to end child marriage, a useful starting point is the review of 23 programs that conducted some evaluation of impact by Malhotra and others (2013). The authors of that review identify five strategies to prevent or delay early marriage: (1) empower girls with information, skills, and support networks; (2) educate and mobilize parents and community members; (3) enhance xthe accessibility and quality of formal schooling for girls; (4) offer economic support and incentives to girls and their families; and (5) foster an enabling legal and policy framework. Examples of programs in each of these five areas are provided in table 4.3 (a few programs have been added on top of those described in Malhotra et al. 2013).

Table 4.5 Potential Strategies to Prevent or Delay Child Marriage

Strategy	Types of programs
Empowe girls	Life-skills training Vocational and livelihoods skills training Information, education, communication (IEC) campaigns Mentored learning spaces to facilitate the acquisition of core academic skills Safe spaces that allow girls to connect and socialize outside the home
Engage parents and communities	One-on-one meetings with parents, community, and religious leaders to gain support Group/community education on consequences of/alternatives to early marriage Parental/adult committees/forums on life skills and sexual and reproductive health (SRH) curricula IEC campaigns Public announcements/pledges by influential leaders
Improve formal schooling and education opportunities for girls	Preparation, training, and support of girls to enroll/re-enroll in school Improvements in quality of instruction in formal school to enhance learning Curriculum improvements/ teacher training in life skills, SRH, gender sensitivity Construction of schools, improvement of facilities, and hiring of female teachers Remedial education, including through after-school programs
Provide incentives and economic support	Incentives (e.g., cash, scholarships, fee subsidies, uniforms, supplies) to remain in school Microfinance and related training to support income generation by adolescent girls
Enacti laws and policies	Establishment or reform of legal minimum age for marriage Advocacy of new policies, enforcement of existing laws/policies Awareness raising of negative consequences of early marriage

Source: Adapted from Malhotra et al. (2013).
Note: IEC – information, education, communication; SRH – sexual and reproductive health.

Not all of interventions are necessarily applicable or should be considered as priorities in all countries; typically, interventions with economic incentives are needed for practices to change. Many of the interventions reviewed by Malhotra et al. (2013) aim to empower girls with information, skills, and support networks. The idea is to help girls know themselves, their context, and their options by providing them with valuable information and training in a "safe-space" environment while reducing their isolation. These programs are generally implemented together with efforts to engage parents and communities, so that an enabling environment is created and the stigma associated with delaying marriage is reduced. These interventions also seek to change social norms and reduce the pressure to marry early. However, community engagement alone rarely has impact. Rather, it is the concrete and tangible benefits of programs that empower girls, improve schooling and education opportunities, and provide incentives and economic support, respectively, that facilitate change. Enacting laws and policies can also be beneficial, but typically do not result in impact without the other programs. Examples of programs that proved economic incentives were mentioned in chapter 3. They include:

1. *Traditional conditional cash transfers.* Such transfers may reduce marriage indirectly by increasing education, but the impact on schooling must be large in order to have a substantial indirect effect on child marriage. Other education interventions, such as better proximity of secondary schools, public transportation to schools, and more generally, improvements in the

quality of schooling so that the incentives to enroll girls are higher, may also have beneficial indirect effects on child marriage and education, as well as learning.

2. *Transfers conditional on delaying marriage.* In rural Ethiopia, the Berhane Hewan Program focuses on income-earning projects for families that send their daughters to school, culminating in the presentation of a pregnant ewe to the girl and her family at graduation (Erulkar and Muthengi 2009). Another example is the Apni Beti Apna Dhan Program (Our Daughter, Our Wealth) in the state of Haryana, India. Since 1994, the program has provided financial incentives to parents if they give birth to a daughter and she remains unmarried until 18. The incentives consist of an immediate cash grant upon birth and a long-term savings bond that can be redeemed on the girl's 18th birthday if she is unmarried, with additional bonuses for education. Sinha and Yoong (2009) suggest that on the basis of the limited data available, the program may have positive impacts on the sex ratio of living children, parental investments in daughters' human capital, and the likelihood that girls' educational attainment will be greater.

3. *Good, safe job opportunities for girls.* Better job opportunities would likely have a substantial effect on child marriage and pregnancy in many settings, as would better access to basic infrastructure (i.e., water and electricity), which would free up time spent by girls doing domestic chores. However, it must be recognized that traditions and culture play an important role in the persistence of early marriage (e.g., dowry rules). This suggests that eliminating child marriage requires a cross-sectoral policy agenda that goes beyond education policies and programs alone, although focusing on education is a start.

Adolescent girls in need of sexual and reproductive health services

Apart from the issue of child marriage, sexual and reproductive health (SRH) education and services are important for adolescent girls. Adolescents face preventable challenges to their sexual and reproductive health, including unsafe abortions, early pregnancy, sexually transmitted infections (STIs, including HIV), and gender-based violence apart from child marriage. There has been a decline over time in age at puberty in many countries; age at sexual initiation is decreasing as well. This is accompanied by high risk of HIV infection among young people, especially in countries with high prevalence of the virus. As a result, HIV/AIDS is now the leading cause of death among adolescents in Sub-Saharan Africa and the second most common cause of death for adolescents worldwide (WHO 2014) The risks associated with lack of SRH services also includes its impact on the probability of early pregnancy on educational attainment, the health of girls and their children, and overall poverty and economic growth.

To address these challenges, countries have started to implement school-based SRH services, including SRH education and in-school SRH services. Both types of SRH education programs have the potential to reduce adverse SRH outcomes (Haberland and Rogow 2014; Kirby, Laris, and Rolleri 2007; Underhill, Operario, and Montgomery 2007; and Kirby 2011). As to concerns that school-based health services might increase sexual activity, research suggests that instead, sexual education delays sexual initiation, increases the adoption of safe sexual practices, and reduces the frequency of activity (e.g., Grunseit and Aggleton 1998). These interventions are considered below.

1. *SRH education.* Information and education programs usually focus on providing HIV/AIDS/STI education aimed at improving reproductive health knowledge, attitudes, and behaviors. They vary in curricula, content, and delivery format (Speizer, Magnani, and Colvin 2003). They may be formal (i.e., included in the curriculum) or informal programs that involve training of peer educators and counselors. In a review of 14 school-based programs that focused on HIV/AIDS/STI education,

Speizer, Magnani, and Colvin (2003) reported that 11 programs had a positive effect on knowledge and attitudes. One program in Nigeria reported fewer sexual partners after six months (Fawole et al. 1999). Other reviews suggest that successful programs focus on specific sexual behaviors, use methods and materials that are culturally and age appropriate, and last for a sufficient period of time (Kirby 1994; Birdthistle and Vince-Whitman 1997). Kirby, Laris, and Rolleri (2007) conducted a review of 83 curriculum-based sex and HIV education programs to determine their effects on sexual risk behaviors, STIs, and pregnancy rates, as well as the mediating factors that affect those behaviors, such as knowledge and attitudes. The greatest impact of sex and HIV education programs were on sexual initiation, frequency of sexual activity, and condom use. Effective programs also tend to be comprehensive (Haberland and Rogow 2014). One such example is the Project for Sexuality Education and the Construction of Citizenship (PESCC) in Colombia, which is implemented from kindergarten through high school. Age-appropriate SRH-based education programs should be implemented in schools as early as five years of age, so that girls can be educated about their health before they end schooling (UNESCO 2009). The literature also finds that effective programs rely on teachers and health workers trained in adolescent SRH (Haberland and Rogow 2014; WHO 2009), as well as supportive environments for students to develop their critical-thinking skills. Students should be provided information about how they can access adolescent-friendly health services and SRH commodities (such as contraception) not only within school, but also through available services in the community (WHO 2009). Of note, abstinence-only education programs provided in school tends to be ineffective (for a broad review of such programs, see UNFPA 2015).

2. *SRH services in schools.* In-school health clinics help reach students who may otherwise have difficulty accessing health services. In the United States, schools rely on a variety of approaches, including school nurses, school-based health centers, school-linked health centers, and other partnerships to provide services (Advocates for Youth 2012). Ideally, health services should not only include primary health care, but also mental health services, nutritional counseling, and SRH services (Boonstra 2015). Effective programs provide health personnel trained in adolescent SRH issues and needs and in cultural sensitivity; maintain student confidentiality; treat students with respect; provide multiple services in one location; ensure that services are accessible (e.g., location, convenient hours, availability of health personnel); and guarantee that services are provided free of charge or for a nominal fee (Advocates for Youth 2012). To promote E&I in education and keep pregnant girls in school, SRH services can be expanded to provide pregnancy care. School-linked services may be more practical in low-resource settings where a school-based health center is not available. In such situations, an arrangement is made with a clinic to accept referrals from school officials and to provide priority appointments to students. School-based SRH programs can also be designed in a way to facilitate the smooth re-entry into the school of girls that have dropped out due to pregnancy. This can be achieved through focusing on these girls, among others, in order to prevent repeat pregnancies.

Box 4.2 Improving Educational Attainment and Learning for Girls

Because multiple reasons may contribute to gender gaps in educational attainment and learning, there are multiple types of interventions that could be implemented to reduce these gaps. Should the distance to schools be reduced, whether by building new schools in remote areas or reducing travel time through public transportation? Should scholarships be provided to girls, as successfully pioneered by Bangladesh several decades ago? Should more female teachers be hired? Should the priority be to make separate toilet blocks available for boys and girls? Should more focus be placed on understanding and changing cultural practices? Should pedagogical interventions targeting girls be implemented? Choosing between these and many other potential interventions is often difficult and depend on country context. But reviews of the evidence can help and such reviews are now becoming more available thanks to a substantial increase in rigorous impact evaluations in recent years.

One such review was published in June 2014 (Unterhalter et al. 2014). The review assessed the evidence on the impact of interventions for girls' education focusing on: (1) providing resources (including transfers) and infrastructure, (2) changing institutions, and (3) changing norms and including the most marginalized stakeholders in education decision making. The review summarized the impact of different types of interventions on three outcomes: participation, learning, and empowerment. For each type of intervention and outcome category, the evidence on the likelihood of impact was classified as strong, promising, limited, or needed (i.e., weak). For participation, the evidence on the impact of conditional cash transfers, information about the potential employment returns to education, and the provision of additional schools in underserved and unsafe areas was found to be strong. This was also the case for the evidence on certain interventions related to teacher training, group learning, and measures to promote girl-friendly schools, as well as learning outside the classroom (e.g., tutoring). Several of these interventions (group learning, programs for learning outside the classroom, and scholarships linked to student performance) were also found to have clear impacts on learning. The evidence on the impact of interventions on empowerment was generally found to be weaker.

Source: Unterhalter et al. 2014.

CHAPTER V
CONCLUSION

While meeting the challenge of E&I in education will require substantial efforts, the ensuing gains for the reduction of extreme poverty and shared prosperity would be large. Despite substantial progress over the last two decades, the challenge of E&I in education remains massive. Some 58 million children of primary school age and 63 million children of lower secondary school age remain out of school. And at least 250 million children of primary school age either fail to make it to grade 4 or do not reach a minimum level of learning. Meeting these challenges will require substantial efforts on the part of countries and the international community. Fortunately, improving E&I in education will bring major gains in terms of the reduction of extreme poverty and shared prosperity worldwide.

This "What Matters" paper has been prepared as part of the SABER initiative to help inform ministries of education and other stakeholders about what can be done to improve E&I in education systems. The SABER E&I framework consists of three simple policy goals that countries should strive to achieve:

1. *Establishing an enabling environment and providing adequate resources.* The first policy goal seeks to make E&I in education is a national priority with sufficient financial and informational resources, as well as an appropriate enabling environment to implement E&I programs and policies. Five policy levers are considered: (1) the existence of a strategy for E&I in education with appropriate coordination mechanisms that define the responsibilities and accountability of ministries and agencies that play a role in the promotion of E&I; (2) the availability of an E&I diagnostic; (3) the adoption of E&I targets and the availability of financial resources to achieve these targets; (4) a regulatory and legal framework for E&I; and (5) the existence of an adequate information system to monitor how vulnerable groups are served, evaluate the performance of programs and policies, and scale up proven interventions while phasing out unsuccessful ones.

2. *Ensuring that all children are ready to learn and in school.* The second policy goal seeks to ensure that all children are able to enroll in primary school under good conditions and remain in school until they complete their (secondary) education. The three policy levers under this policy goals are: (1) improving child readiness for primary school, especially among vulnerable groups; (2) reducing the cost of schooling and improving affordability for the poor; and (3) ensuring that schools are not located too far away from where children live so that they can indeed enroll.

3. *Ensuring that all children and especially vulnerable groups learn in school.* The third policy goal seeks to enhance learning, the ultimate goal of all education systems. The three policy levers under this goal are: (1) ensuring that basic conditions for learning in school are met; (2) implementing interventions that increase student learning; and (3) meeting the needs of specific vulnerable groups. Examples of such vulnerable groups include, among others, children from minority and indigenous populations, children with disabilities, girls at risk of child marriage, and adolescent girls in need of sexual and reproductive health services (other groups could be considered).

This paper provides guidance for tackling the challenge of E&I in education. Given the variety of country contexts, much more detailed country work must be undertaken in any given country. The framework presented in this paper was not developed in a vacuum. It takes into account the fact that E&I issues are already considered by many other SABER domains. Even more importantly, it recognizes that E&I issues differ markedly among countries. Following the path of the SABER Resilience domain, this paper essentially provides a general approach, as opposed to a data collection tool, for work on E&I.

ANNEX 1: PROGRESS TOWARDS EDUCATION FOR ALL:
FACTS FROM THE 2015 UNESCO GLOBAL MONITORING REPORT

The international community signed onto the Education for All (EFA) Initiative 25 years ago. The six EFA goals were to provide: (1) comprehensive early childhood care and education; (2) free and compulsory primary education, especially for girls; (3) access to education and life-skills programs for young people and adults; (4) equitable access to continuing education for adults and adult literacy, especially for girls; (5) gender equality in education; and (6) quality of education and measurable learning outcomes. UNESCO (2015) provides a synthesis of gaps remaining:

Goal 1 – Early childhood care and education: Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children. Despite progress, 6.3 million children under the age of 5 died in 2013 from mostly preventable causes and 1 in 4 children are short for their age—a sign of chronic deficiency in essential nutrients. Preschool enrollment has increased by two-thirds since 1999, but most children still do not benefit from preschools.

Goal 2 – Universal primary education: Ensuring that by 2015 all children, particularly girls, children in difficult circumstances, and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality. Large gains have been achieved in primary school enrollment. Yet 58 million children of primary school age remain out of school and progress toward reducing this number has stalled. In addition, one in six children in low- and middle-income countries—almost 100 million children—does not complete primary school.

Goal 3 – Youth and adult skills: Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programs. Thanks to better transition and retention rates, lower secondary enrollment has increased, in some countries by more than 25 percentage points. But inequality persists. In the Philippines, just 69 percent of primary school graduates from the poorest families continue into lower secondary, compared with 94 percent for the richest households. Overall, more than 60 million children of lower secondary age remain out of school. While more countries have adopted free lower secondary education, quite a few have not, which contributes to affordability issues. Skill levels also remain low among many youth and adults.

Goal 4 – Adult literacy: Achieving a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults. The adult illiteracy rate dropped between 2000 and 2015, but only from 18 percent to 14 percent, and 781 million adults remain illiterate. Progress has also been made towards gender parity in literacy, but is not sufficient. None of the countries with large gender gaps in adult literacy in 2000 achieved parity by 2015.

Goal 5 – Gender equality: Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality. At the primary level, 69 percent of countries with data are expected to reach gender parity by 2015. Progress is slower in secondary education, with 48 percent of countries projected to have reached gender parity in education. Girls remain more likely than boys to never to enroll in school, and while boys are more likely to leave school in basic grades, the reverse is often seen in higher grades. In Guinea and Niger in 2010, over 70 percent of the poorest girls had never attended primary school, compared with less than 20 percent of the richest boys.

Goal 6 – Quality of education: Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy, and essential life skills. Poor quality of education, as measured by national and international assessments (whose coverage has greatly increased) remains endemic. Gains have been achieved with respect to some inputs that affect education quality, but more needs to be done. In one-third of countries with data, the training of less than 75 percent of primary school teachers meets national standards. At the lower secondary education level, only 87 of the 105 countries with data have a pupil-teacher ratio below 30:1.

Source: Adapted with minor modifications from the executive summary of UNESCO (2015).

ANNEX 2: EXAMPLES OF WORK ON EQUITY AND INCLUSION IN EDUCATION BY OTHER ORGANIZATIONS

Several international organizations are conducting or have conducted work on equity and inclusion in education, including the development of diagnostic tools, some of which are similar in spirit to the World Bank's SABER initiative. Examples include the OECD, UNESCO, and UNICEF/FTI/UNGEI.

OECD. The OECD has published several reports on equity in education, including *Equity, Excellence and Inclusiveness in Education: Policy Lessons from Around the World* (2014) and *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*. (2012). In 2008, it recommended ten steps to reduce failure in school and dropouts. The first four steps relate to education systems design: (1) limit early tracking and streaming and postpone academic selection; (2)manage school choice so as to contain the risks to equity; (3) provide attractive alternatives in secondary education, remove dead-ends, and prevent dropouts; and (4) offer second chances for students to gain an education. The next three steps relate to education practices: (5) identify and provide systematic help to those who fall behind at school and reduce year repetition; (6) strengthen the links between school and home to help disadvantaged parents help their children to learn; (7) respond to diversity and ensure the successful inclusion of migrants and minorities into mainstream education. The last three steps relate to resources: (8) provide quality education for all, giving priority to early childhood provision and basic schooling; (9) direct resources to students with the greatest need; and (10) set concrete targets for more equity, particularly as those targets relate to low educational attainment and dropout rates.

UNESCO. In 2008 UNESCO published *Equity and Inclusion in Education: Tools to Support Education Sector Planning and Evaluation.* The first tool is especially designed to be simple and user friendly and is organized around five steps: (i) conduct a situation analysis; (ii) establish an enabling environment; (iii) address access, quality and outcomes in educational provision; (iv) allocate resources; and (v) monitor and review. Two additional tools are provided. One includes more comprehensive questions related to gender, HIV and AIDS, disability, and child labor; the other deals with the evaluation of progress, at any stage, along the trajectory towards equity and inclusion. UNESCO also publishes an annual Global Monitoring Report (GMR) with vast amounts of data and analysis, often with references to vulnerable groups. A summary of key findings from the 2015 GMR is provided in annex 1.

UNICEF/Fast Track Initiative and UNGEI. In 2010, the Education for All Fast Track Initiative (FTI) and the United Nations Girls' Education Initiative (UNGEI) published Equity and Inclusion in Education: A Guide to Support Education Sector Plan Preparation, Revision, and Appraisal. The guide suggests a three-step approach to looking at the issues. Step 1 highlights key questions to help investigate the status of inequity and exclusion. Step 2 proposes more specific questions for an assessment of equity and inclusion as a focus area. Step 3 suggests how to prepare and revise an education sector plan around access, quality and management. The three-step approach is then applied to 10 areas of interest: baseline data on enrollment and completion; barriers to equity and inclusion; policies; strategies to promote equity and inclusion; institutional arrangements; schools; parental and community participation; teachers; curriculum; and finally, budgets and unit costs.

Policy assessment tools. Several agencies are working on tools to assess policies towards specific vulnerable groups. UNGEI, for example, is working on a gender analysis tool to assess whether education systems and plans address and integrate gender concerns. UNICEF has developed indicators to assess policies related to children with disabilities (see annex 5). And the U.K. Department for International

Development (DFID 2010) has developed a guidance note for work on education with children with disabilities.

ANNEX 3: PUBLIC SPENDING AND EDUCATION OUTCOMES

Countries should set SMART targets for E&I in education and estimate the cost of reaching such targets. While education production functions can be used to relate performance measures to inputs, cost functions can, in principle, be used to assess whether more investment leads to higher performance. Education cost functions relate cost data (the dependent variable) to outputs produced by education systems (the independent variables), as well as to a range of controls, such as the characteristics of geographic areas that might lead to differences in the cost of provision (e.g., differences in teacher wages), difference in needs (students in some areas may have fewer resources at home), or differences in efficiency (some areas may be more efficient in using their inputs than others).

The basic idea behind cost functions is that once various factors are controlled for, a meaningful relationship can be estimated between achievement and the spending required for such achievement (e.g., Duncombe and Lukemeyer 2002; Gronberg et al. n.d.). Cost functions are a potentially powerful way to analyze variations in costs in a multiproduct setting where competitors are trying to minimize costs, but proper estimation is challenging (Colegrave and Giles 2008), especially in a public provision setting such as that of a ministry of education where cost minimization is not the rule. As a result, as noted by Costrell, Hanushek, and Loeb (2008), while cost functions provide stylized relationships between outputs and spending, they may be problematic for "costing out" performance targets and the adequacy of public education spending.[16] The empirical evidence on cost functions has been focused on high- and upper-middle-income countries, but case studies on cost functions are starting to be implemented in developing countries as well.[17]

One of the key findings from the literature is that more spending does not necessarily lead to better learning. There are several reasons for this. First, factors unrelated to school inputs, such as the socioeconomic background of children, often have a stronger impact on how well children learn than do school inputs (Hanushek 1986; Coleman et al. 1966). In addition, the composition of spending matters at least as much as the level of funding. A minimum level of funding is needed to ensure basic staffing in schools and materials (Vegas and Petrow 2008; Roza 2010), but beyond that base, how resources are invested—not only in terms of what is purchased, but also in terms of incentives imbedded in financing—often matters more than how much is spent (Hanushek 1997; Burtless 1996). For example, teacher salaries account for a large majority of public education spending. But other inputs can be up to 10 times as efficient in terms of improving learning (Pritchett and Filmer 1999). Finally, how resources are allocated between schools, and whether they reach vulnerable children is also important (Oosterbeek and Patrinos 2008). This matters for student performance because gains in learning among vulnerable groups may be larger than for other groups (Heyneman and Loxley 1983; Fuller and Clarke 1994; Pritchett and Filmer 1999; Ferguson and Ladd 1996).

At the same time, budgets are needed for schools to function and when both attainment and learning are taken into consideration, the relationship between costs and performance is stronger. As noted in the SABER School Finance framework paper (Vegas and Cofin 2013), while the availability of funding does not guarantee quality education, without adequate funding, quality education cannot be provided (Reschovsky and Imazeki 2001; Clune 1994). There is ample evidence, for example, that lack of basic

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[16] One alternative to using production and cost functions to assess which policy interventions may generate the best impact is to rely on expert surveys. For an example on Sub-Saharan Africa, see Schiefelbein and Wolff (2007).

[17] This is especially the case for cost functions at the university level (see, for example, Longlong, Fengliang, and Weifang 2008).

school inputs is likely to affect learning negatively (Harbison and Hanushek 1992; Glewwe et al. 2014; Tan, Lane, and Coustere 1997).

ANNEX 4: ASSESSING EQUITY IN PUBLIC SPENDING

In order to assess whether the allocation of recurrent public spending for education is equitable, benefit or expenditure incidence analysis can be used. This type of analysis typically involves assessing who uses government services according to various categories of households (or individuals). This information is then combined with data on the cost to the government of providing the services, so that the share of public spending allocated to different groups of households or individuals can be estimated.

Benefit or expenditure analysis is used extensively by governments and international organizations in order to assess who benefits from public spending not only in education, but also in other areas, such as health and basic infrastructure services. The analyses often come with recommendations on how the allocation of public spending could be improved in order to better benefit vulnerable groups. In principle, benefit incidence relates to the actual benefits of public spending for individuals and households, while expenditure incidence refers to the allocation of spending, with or without benefits. In practice, data on actual benefits are often scarce, so that the term benefit incidence is often used, even when looking only at expenditure incidence. The first paper on this topic appears to have been published more than 45 years ago. Often-cited references include Meerman (1979) for Malaysia and Selowsky (1979) for Colombia. Today, the technique is widely used thanks to the availability of household surveys and data on public expenditures.

When using benefit expenditure incidence analysis for education spending, controlling for potential differences in needs, as well in unit costs of service delivery, can make a difference in the results. The most basic form of benefit expenditure incidence analysis consists of reporting the share of public spending allocated to various population groups. Typically, the groups are categorized as quintiles of well-being, although other categories are often considered, for example, those based on location or gender. However, differences in both needs and the cost of service delivery are often overlooked. In the case of welfare quintiles, for example, the usual practice is to consider quintiles that represent each 20 percent of the population. Yet because the poor tend to have more children, this does not take into account the greater needs of poor households. Said differently, population quintiles do not have the same number of children at school-going age. As argued by Wodon (2016c), it is better to rely on quintiles of children in order to at least take difference in needs into account to some extent. Another issue is that due to lack of disaggregated data, often the same unit costs for public service delivery are used for all children. However, this may again lead to bias if, for example, teachers are less qualified in rural areas and pupil-teacher ratios in those areas are higher than in urban areas. These distinctions can make a large difference in equity assessments.

It is also worth noting that census data and large surveys, as well as, to some extent, administrative data, can be used to measure educational attainment by geographic area at low levels of aggregation. Often, there is a strong relationship between educational attainment and welfare as measured by income, poverty, or wealth. This implies that geographic targeting at the level of school districts or even lower levels of an education system can be used to target vulnerable groups. For an example of how this can be done, see Malé and Wodon (2016), which uses census data from Ghana to analyze differences in educational attainment at the level of school districts.

ANNEX 5: UNICEF INCLUSIVE EDUCATION BENCHMARKING FOR CHILDREN WITH DISABILITIES

Championing (Score 4)	Established (Score 3)	Initiating (Score 2)	Weak (Score 1)
Law/policy. There is a law/policy establishing the right of all children to receive an education, with an explicit mention of CWDs. There is also a national plan on inclusive education.	Law/policy. There is a law/policy establishing the right of all children to receive an education, with explicit mention of CWDs.	Law/policy. There is a law/policy establishing the right of all children to attend school, which implicitly but not explicitly includes CWDs.	Law/policy. No law /policy establishes the right to education for CWDs.
Physical environment. All schools have accessible classrooms and/or reasonable accommodations (including accessible toilets and recreation areas) that remove all physical barriers to CWDs.	Physical environment. More than half of schools have CWD-accessible classrooms and toilets, at times because of an accessible design and at times because of makeshift adjustments.	Physical environment. Less than half of schools are CWD-accessible (including toilets). Some schools may have accessible classrooms or use makeshift ramps.	Physical environment. In general, schools are not accessible. Children with physical disabilities have great difficulty or are completely unable to access school facilities (including toilets).
Materials and communication. Assistive devices and materials are available in most regular schools. Books and other materials include positive references to CWDs.	Materials and communication. Assistive devices and materials are available in special schools, but in less than half of regular schools. A few books and other materials include positive references to CWDs.	Materials and communication. Assistive devices and materials are available in special schools, but not in regular schools. Little or no mention of disabled children appears in books or materials.	Materials and communication. Assistive devices and materials are generally not available in schools. Books and other materials make no mention of CWDs.
Human Resources. Most teachers and school administrators receive training on inclusive education. All schools have access to specialists on inclusive education for consultation. Most children have access to speech, physical, and occupational therapists, as needed.	Human resources. More than half of teachers and school administrators receive training on inclusive education. More than half of schools have access to specialists on inclusive education for consultation. Some children have access to speech and physical therapists.	Human resources. Less than half of teachers and school administrators receive training on inclusive education. Less than half of schools have access to specialists on inclusive education for consultation. No access to speech and physical therapists exists.	Human resources. Teachers and school administrators receive no training on inclusive education. Teachers have no specialists to consult with regarding the education of CWDs. No access to speech and physical therapists exists.
Attitudes. Teachers and school administrators support the inclusion of CWDs into regular schools and are willing to make significant adjustments to ease their inclusion. Curricula and classroom management allow for flexibility in addressing individual students' needs.	Attitudes. Teachers and school administrators do not object to including CWDs in regular schools and are willing to make small adjustments to ease their inclusion.	Attitudes. Teachers and school administrators do not see the value of including CWDs in regular schools, but do not make explicit objections. They do not feel it is their responsibility to make any adjustments to ease the inclusion of these children.	Attitudes. Teachers and school administrators object to including CWDs in regular schools and do not believe they should make any adjustments to ease the inclusion of these children.

EMIS. The routine EMIS contains data on CWDs, using ICF-based definitions of disability. Reports are produced on enrollment of CWDs	EMIS. There are some data on CWDs in the school system, but it is characterized by medical diagnosis. Reports are produced on enrollment of CWDs.	EMIS. There are some data on CWDs in the school system, but it is characterized by medical diagnosis. No reports on enrollment of CWDs are produced, except for special	EMIS. There are no data on CWDs in the routine EMIS.

Note: CWDs – children with disabilities; EMIS – education management information system; ICF – International Classification of Functioning, Disability, and Health.

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The Systems Approach for Better Education Results (SABER) initiative collects data on the policies and institutions of education systems around the world and benchmarks them against practices associated with student learning. SABER aims to give all parties with a stake in educational results—from students, administrators, teachers, and parents to policymakers, business people and political leaders—an accessible, detailed, objective snapshot of how well the policies of their country's education system are oriented toward delivering learning for all children and youth.

This report focuses specifically on policies for Equity and Inclusion in Education Systems.

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