*Education matters

GLOBAL EDUCATION MONITORING REPORT

2017/8

Accountability in education:

MEETING OUR COMMITMENTS

United Nations Educational, Scientific and Cultural Organization

Sustainable Development Goals

Global Education Monitoring Report

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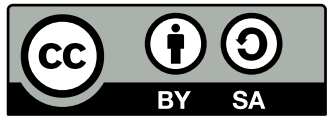


Foreword

There are today 264 million children and youth not going to school – this is a failure that we must tackle together, because education is a shared responsibility and progress can only be sustainable through common efforts. This is essential to meet the ambitions of Sustainable Development Goal on education (SDG 4), part of the 2030 Agenda for Sustainable Development. Governments, schools and teachers have a frontline role to play here, hand-in-hand with students themselves and parents.

Moving forward requires having clear lines of responsibility, knowing when and where those lines are broken and what action is required in response – this is the meaning of accountability, the focus of this *Global Education Monitoring (GEM) Report*. The conclusion is clear – the lack of accountability risks jeopardizing progress, allowing harmful practices become embedded in education systems. For one, the absence of clearly-designed education plans by Governments can blur roles and mean that promises will remain empty and policies not funded. When public systems do not provide an education of sufficient quality, and for-profit actors fill the gap but operate without regulations, the marginalized lose out. Governments are the primary duty bearers for the right to education, yet this right is not justiciable in almost half of countries, and the primary course of action for those with a complaint is lost.

Everyone has a role to play in improving education. This starts with citizens, supported by civil society organisations and research institutions, who point out gaps in quality, equitable education. In a number of countries, student movements have often swayed policies on equitable and affordable education, highlighting the power that we all share and must exercise to advance SDG 4. International organisations have been in the lead also in shaping new goals and targets in line with the complex challenges of our times.

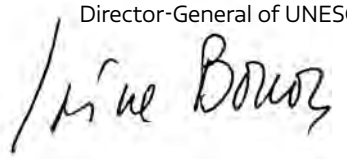
The Report shows also that not all accountability methods are currently helping us achieve SDG 4. In some parts of the world, it is becoming more common, for instance, for teachers and schools to be sanctioned for poor test results, in the name of purported attempts to improve quality instruction and learning. The Report concludes this must be approached with great caution to avoid having unintended, contrary consequences.

There is extensive evidence showing that high-stakes tests based on narrow performance measures can encourage efforts to 'game the system,' negatively impacting on learning and disproportionately punishing the marginalised. It is vital to collect data on learning outcomes, to shed light on factors that drive inequality in education. But drawing precise conclusions requires time, resources and skills that few countries have, and drawing the wrong conclusions can be all too easy.

Accountability means being able to act when something is going wrong, through policy, legislation and advocacy, including through ombudspersons to protect citizens' rights. We need stronger mechanisms across the board to enshrine and enforce the right to education and hold all Governments to account for their commitments, including donors.

The word 'accountability' appears all throughout the 2030 Education Framework for Action, demonstrating the importance that UNESCO and the international community give to follow up and review functions to catalyse and monitor progress. This means also that all countries should produce national education monitoring reports explaining their progress against their commitments – currently only about half do so and most of them not regularly. Accountability is about interpreting evidence, identifying problems and working out how to solve them. This must be the backbone to all our efforts to achieve equitable, quality education for all.

Irina Bokova
Director-General of UNESCO



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HIGHLIGHTS

Accountability in education: Meeting our commitments

WHY ACCOUNTABILITY MATTERS

Despite strong progress in education, there are significant challenges to achieving the global education goal, SDG 4: Children cannot read after several years of school in sub-Saharan Africa; examination pressure is having an impact on gender gaps in China; the excess focus in education on employability is being questioned in Germany; decentralization is posing challenges for underfunded rural schools in Pakistan; low-quality private universities are proliferating in Paraguay; refugee children have severely constrained education chances, especially those fleeing war in the Syrian Arab Republic.

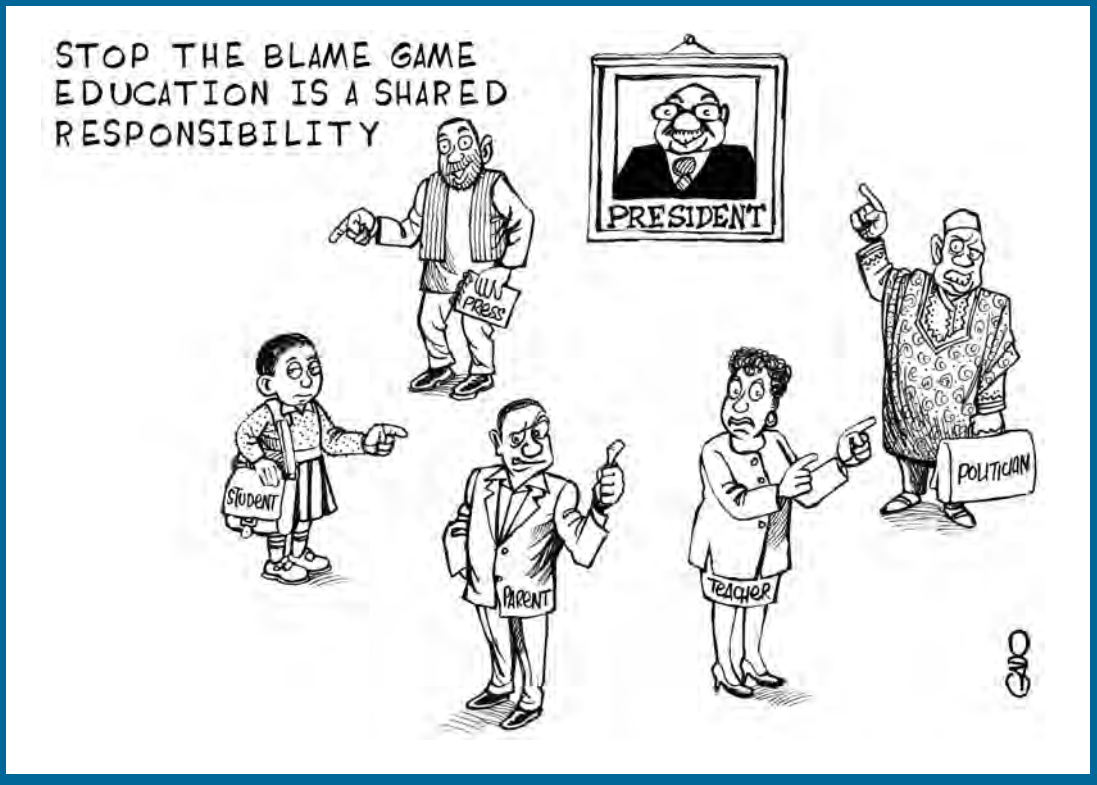
Faced with education challenges, the public wants to know who is responsible and policy-makers look for urgent solutions. Increased accountability often tops the list. When systems fail, people call for someone to be held responsible and for mechanisms to be in place that ensure corrective action.

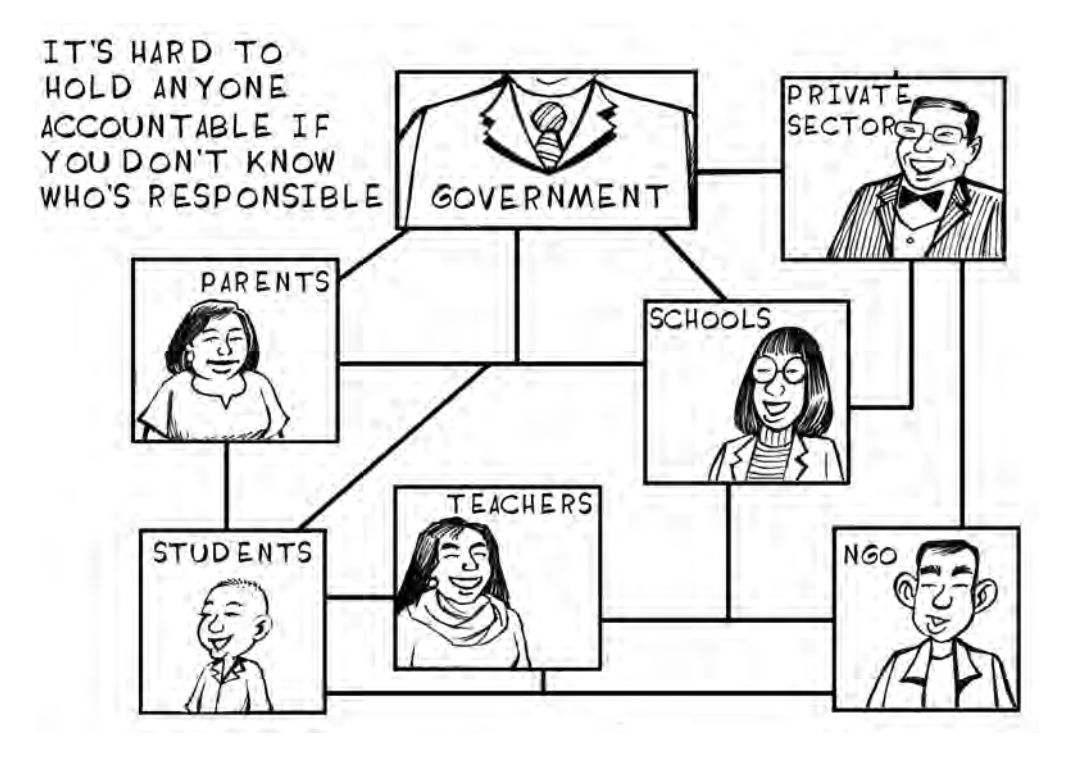
WHAT IS ACCOUNTABILITY? WHOM DOES IT INVOLVE?

Accountability is a process, aimed at helping actors meet responsibilities and reach goals. Individuals or institutions are obliged, on the basis of a legal, political, social or moral justification, to provide an account of how they met clearly defined responsibilities.

But reaching SDG 4 is often a collective enterprise. Ensuring inclusive, equitable and good-quality education requires all actors to make a concerted effort to meet their responsibilities.

Accountability, therefore, does not easily rest with single actors. For instance, schools may be responsible for providing supportive learning environments, but to deliver on this they rely on governments providing resources, teachers respecting professional norms and students behaving appropriately.





Increasingly, however, voices call for holding people accountable for outcomes beyond their control. Individuals cannot be held accountable for an outcome that also depends on the actions of others.

WHAT DOES AN EFFECTIVE ACCOUNTABILITY SYSTEM LOOK LIKE?

Everyone has a role to play in improving education. Student movements have often swayed policies on equitable and affordable education. The media plays a key role in investigating wrongdoing and reporting corruption. Civil society support can be crucial.

But accountability starts with governments. They are ultimately the primary duty bearers of the right to education.

A credible education plan is the basis for accountability. It should have clear targets and lines of responsibility and allocate resources through transparent budgets that can be tracked and queried.

Policy processes must be open to broad and meaningful consultation. In Brazil, about 3.5 million people participated in the national education plan consultation.

Transparency of information is vital to make accountability work. Around half of countries have produced a national education monitoring report analysing progress related to their national education plan and budget since 2010, although only one in six have done so annually.

Independent checks and balances help hold governments to account. The ombudsman offices in Latin America from 1982 to 2011 helped increase access to education, despite the lack of sanctioning power. In the Philippines, volunteers monitored up to 85% of 7,000 textbook delivery points helping reduce costs by two-thirds and procurement time by half.

Legal and regulatory routes to accountability are the backbone of a well-functioning state. In Kenya, the Education Board closed down private schools

not meeting standards. But standards need to be set at a level compatible with the available human or material resources so that countries do not overburden themselves with regulations that are ignored in practice.

ACCOUNTABILITY MECHANISMS CAN BE DETRIMENTAL IF POORLY DESIGNED

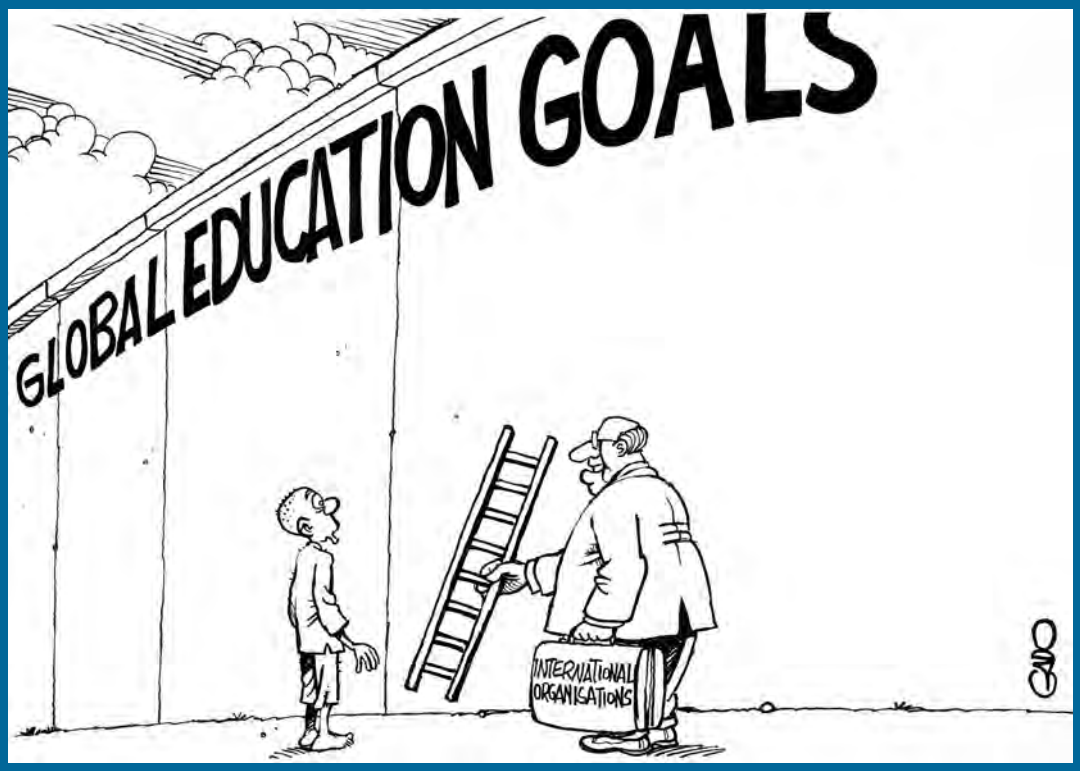
There is little evidence that performance-based accountability, when focused on outcomes over inputs and based on narrow criteria, improves education systems. Incentives have often been limited to punishments to force compliance or modify behaviour. A blame-focused approach to accountability is associated with undesirable consequences. Rewards, such as performance-related teacher pay, have had detrimental effects: peer collaboration deteriorates, the curriculum is narrowed, teaching to the test is emphasized.

A market-based approach creates competitive pressure that marginalizes disadvantaged parents and schools. While targeted vouchers in some countries have helped overcome constraints, in other cases schools have simply increased their fees. School choice approaches have undermined efforts towards inclusive, equitable, high-quality education, leading to greater segregation. Information is a foundation for a market but is often not available and, even if accessible, may not be usable: 72% of parents in Kenya reported not knowing how to use student learning data.

Many approaches to accountability, often externally funded, have not been designed in a sustainable way. Systems relying on government to respond to donor demands are disappointed when funding disappears.

WHAT IS NEEDED TO KEEP ACCOUNTABILITY WORKING?

Adequate resources, capacity and genuine commitment are essential. Governments should spend at least 4% of GDP on education, or allocate 15% of total government expenditure. But one in four countries do not reach these benchmarks.



Donor support is needed in the poorest countries. In 2015, only 6 of 28 OECD-DAC countries met their commitment to allocate 0.7% of national income to aid. Aid predictability, at least in the short term, slightly decreased between 2010 and 2015. Donors should be careful when making aid available through results-based mechanisms that shift risk to countries that are little prepared to bear it.

Transparent and relevant data on the strengths and weaknesses of education systems should be available. But countries need to be judicious in what data they collect and how they use them, keeping in mind the costs involved and the skills required to interpret, analyse and act on such data to improve teaching and learning. Many low and middle income countries cannot afford them. Over half of teachers in England argued that increased data collection created more unnecessary work.

Capacity development is essential. Actors need the skills to fulfil their responsibilities. Governments need to ensure that teacher evaluators have the appropriate training to recognize good teaching and provide constructive feedback. In New Delhi, India, school inspectors are tasked with inspecting over 50 schools annually. Teachers' unions aiming to strengthen professionalism should build the skills of those entrusted with following through on internal accountability mechanisms.

Countries need to participate actively and monitor the work of international organizations. An accountability vacuum exists concerning the role of international organizations and their responsibility in achieving international goals. This is due to the multiple roles and competing agendas among them. But countries should also be prepared to be held to account: the word 'accountability' is conspicuously absent from the SDG foundation document that was developed by governments.

Monitoring SDG 4

TARGET 4.1: PRIMARY AND SECONDARY EDUCATION

- In 2015, there were 264 million primary and secondary age children and youth out of school.
- In 2010–2015, completion rates were 83% for primary, 69% for lower secondary and 45% for upper secondary education.
- About 387 million children of primary school age, or 56%, did not reach the minimum proficiency level in reading.
- Less than one in five countries guarantee 12 years of free and compulsory education.

TARGET 4.2: EARLY CHILDHOOD

- In 2015, 69% of children participated in organized learning at the pre-primary or primary level one year before official primary entry age.
- In 2010–2015, across 52 low and middle income countries, the richest 3- to 4-year-olds were five times as likely to attend organized learning as the poorest.
- Just 17% of countries legally stipulate at least one year of free and compulsory early childhood education.

TARGET 4.3: TECHNICAL, VOCATIONAL, TERTIARY AND ADULT EDUCATION

- More women than men graduate from tertiary education but fewer women than men obtain science, technology, engineering and mathematics degrees; in Chile, Ghana and Switzerland, women account for less than one-quarter of these degrees.
- There are vast disparities in tertiary education opportunities in low and middle income countries between richer and poorer students. In El Salvador, 51% of the richest fifth but less than 2% of the poorest fifth attended any form of post-secondary education.
- Very few adults who have not completed primary education go back to school. In Mozambique, just 20% of adults had completed primary but only 0.5% were enrolled in formal education.

TARGET 4.4: SKILLS FOR WORK

- Most adults in low and middle income countries do not have even basic computer skills. In 2014–2016, only 4% of adults in Sudan and Zimbabwe could copy and paste files.
- There are wide gender gaps in ICT skills. About 75 women for every 100 men could use basic arithmetic formulas in a spreadsheet in Italy, Germany and the Netherlands.
- Establishing regulations and accreditation processes for skills training providers, public and private, is important for accountability but requires resources and expertise many countries lack.

TARGET 4.5: EQUITY

- There is gender parity in participation at all education levels except tertiary. However, global averages mask gaps: only 66% of countries have achieved gender parity in primary education, 45% in lower secondary and 25% in upper secondary.
- There tend to be more female than male teachers but far fewer women than men become school leaders. Only 6% of lower secondary head teachers are female in Japan.
- Inequality is underestimated, as survey design may exclude up to 250 million vulnerable people worldwide, while a further 100 million, such as slum dwellers, may be under-represented.
- In 42 of 86 countries, there is explicit reference to inclusive education in constitutions, laws and policies, although interpretations of the term differ.

TARGET 4.6: LITERACY AND NUMERACY

- The adult literacy rate increased from 81.5% to 86% worldwide between 2000 and 2015. It is below 60% in low income countries.
- The number of youth with no literacy skills has fallen by 27% since 2000 although more than 100 million young people still cannot read.

- In sub-Saharan Africa, 69% of adults with five years of education in systems that privileged local languages could read a sentence, compared with 41% of adults educated in part or wholly in colonial languages.
- There is some evidence that literacy and numeracy levels may be declining in high income countries, including Denmark, Germany, Norway and Sweden.

TARGET 4.7: SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP

- In 2009–2012, only 7% of teacher education programmes covered education for sustainable development.
- A 48-country review found that almost 80% had supportive policies for sexuality education but they are not always implemented.
- Almost 30% of 15-year-olds performed below the minimum proficiency level in science in the content areas of earth and space systems.

TARGET 4.A: EDUCATION FACILITIES AND LEARNING ENVIRONMENTS

- In sub-Saharan Africa, only 22% of primary schools have electricity.
- In half of 148 countries, less than three-quarters of primary schools had access to drinking water.
- In 2015, about 40% of secondary school principals in Indonesia and Jordan and 25% to 30% in Israel and Italy reported that infrastructure problems significantly hampered instruction.
- There has been a sharp uptick in attacks on schools since 2004, disproportionately affecting Southern Asia, Northern Africa and Western Asia.

TARGET 4.B: SCHOLARSHIPS

- Aid spending on scholarships decreased by 4% to US$1.15 billion from 2010 to 2015, on a par with the overall decrease in aid to education.
- Scholarship spending is underestimated, as many countries, including Brazil, China and India, do not include it in their aid programmes.
- In 2015, 2% of tertiary education students studied abroad. The percentage of those studying outside their home region increased from 57% in 2000 to 63% in 2015.

TARGET 4.C: TEACHERS

- Globally, 86% of teachers are trained at the primary school level.
- There is a need to agree on a common definition of what it means for a teacher to be trained.
- Information on teacher salaries is scarce. In OECD countries, primary school teachers earn 81% of what other full-time working professionals with tertiary education earn.

EDUCATION IN THE OTHER SDGS

- Those lacking formal education are 6.5 times likelier to smoke than those with at least secondary education in lower middle income countries.
- In 2013, the global shortage of healthcare workers was 17.4 million, including 2.6 million doctors and 9 million nurses and midwives.

FINANCE

- Public education expenditure was 4.7% of GDP and 14.1% of total public expenditure in 2015.
- Education was more exposed to corruption risk than even construction in the European Union in 2009–2014.
- The education share of total aid fell for six consecutive years, from 10% in 2009 to 6.9% in 2015.
- New estimates put the share of education expenditure borne by households at 18% in high income, 25% in middle income and 33% in low income countries.

Students hold up the results from their exams at a school in Kabul, Afghanistan.

CREDIT: Ivan Armando Flores/Arete/GEM Report

CHAPTER

1

Introduction

KEY FINDINGS

Accountability is a process aimed at helping individuals or institutions meet their responsibilities and reach their goals. Actors have an obligation, based on a legal, political, social or moral justification, to provide an account of how they met clearly defined responsibilities.

Accountability lacks common definitions across disciplines and may be understood in different ways across languages.

Accountability matters enormously for improving education systems but it should be a means to education ends, not an end in itself.

People are more likely to deliver if held accountable for decisions. If held accountable for outcomes beyond their control, they will try to avoid risk, minimize their role or adjust their behaviour in unintended ways to protect themselves.

Trust is largely absent when actors operate in fear of punishment. A shared purpose, which fosters trust, is central to effective accountability.

Education actors are held to account through political processes, laws and regulations, performance evaluations, market competition, social pressure and professional norms.

Different approaches to accountability may be effective in some contexts and for some aspects of education and detrimental in and for others. No one approach is universally effective at all times.

Accountability needs to emphasize building more inclusive, equitable, good-quality education systems and practices instead of blaming individuals.

No approach to accountability will be successful without a strong enabling environment that provides actors with the resources, capacity, motivation and information to fulfil their responsibilities.

To accomplish the larger shared aims of education, policy-makers must recognize actors' interdependence and work towards systems that incorporate mutual accountability approaches.

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Education is a collective responsibility 6
A supportive environment helps actors fulfil their responsibilities 11
Reader's guide to the report 12

People around the world, and the media in particular, describe education as in crisis. Problems characterized by a crisis narrative vary widely among countries: children unable to read after several years of school in sub-Saharan Africa (Africa Progress Panel, 2012); the impact of examination pressure on gender disparity in China (Yangcheng Evening News, 2016); the focus on employability as a distracting influence in German education (SWR, 2017); decentralization challenges for underfunded rural schools in Pakistan (Dawn, 2011); the proliferation of low-quality private universities in Paraguay (ABC Color, 2017); severely constrained chances at education for refugee children, especially those fleeing the war in the Syrian Arab Republic (Reliefweb, 2016).

This report also uses 'crisis' to alert the international community to how far it is from achieving its education commitments, most recently those under United Nations Sustainable Development Goal (SDG) 4, which aims to ensure inclusive, equitable, good-quality education and lifelong learning for all by 2030. With hundreds of millions of children and youth not gaining access to primary and secondary education, and with even more struggling to acquire basic skills, the persistent deficiencies in provision and quality must come into sharper focus, especially in the context of tight education budgets.

ACCOUNTABILITY IS A MEANS OF ACHIEVING SPECIFIC ENDS IN EDUCATION

Faced with education challenges, the public wants to know who is responsible and policy-makers look for urgent solutions. Increased accountability often tops the list.

> "Accountability is a process aimed at helping individuals or institutions meet their responsibilities and reach their goals"

Governance and management problems in any sector are often blamed on unclear lines of responsibility. When systems fail, people call for someone to be held responsible and for systems to be in place that ensure corrective action and prevent recurrence. Ideally, accountability is a process that helps individuals or institutions meet responsibilities and reach goals. Central to accountability is the relationship among individuals or institutions. For the purposes of this report, the definition of accountability has three main elements:

Australia: 'The sad truth about education: it's easier to blame someone else than fix the problem'

~ *Sydney Morning Herald, March 2017*

- Clearly defined responsibilities;
- Obligation to provide an account of how responsibilities have been met;
- Legal, political, social or moral justification for the obligation to account.

Accountability should be evaluated against specific goals (Maroy and Voisin, 2017; Perie et al., 2007). Treating accountability as an end in itself – suggesting that good governance amounts to more accountability – fails to recognize that accountability can have both beneficial and detrimental outcomes (Bovens, 2006; Gorur, 2017).

Accountability has been called a cultural keyword, with no straightforward definition. It draws meaning from context – its interaction with other words in the culture in which it plays a more or less central and often controversial role. Use of the term has grown from specific applications, usually in business, to broader and more ambiguous applications in various sectors and government domains. Disciplines and languages have no common definition of accountability (Bovens et al., 2014) (**Box 1.1**).

ACCOUNTABILITY IN EDUCATION REFLECTS BROADER SOCIAL AND CULTURAL TRENDS

Various social, political, economic and cultural trends have shifted education policy towards a greater emphasis on accountability. These trends sometimes operate in parallel, sometimes reinforce each other and, in a few cases, cancel each other out.

The rapid expansion of education in the second half of the 20th century poured more students into all levels of education and required the introduction of new public management techniques to ensure delivery of key inputs, adherence to rules and prevention of corruption. That

Uganda: 'We Need Strong Accountability Mechanisms for Quality Education'

~ The Monitor, February 2017

> One government response to the rapid expansion of education was to shift focus from managing inputs to managing results

impetus spilled over from efforts in the corporate world to make financial statements more trustworthy through independent audits. Along with audit and verification techniques exported from the private to the public sector came a system of values and goals that may or may not be suitable in the context of education (Power, 1997).

In high income countries, one government response to this management challenge, as in many other sectors, was to shift focus away from managing inputs – with the associated tendency for central government to micromanage administrative details – to managing results. The establishment of metrics and standardized instruments to enable comparisons of local governments and schools accompanied this focus on results. A few countries even moved towards accountability policies using student test scores to measure and evaluate school and teacher performance, linking results to rewards and sanctions. The No Child Left Behind programme in the United States was perhaps the best-known example (Harris and Herrington, 2006). Starting from a range of premises, calls for standardization of curricula and assessments have gained support all along the political spectrum, from those who wish to ensure a return to basics to those who wish to ensure no one is left behind.

To be effective, a focus on managing results requires government to generate more and better information. Often, governments share information as a result of calls for transparency and the introduction of freedom of information legislation, trends aided by technological advances that have reduced the cost of access to data. In addition, as part of a democratization trend, many governments have opened space for civil society organizations to generate their own evidence, voice concerns and challenge governments, schools and teachers on fulfilment of their responsibilities.

Decentralization has been a further development, which increases local control over education provision and often financing, while central government maintains responsibility for monitoring and regulation (Verger and Parcerisa, 2017). The decentralization trend largely resulted from frustrations with perceived failures

BOX 1.1

Accountability coincides with responsibility in many languages

For accountability to become a means of development, at a minimum its meaning must be clear. Yet most discussion about accountability occurs in English, which differentiates responsibility from accountability. Both words have Latin roots – meaning, respectively, responding and counting (or recounting, as an event or experience). The concepts are used interchangeably, however, and their definitions make them largely synonymous.

Linguistic frequency lists show 'responsible' and 'responsibility' appear in the top 1,000 lemmas, but 'accountability' appears after the first 3,000 lemmas. That relatively low frequency might suggest that, even in English, responsibility adequately addresses the need to capture performance, while accountability is a special case. Data from about a million Google scanned books show accountability has become a much more common term since the 1970s. Financial accountability appeared first, corporate accountability emerged in the 1950s, and government accountability – of relevance to education – was increasingly referred to from the 1970s onwards.

Languages such as Chinese and Vietnamese also differentiate between the terms. In Chinese, *zeren* means duty and occupational task of a role, while *wenze* or *jixiao wenze* means accounting for what is required for fulfilling a duty or task. In Vietnamese, ***trách nhiệm*** is a task or duty one must undertake, while ***trách nhiệm giải trình*** is a task or duty one must undertake that will be checked on by someone else, and about which one must answer any questions (**Table 1.1**).

TABLE 1.1:
Use of the terms responsibility and accountability in selected languages

Language	Responsibility	Responsible for...	Accountability	Accountable for...
Albanian	përgjegjësi	është përgjegjës për	llogaridhënja	llogaridhënës
Arabic	مسؤولية mas'ulia	هو مسؤول عن mas'ul an	مساءلة musa'ala	هو مسؤول عن mas'ul an
Bahasa Indonesia	tanggung jawab	dia bertanggung jawab untuk	akuntabilitas	dia bertanggung jawab untuk
Bengali	দায়িত্ dayitbo	তিনি জন্য দায়ী tini jon daitbo	দায়িত্ব/জবাবদিহিতা daytbo	তিনি জন্য দায়ী tini jon daitbo
Chinese	责任 zeren	(他/她) 负责 (ta) fuze	问责/绩效问责 wenze (jixiao wenze)	(他/她)应该对.....负责 (ta) yinggai dui.....fuze
Dutch	verantwoordelijkheid	antwoordelij voor	verantwoording	is antwoordelij voor
French	responsabilité	est responsable de	reddition des comptes	rendre des comptes
German	Verantwortung	ist verantwortlich für	Rechenschaftspflicht	ist rechenschaftspflichtig für
Greek	ευθύνη efthýni	είναι υπεύθυνος για íne ypéfthynos yía	λογοδοσία logodosía	είναι υπόλογος για íne ypólogos yía
Hebrew	אַחֲרָיוּת aharayut	הוא אחראי hu ahara'i	דין וחשבון Din heshbon	הוא אחראי hu ahara'i
Hindi	ज़िम्मेदारी jimedaarii	वह जिम्मेदार है vo jimmedaar hai	जवाबदेही javaabdehi	वह जवाबदेह है vo javaabdeh hai
Italian	responsabilità	è responsabile di	responsabilità	è responsabile di
Japanese	責任 sekinin	彼は責任があります kare wa sekinin ga arimasu	アカウンタビリティ akauntabiriti	彼は責任があります kare wa sekinin ga arimasu
Kinyarwanda	inshingano	kuzuza inshingano ze	guhiga	Imihigo
Malagasy	andraikitra	tompon' andraikitra amin'ny	maha-tompon'andraikitra	mpiandraikitra ny
Nepali	जिम्मेवारी jimevaarii	उहाँ जिम्मेवार हुनुहुन्छ uha jimmevaar hunuhunchha	उत्तरदायित् uttardayitva	उहाँ उत्तरदायी हुनुहुन्छ uha uttardayi hunuhunchha
Polish	odpowiedzialność	jest odpowiedzialny/a za	rozliczalność	jest rozliczany/a za
Portuguese	responsabilidade	é responsável por	prestação de contas	é responsável por
Romanian	responsabilitate	este responsabil pentru	responsabilitate	este responsabil pentru
Russian	обязанность abyazannost	отвечает за atviechaet za	Подотчетность atvietstvennost	отвечает за atviechaet za
Sinhalese	වගකීමක් vagakīvak	ඔහු වගකිව ohu vagakiva	වගකීමයි accountability	ඔහු වගකිව ohu vagakiva
Spanish	responsabilidad	es responsable de	rendición de cuentas	es responsable de
Swahili	wajibu	yeye ni kuwajibika kwa ajili ya	uajibikaji	yeye ni kuwajibika kwa ajili ya
Vietnamese	trách nhiệm	tôi chịu trách nhiệm	trách nhiệm giải trình	tôi chịu trách nhiệm giải trình

(continued on next page)

BOX 1.1 (CONTINUED)

Responsibility may be individual or collective, action-oriented or moral. People can be responsible for various tasks, or they may feel morally responsible for promoting certain ideals. They are not necessarily liable or obliged to report results. Management literature emphasizes the individualistic aspect of accountability. Many people can be responsible for making something happen, but the final accounting ought to be attributed to one individual.

Languages with a distinct word for accountability often refer to answering and rendering accounts or explanations. For example, in Russian and Swahili, the term refers to answerability; in Albanian and German, it refers to account- or explanation-giving. Yet many languages, such as Italian and Malagasy, only use the word responsibility. Bahasa Indonesia and Japanese have imported the term accountability from English as a neologism, as have other languages, depending on context. For example, accountability is used in Spanish in discussing development cooperation.

Sources: Abadzi (2017); Dubnick (2012; 2014).

of centralized bureaucratic systems (Rado, 2010). In Argentina, 43% of primary schools and 75% of secondary schools were under central authority until decentralization laws in 1993 and 1995 brought universal local control (Salto, 2017). In Poland, a 1999 reform shifted all ownership and financing to local government, supported by central monitoring tools, including a new school evaluation system (Jakubowski, 2017). In Viet Nam, the State Budget Law of 1996 and 2002 shifted more financing responsibility away from the centre and, by 2006, over 80% of all school financing came from the local level (Hoang, 2017).

In some countries, dissatisfaction with public education contributed to policies diversifying provision and creating an education 'market', whereby parents could choose schools based on school rankings published with the intent of spurring competition and quality. Part of a larger movement in all social sectors, marketization moves education from a public good focused on national interests to a private good responding to consumer demands (Ball, 2003). The idea that enforced marketplace competition could rectify education system failings can be traced to the 1950s in the United States (Friedman, 1962; Chubb and Moe, 1990).

Some of these ideas have been espoused and promoted by international organizations. The World Bank has promoted standardization, decentralization and accountability since the 1990s. Accountability was mentioned twice in the Bank's 1999 education sector strategy and 32 times in the 2011 revision (Joshi and Smith, 2012). Its World Development Report 2004 emphasized the importance of public services responding to local end users, advocating for greater decentralization and local control – and accountability (World Bank, 2004).

EDUCATION IS A COLLECTIVE RESPONSIBILITY

'Achieving quality education is a responsibility for all major stakeholders in education. For instance, government cannot be blamed for poor performance of pupils in schools. Teachers, head teachers, education supervisors, pupils and parents should be able to ensure that kids are in school and learning for an enhanced performance.'

IDDRISU BARIHAM, TEACHER TRAINER, GHANA

To feel accountable, a person must be identifiable. Between two people with the same intrinsic motivation for a task, the one with greater anonymity has a weaker incentive to exert the required effort. Actors asked to account for their actions strive harder to achieve the task. They will develop strategies that contribute to task fulfilment.

Reciprocal relations, altruism and the desire to perform public service suggest accountability should be strongest in smaller, closely linked groups whose members are in ongoing relationships. People in large, diffuse groups may feel limited personal obligation. People may also be more likely to deliver if held accountable for decisions rather than outcomes beyond their control. People are more averse to losses than they are attracted to gains. If they are held accountable for difficult outcomes, they tend to avoid risk and minimize their roles or adjust their behaviour in unintended ways to protect themselves (Abadzi, 2017).

> "People may also be more likely to deliver if held accountable for decisions rather than outcomes beyond their control"

Desirable results in education, especially those associated with SDG 4, can rarely be linked to individuals. Rather, they are complex outcomes resulting from many actors' efforts. As these outcomes rely on fulfilling shared responsibilities, accountability does not easily rest with single actors. As this report demonstrates, ensuring inclusive, equitable,

good-quality education is a collective enterprise in which all actors make a concerted effort to meet responsibilities. Education is essentially a shared responsibility, whether it is cultivating relevant work skills or culturally aware, tolerant citizens.

While those in the direct provision of education are usually considered more responsible, schools and teachers do not work in isolation from government decisions or community activities. This interdependence is one of several factors limiting the effectiveness of accountability mechanisms in education; unpacking the assumptions that underpin accountability requires caution. For one thing, responsibility may not be clear. Teaching, for instance, cannot be parsed into easily defined, routinely performed tasks. Even if that were possible, teachers may depend on the actions of others to fulfil their responsibilities.

The idea that incentives in the form of external rewards and sanctions motivate behavioural changes in the right direction is also questionable. Often, selected incentives do not align with psychological and education theories of motivation. The notion of shared responsibility contrasts with a common public rhetoric around accountability, which tends to be overly simplistic, driven by the assumption that behavioural change is only possible when serious consequences are made explicit (Braun and Kanjee, 2006). This report's treatment of accountability does not require the promise of reward or the threat of sanction as some, although by no means all, definitions do in the social sciences.

Faced with a wide range of possible outcomes often impossible to measure accurately, it is tempting to settle for quantitative indicators that do not capture the varied impact of education on individuals and society in the short and long term.

DIFFERENT APPROACHES TO ACCOUNTABILITY FIT DIFFERENT CONTEXTS

Yet individual or institutional responsibilities can be identified and those responsible can be expected to provide an account of their actions. It is important to be specific about the education context in which an accountability mechanism may operate, however. People working in a village school face different constraints than in a large education bureaucracy. Expectations in a system with malnourished students and few instructional materials differ considerably from those in a well-resourced system with cutting-edge technology. It is entirely different to hold someone to account for ensuring textbooks are delivered to all schools than for ensuring achievement of a national education plan objective that all children achieve minimum learning proficiency in reading in five years.

Problems and solutions will differ by context. Accountability approaches effective in some contexts and some aspects of education may be detrimental in others. This report discusses a range of accountability tools in various contexts and how they have or have not motivated actors in education to shift their behaviour towards achieving SDG 4 goals (**Table 1.2**).

For example, in democratic systems, all citizens can exercise their power to hold politicians, including those responsible for education, to account through voting. All education actors can hold each other to account by invoking laws and regulations. Mechanisms can range from government ensuring rules are followed internally in various levels and bodies, to independent audit institutions scrutinizing budgets and accounting reports to prevent and punish corruption, to schools calling on parents to explain unjustified student absences. Formal or, more often, moral codes of conduct form the foundation of social and professional education accountability, calling on individuals to respect norms of responsibility accepted by their communities and peers.

TABLE 1.2:
Approaches to accountability

Approach	Description	Potential motivation
Electoral	Citizens vote politicians in or out of office	Removal from office
Legal/regulatory	Laws or regulations establish formal checks and balances, and government publishes inspection or audit reports	Disciplinary action
Performance-based	Authorities evaluate performance information with respect to processes, outputs or outcomes	Sanctions or rewards
Market-based	Parents and students evaluate publicly available, comparable information and choose the preferred education option	Profit
Social	Individuals or communities use their own experience or other information to put pressure on education providers to meet norms of appropriate behaviour	Moral duty Public pressure
Professional	Peers observe and review others in their group to ensure they meet shared standards and expectations	Professional duty Peer pressure

Source: GEM Report team.

FIGURE 1.1:
How all actors in education are currently held to account

PARENTS
ATTENDANCE
TRUANCY LAWS
CONDITIONAL CASH TRANSFERS
PARTICIPATION in CHILD'S EDUCATION
PARENT-SCHOOL MEETINGS
STUDENTS
GOOD BEHAVIOUR
SCHOOL-WIDE CODES OF CONDUCT

INTERNATIONAL ORGANISATIONS
COMMON GOALS
COUNTRIES PARTICIPATE IN INTERNATIONAL BODIES
STANDARDS
AID to HELP ACHIEVE GOALS
AID REPORTING

PRIVATE SECTOR
SCHOOL MEALS
TRANSPARENT CONTRACTS
MONITORING and REGULATIONS
LEARNING MATERIALS
MEDIA SCRUTINY
PRIVATE TUTORING
CODES OF CONDUCT

Attention has recently turned to accountability mechanisms that seek significant step changes rather than incremental, corrective change in education systems. These centre on performance assessment, especially of education outcomes, and posit that failure to meet targets can be ascribed to individual irresponsibility and neglect of duty. Performance-based accountability links results with resource allocation and management decisions. Market-based accountability follows a similar logic, except that performance evidence informs parent and student enrolment decisions when choices are available.

While a wide range of accountability approaches exist, countries vary enormously in the extent to which they employ them. In some countries, a serious lack of checks and balances is symptomatic of neglect in the exercise of government or professional duty. In others, accountability has become a tool for policing and administrative control seeking to apportion blame to individual actors, with insufficient attention paid to the means used and the effects on equity. Evidence of the effectiveness of accountability mechanisms in education is mixed. Some countries achieve education goals without explicit emphasis on rewards and sanctions; in others, accountability mechanisms have promoted a renewed focus on what matters and have prevented abuses.

TRUST IS ESSENTIAL TO ACCOUNTABILITY AND REACHING EDUCATION GOALS

For accountability mechanisms to work, social, political, economic and cultural factors need to be in alignment. Adequate trust among parties is essential to achieve ambitious education goals that require collaboration, communication and a belief that others can be relied upon to deliver on commitments.

Trust between individuals may result from face-to-face interaction. For instance, students have greater trust in the authority of teachers who demonstrate caring and see to individual student needs (Gregory and Ripski, 2008). Trust between groups is more likely when they share values. Trust generates a belief in others' goodwill, even when they are relatively anonymous. In a sample of 74 countries, greater social polarization in the form of ethnic diversity and income inequality was associated with lower levels of general trust (Bjørnskov, 2006).

Trust in institutions reflects individuals' confidence in their quality and fairness, and tends to be positively associated with public satisfaction with the education system. The 2013 Gallup World Poll found that 66% of individuals worldwide were satisfied with their education systems, with regional shares ranging from nearly 80% in Eastern Asia and the Pacific to less than 60% in sub-Saharan Africa (Brixi et al., 2015). Lack of trust in the education system can lead to a disengaged public that believes its voice will not be heard and searches for alternative provision.

Trust in people, professions and processes affects how accountability mechanisms can be applied in education. For example, when teachers feel trusted, they are more likely to invest fully in school improvement and seek collaboration with peers (Borgonovi and Burns, 2015). And greater trust in teachers and the teaching profession may reduce the need for some externally imposed approaches to accountability.

Trust in the education system can be built by raising teachers' professional status, improving school leaders' capacity and promoting collaboration through professional learning communities (Fullan, 2011; Sahlberg, 2015). Greater clarity and transparency of roles and responsibilities can also build trust. With clear responsibilities, individuals are more likely to feel fairly treated (Cerna, 2014). Transparency can aid communication and ensure everyone has access to the same information.

By contrast, externally imposed accountability is likely to create distrust if people feel their autonomy is undermined (NCAHE, 2005; Stensaker and Harvey, 2011). In a self-reinforcing process, low levels of trust lead to more intense forms of accountability that further reduce trust levels. To overcome the feeling of external threat, stakeholders should be included in the creation of shared aims, increasing their motivation and, ultimately, their trust in the process.

South Africa: 'Stop the Education Blame game'

~ Mail and Guardian, October 2016

> Accountability influences the way students learn, teachers teach, and governments govern

Starting from different premises, two examples of education systems without high-stakes consequences show that trust is the deeper foundation for education performance. In Finland, primary and secondary schools and teachers are not held to account through test scores. Instead, monitoring of standards is based on national assessments in a sample of schools (Aurén and Joshi, 2016). The focus is on creating an environment of mutual responsibility and trust (Sahlberg, 2009). High levels of trust in tertiary education professionals also reduce the need for accreditation or approval processes; the focus is on self-evaluation and professional development (Välimaa, 2004).

In Greece, severe distrust between teachers and government has paralysed any discussion of accountability. External teacher and school inspections, seen as a tool of political oppression, were abolished in 1981. Seven different laws have since been proposed to reintroduce external evaluation. All failed, including the latest proposals emphasising self-evaluation, which teachers often support. The country is an exception in Europe for having no national assessment of learning achievement. An attempt to reform tertiary education institution management to increase transparency and improve standards achieved rare cross-party agreement, but even it was never implemented (Dimitropoulos and Kindi, 2017).

ACCOUNTABILITY DILEMMAS AFFECT EVERYONE INVOLVED IN EDUCATION

Accountability may seem abstract. However, its presence or absence influences the way students learn, teachers teach and governments govern. Well-designed accountability mechanisms encourage collaboration, leading to inclusive, equitable, good-quality education; badly designed ones supply a veneer of effectiveness or, worse, bias education and undermine the very purpose for which they were introduced. In any attempt to introduce accountability, dilemmas arise.

Imagine a student who walks an hour and a half to school where there is no path or public transport and no teacher when they arrive. Is someone to blame? Who? What can the parents do if they are not literate and cannot afford to find out whether the teacher had to attend to regular, non-classroom administrative duties or was simply negligent, backed by a local politician who helped appoint the teacher in the first place?

Imagine a head teacher in a school whose students perform poorly on the year-end examination two years running, despite efforts to reverse the situation. Results are used to review the school; a third year of poor results will close it. Despite believing school should provide a well-rounded education that takes into account the needs of students in this disadvantaged area, the head teacher may ask staff to alter lesson plans to align with the examination so students score higher the following year.

Imagine parents whose school's rating has declined. A new government policy allows for school choice, and data in newspapers offer some comparison. A well-off neighbourhood school attracts their interest but is oversubscribed, a frustration compounded when a better-connected neighbour secures a place. The community is left to wonder why local government does not try harder to improve their school rather than raise expectations of better opportunities elsewhere.

Imagine a lecturer in a system where student evaluations count in national tertiary education institution assessment. The professor believes in merit and marks essays accordingly, provoking a backlash by aggrieved students who give negative evaluations. This brings down the average of the department, which loses its rating and, consequently, its eligibility for research funding. Despite the demotivating effect, the lecturer, faced with the threat of not being promoted, decides to mark essays leniently next time.

Imagine an education minister lambasted in the press for the country's latest international learning assessment results. The ministry's communications office press releases at once question whether ministry leadership can be held accountable for predecessors' policy results and promise interventions that could ever affect scores

after the government's mandate. The minister turns to urgent issues on which re-election depend, such as preventing curriculum reform in an area protected by an influential lobby, braking on reform opposed by powerful unions or hushing audit results that damn a well-connected private provider.

Imagine a donor agency with decades of experience, proud of its record promoting education development in several countries. Yet its managers are under pressure by their political leaders to deliver visible results in the short term that can convince a sceptical electorate where tax payer dollars should go. Delivering more textbooks is far less conducive to development than helping reform the national textbook board, but the latter will not win votes at home. Moreover, working with the partner country on building the textbook board's capacity is difficult and the results may be uncertain; it also requires personnel continuity, which is in short supply on both sides.

Imagine a voter choosing between education programme platforms before an election. Even assuming a free press compares the programmes, voters likely receive or register partial information. Government budget presentations never highlight funding disparity between schools or regions; no monitoring report links annual government programme promises to actual government record, let alone results; and debates between political leaders, if they touch upon education, appeal to emotions and not to evidence.

Taking the measure of teaching amounts to more than performance

The core of the accountability question comes back to teachers, who carry the responsibility for educating and bear the brunt of recent accountability efforts. In his portrait of an English country doctor in the 1960s, long before modern accountability mechanisms, the novelist and critic John Berger asked whether one should judge

doctors professionally by simply appraising how they apply their professional skills. The question refers to the general practitioner rather than the specialist, much as the core questions of accountability in education apply to the mass of primary and secondary teachers rather than to university professors.

'Let us assume that the consistent level of ... performance as a doctor can be measured as a technique. He can then be graded as a technician. Since with his technique he treats illness, and illness requires treatment, his grading as a technician should be able to determine the value of his work. But could this satisfy us? The value of his capacity rather than the value of what he has really achieved? ...

'You cannot expect to evaluate a man's life's work as though it were a stock in a warehouse. There is no scale of measurement possible ... [We] in our society do not know how to acknowledge, to measure the contribution of an ordinary working doctor. By measure, I do not mean calculate according to a fixed scale, but, rather, take the measure of. ... It is a very different matter when we imaginatively try to take the measure of a man doing no more and no less than easing – and occasionally saving – the lives of a few thousand of our contemporaries. Naturally we count it, in principle, a good thing. But fully to take the measure of it, we have to come to some conclusions about the value of these lives to us now.'

(Berger, 1967)

Substituting teacher for doctor, ignorance for illness, and easing with enriching helps summarize the dilemmas facing policy-makers seeking to overhaul education systems through performance-based accountability. Responses to systemic problems are increasingly laid at the feet of schools and teachers. In countries as varied as Australia, Bangladesh, Oman, Saudi Arabia and South Africa, one-sided media has often represented teachers as lazy, unprofessional and sometimes engaged in misconduct (Alhamdan et al., 2014). In Pakistan, the level of teacher salaries was identified as the crux of the problem, even though the country has some of the world's highest levels of inequality and lowest levels of education spending (Pakistan Education Task Force, 2011). In Turkey, following poor performance on the 2003 and 2006 Programme for International Student Assessment, the ministry placed the blame mainly on teacher inability to apply the new curriculum (Gür et al., 2012). Caution is needed to maintain a focus on shared responsibility.

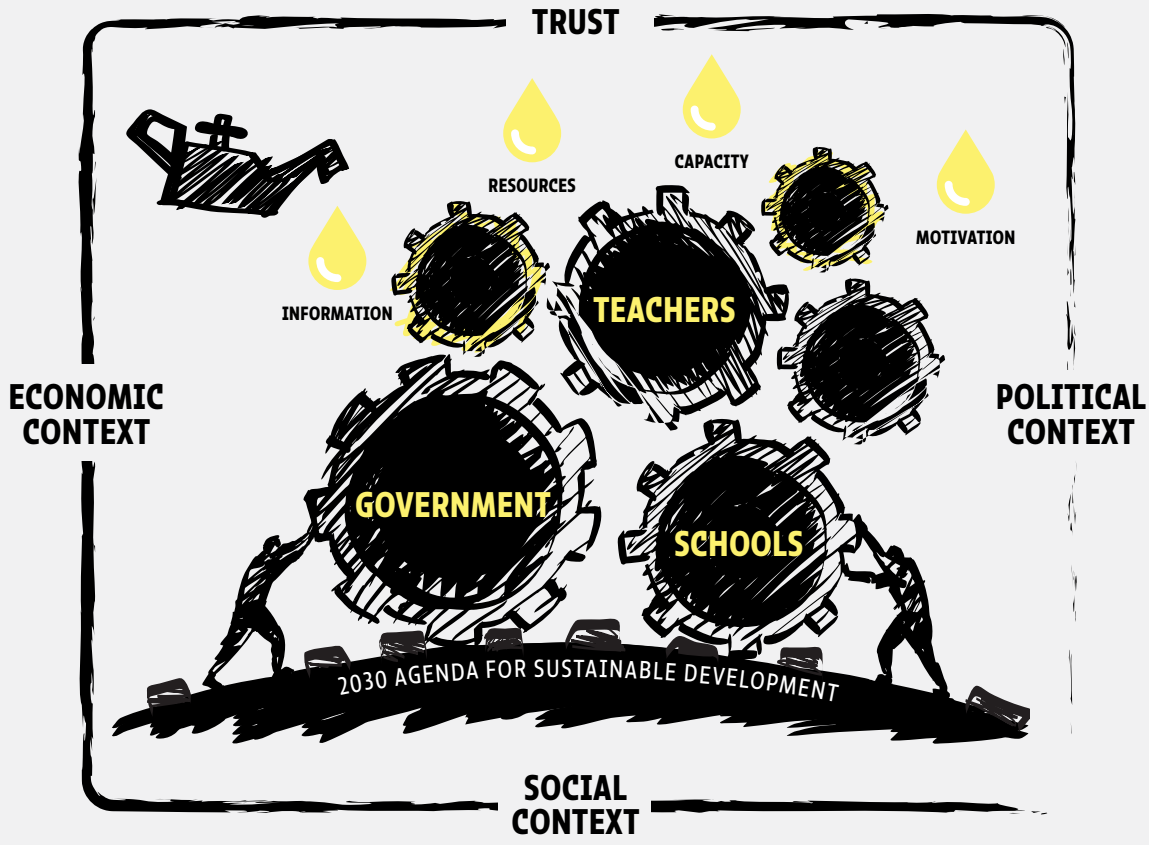
> "Responses to systemic problems are increasingly laid at the feet of schools and teachers"

A SUPPORTIVE ENVIRONMENT HELPS ACTORS FULFIL THEIR RESPONSIBILITIES

No accountability approach can succeed if actors lack an enabling environment or are ill-equipped to meet their responsibilities. A supportive environment has four essential characteristics. First, actors need clear information. They must know, understand and agree to their responsibilities and how their fulfilment will be evaluated – and have access to relevant data. Second, actors must have the resources necessary to complete their tasks. It is not uncommon for governments to ask schools to achieve targets without providing the necessary financial means. Third, actors must have the capacity to meet their responsibilities. This includes individual, group and institutional capability. Fourth, individuals must be motivated to fulfil their responsibilities. Motivation includes trust in the selection of the approach and in its purpose, as well as the political and personal will to complete the tasks at hand (Fullan, 2000; Olsen, 2014).

Ultimately, actors depend on each other to reach shared education goals; meeting those goals requires collaboration and communication. Moreover, public trust and support depend on the goals being seen as legitimate and achievable, within resource constraints. Building trust requires including as many stakeholders as possible in creating shared aims and using flexible approaches that make judicious use of the information available. The four essential enabling characteristics help actors efficiently and effectively meet their individual responsibilities within the larger social, political and economic context (**Figure 1.2**).

FIGURE 1.2:
Actors are interdependent in achieving inclusive, equitable, good-quality education



Source: GEM Report team.

READER'S GUIDE TO THE REPORT

Accountability matters enormously for improving education systems. The mission of this report is to be "an indispensable evidence-based advocacy tool for holding the international community and governments to account for their international commitments and for promoting equitable and inclusive good-quality education and lifelong learning for all". The report is a strong proponent of effective accountability, deeming it key to education systems of good quality, while recognizing that it is a means to an end – a tool in achieving SDG 4 targets – not a goal of education systems in itself.

> "This report is a strong proponent of effective accountability as key to education systems of good quality"

Some assumptions by those propounding an uncritical approach to accountability in education need to be questioned. The drumbeat of accountability for accountability's sake is misdirected. Problems in systems cannot be reduced to a simple dichotomy of successful or failing education.

The 2017/8 Global Education Monitoring Report reviews global evidence on the interdependent mechanisms holding key actors in education to account. It aims to answer the following questions on accountability in education:

- Which approaches to accountability are more likely to help countries accomplish the aim of ensuring inclusive, equitable, good-quality education?
- Under what conditions or circumstances are various approaches to accountability effective in meeting the aim of inclusive, equitable, good-quality education?
- What is the role of the enabling environment in ensuring effective accountability, and what is needed to foster such an environment for the actors involved?
- How can accountability policies take into account the interdependence of actors working towards a shared aim?

The thematic part of the report, Chapters 2 to 7, focuses on the main education actors and how they are held to account. All of them play a role, if with varying degrees of responsibility. Government, schools and teachers are most central, but parents and students, international organizations and the private sector also have distinct roles. Each chapter ask three general questions:

- What is the actor responsible for?
- What approaches have been used to hold the actor accountable for their responsibilities? Are these approaches effective, and why?
- What is necessary in the enabling environment to help the actor fulfil their responsibilities?

The monitoring part of the report, Chapters 8 to 20, serves twin purposes. First, as always, it reviews performance against the international education targets. Second, as monitoring is a key tool for accountability, this part complements the thematic part through targeted policy focus sections in most chapters, addressing specific related issues. For example, corruption in education is addressed in Policy focus 20.1 (**Table 1.3**). Following an introduction (Chapter 8), ten chapters address the seven targets and three means of implementation (Chapters 9 to 18). Chapter 19 reviews the role of education in three other SDGs: those on nutrition, health and water. Chapter 20 looks at public, external and household finance.

In conclusion, Chapter 21 synthesises the key evidence and offers recommendations primarily targeted at governments.

TABLE 1.3:
A guide to following the accountability theme throughout the report

Actor	Thematic part	Monitoring part
Governments	Chapter 2	Policy focus 13.1: accountability for right to inclusive education Policy focus 17.1: accountability in scholarship programmes Policy focus 14.1: protecting internationally mobile students Policy focus 20.1: corruption in education
Schools	Chapter 3	Policy focus 9.1: student and school learning data Policy focus 10.1: quality assurance in early childhood education Policy focus 11.1: quality assurance in tertiary education Policy focus 11.2: accountability for affordable tertiary education Policy focus 12.1: quality assurance in skills development Policy focus 14.1: accountability for adult literacy programmes
Teachers	Chapter 4	Policy focus 18.1: preparing teachers for accountability pressures
Parents and students	Chapter 5	Policy focus 20.2: results-based payment approaches in aid
International organizations	Chapter 6	
Private sector	Chapter 7	

Source: GEM Report team.

Students gather on the streets of Santiago, Chile, to demand lower fees for higher education.

CREDIT: Hugo Infante/UNESCO

CHAPTER

2

Governments

KEY FINDINGS

Accountability starts with governments, which are the primary duty bearers of the right to education.

Citizens can use elections to hold governments to account, but only 45% of elections were free and fair between 2001 and 2011. And politicians often focus more on visible promises, such as school infrastructure, than on less tangible ones, such as teacher professional development.

Social movements put pressure on government. Anti-corruption protests related to public services accounted for 17% of protests in 84 countries over 2006–2013.

The media plays a key role in investigating and reporting wrongdoing. In Uganda, a decrease in distance of 2.2 km to a newspaper outlet increased the share of funding that reached a school by nearly 10 percentage points.

Teachers' unions can hold the government to account for education reforms. Yet 60% of unions in 50 countries reported never or rarely having been consulted on issues such as the development and selection of teaching materials.

The basis for accountability is a credible education plan with clear targets that allocates resources through transparent budgets that can be tracked and queried.

Policy processes must be open to broad and meaningful consultation. In Brazil, about 3.5 million people participated in the national education plan consultation.

Legislatures have oversight roles but their capacity to enforce is often weak. In Bangladesh, there was an average delay of 5 years before government agencies responded to audit observations on primary education and 10 years on secondary.

Internal and external audits are essential to limit waste, misallocation and corruption. Civil society support can be crucial. In the Philippines, volunteers monitor textbook delivery points, helping reduce costs by two-thirds and procurement time by half.

Ombudsman offices help investigate complaints against government. The ombudsman offices in Latin America from 1982 to 2011 helped increase access to education, despite a lack of sanctioning power.

Citizens can take the government to court for violating the right to education in only 55% of countries. This ability has been exercised in 41% of countries, with effects on school meal provision in India, pre-school funding in Argentina and school infrastructure in South Africa.

While national education monitoring reports are essential for communicating progress against commitments, governments in only 108 of 209 countries produced such reports between 2010 and 2016. Only one in six countries did so annually.

People's voice is critical for holding governments accountable 21
Governments must build formal mechanisms that help hold them accountable 26
Conclusion 39

'There is shared responsibility for quality education. However, ultimately the government has accountability to ensure that the education systems are established in a way which will facilitate quality teaching and learning.'

AMY LIGHTFOOT, TEACHER, UNITED KINGDOM

Government has twin roles as protector of rights and provider of the basic goods and services that individuals cannot provide for themselves. These roles underlie the responsibilities of government for ensuring inclusive, equitable, high-quality education for all.

Education as a fundamental human right is enshrined in the 1948 Universal Declaration of Human Rights and other international human rights instruments. All governments have ratified at least one of these international treaties obliging them to guarantee the right to education. Accordingly, they must provide education that is available, accessible, acceptable and adaptable to diverse needs (Tomaševski, 2001a). While most international legal requirements are based on primary education for all, countries are also expected to move towards providing free secondary and tertiary education (CESCR, 1999). Beyond formal treaty commitments, governments have recently subscribed to the aspirational targets of UN Sustainable Development Goal 4 on education (SDG 4).

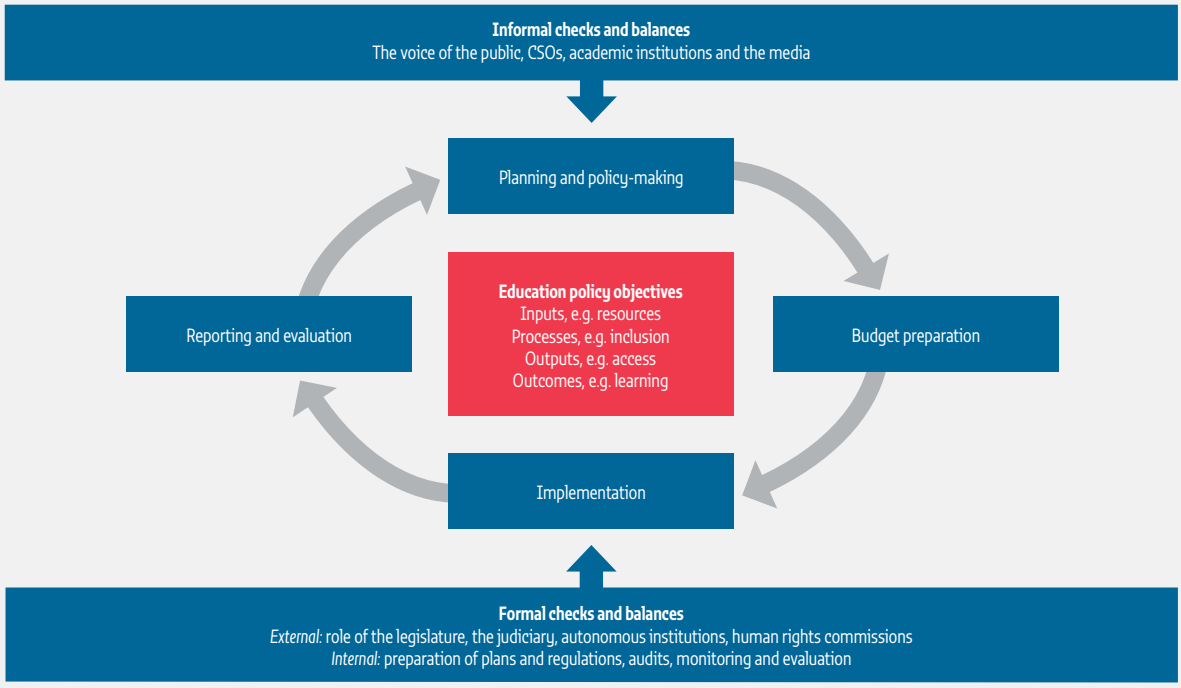
Following from these obligations, governments have the responsibility to set and execute education policy, within their resource constraints. A public financial management cycle follows a series of steps, including policy formulation, resource allocation, implementation and reporting on use of funds. Reporting should help evaluate the achievement of results related to access, inclusion and quality. Feedback from this final stage should inform the next cycle (**Figure 2.1**).

There is widespread recognition that holding governments accountable is very difficult. There is no single formula for how governments should deliver high-quality education. Moreover, a government is not a single, uniform actor but is composed of many sectors, departments, levels and authorities. Various government structures and capacities influence the challenges governments face, their ability to overcome them and the approaches that can be used to hold them accountable for meeting responsibilities. For instance, highly centralized systems are characterized by a range of hard control and command tools. In more decentralized systems, coordination increasingly relies on softer, indirect mechanisms enabling central and local governments to collaborate, while leaving policy-makers to organize implementation independently (Bray, 1999; Lassnigg, 2016). Fragile, post-conflict and post-disaster states with weaker administrative structures and capacity are also in a weaker position to enforce policies and regulations.

Afghanistan: 'Violence, corruption threaten Afghan progress in getting kids to school'

~ *Reuters, March 2017*

FIGURE 2.1:
Formal and informal checks and balances hold governments to account for their education commitments
The education policy and budget cycle



Source: GEM Report team.

Depending on the country context, there are assorted checks and balances to maintain government focus on exercising authority in a way compatible with its commitments. First, governments are held to formal internal controls and administrative procedures that ensure the various bodies function in line with rules and regulations.

Second, democratic systems use formal external mechanisms that separate powers to ensure no single institution can abuse its authority. For example, the legislative and judicial branches exert control over the executive. Similarly, governments establish autonomous institutions, which can review performance. In addition, formal monitoring reporting obligations are enshrined in international human rights treaty frameworks, even if power to enforce recommendations is limited.

Third, informal efforts by external actors within a broader political process – political parties, civil society organizations (CSOs), trade unions, research institutions, the media, think tanks, international organizations in their advisory capacity – all serve to hold governments accountable for commitments, policies and outcomes. Their efforts involve the free flow of information to ensure transparency. Free and fair elections are also a fundamental accountability mechanism.

This chapter focuses on how these three types of checks and balances – informal, formal external and formal internal – are involved in holding the government accountable and under what conditions they are effective in promoting inclusive, equitable, high-quality education for all. The first part of the chapter discusses the informal mechanisms that hold sway over the stages of the public policy and budget cycle. The second part discusses the external and internal formal mechanisms holding governments accountable, from the formulation of plans and budgets to the role of legislatures and the legal tools that help protect the right to education.

The issue of government accountability is vast. Not all aspects are covered here. For example, readers are referred to **Chapter 7** on government responsibility in partnership with the private sector.

PEOPLE'S VOICE IS CRITICAL FOR HOLDING GOVERNMENTS ACCOUNTABLE

People's capacity to demand transparency and scrutinize operations is essential for developing and expressing informed views that hold government to account. People's voice is channelled in many ways, from the general expression of public will through election processes and protest movements to specific forms of engagement through CSOs and trade unions. In these efforts to participate meaningfully in decision-making that affects their lives, people are aided by the evidence provided by a wide range of actors, such as the media and academic institutions.

ELECTIONS ARE AN IMPORTANT MEANS OF HOLDING GOVERNMENTS ACCOUNTABLE

Elections are the most common tool citizens have to hold governments accountable, creating a formal relationship between policy-makers and the public (Ashworth, 2012; Mulgan, 2003). The risk of being voted out is expected to motivate elected officials to respond to the electorate's demands (Gélineau, 2013). Elections must be legitimate to be an effective mechanism, yet only 469 of 890 elections of national leaders in 169 countries between 1975 and 2011 were considered free and fair. Over time the percentage of legitimate elections has decreased; between 2001 and 2011 only 45% were free and fair (Bishop and Hoeffler, 2016). Moreover, elections are infrequent, and it can be hard to link specific political actions with eventual impact conclusively.

This is especially the case for education. While it is part of most campaign promises, education policy is typically not among the highest-priority items in election campaigns, which means the link between electoral accountability and education is somewhat tenuous. In addition, the results of even good education policy take more time to materialize than the typical term in office of a government.

> "In 16 sub-Saharan African countries, the chance of school fee abolition increased by at least four times in election years"

One exception is school fee abolition, which became a politically appealing issue in sub-Saharan Africa. For instance, the promise to eliminate primary education fees fuelled President Museveni's election in Uganda in 1996, and fees were abolished in January 1997 (Stasavage, 2005). An analysis of fee abolition in 16 sub-Saharan African countries between 1990 and 2007 showed that the likelihood of abolishing fees was at least four times higher during an election year, rising from 1.3% to 5.8% (Harding and Stasavage, 2014).

However, electoral accountability is often not enough to hold leaders accountable for education promises, since citizens may have difficulty identifying who is responsible for fulfilling them and at what cost. While abolishing school fees was associated with a 5.5% increase in attending school, the pupil/teacher ratio rose by 8 students in 16 sub-Saharan African countries (Harding and Stasavage, 2014). It is common for politicians to focus on more visible policy promises that can be more easily tied back to them, such as school infrastructure, instead of less tangible education inputs, such as teacher professional development (Akyeampong, 2017; Mbiti, 2016).

Furthermore, evidence is mixed on electoral competition motivating governments to respond to citizen demands. Evidence from Brazil suggested that term-limited politicians were less motivated. Local mayors facing

> In Brazil, local mayors facing re-election misappropriated 27% fewer resources than their term-limited colleagues

re-election misappropriated 27% fewer resources than their term-limited colleagues (Ferraz and Finan, 2011). In a separate study, the effect of a cash transfer programme conditional on student attendance had a bigger effect on dropout rates when mayors could be voted out (de Janvry et al., 2010). On the other hand, in the Republic of Korea, gradually switching from direct appointment to election of superintendents between 1990 and 2006 did not significantly change education expenditure, completion or enrolment rates (Jeong et al., 2017).

In fact, education quality can be high even in societies lacking democratic governance and adequate attention to public opinion, since education is critical for establishing national identity, fostering economic growth and curbing civil unrest (Dahlum and Knutsen, 2017). Conversely, even in democratic contexts, civil society actors increasingly participate in informal protests or formalized social accountability initiatives, which have grown as a result of perceived failures in holding governments accountable through traditional means such as elections (Fox, 2015).

SOCIAL MOVEMENTS OFTEN ADD A CRITICAL DIMENSION TO THE POLITICAL PROCESS

Ways to voice concerns outside formal political mechanisms play an important accountability role. Social movements can have a greater impact on policy decisions than electoral accountability alone (Fairfield and Garay, 2017). They fill the gap between election years – which is the bulk of the time, when government policy is actually at work – putting more pressure on policy-makers than interim voter preferences.

Sustained movements, often a force for social change, usually occur when governments do not deliver on their commitments (Tarrow, 2011). An analysis of 843 protests in 84 countries between January 2006 and July 2013 found that about 58% focused on issues of economic justice and austerity and 45% on the inadequacy of political representation and political systems. Anti-corruption protests, sparked by complaints over poorly delivered public services, accounted for 17% (see **Chapter 20** for further analysis of accountability mechanisms on corruption in education).

Within the education sector, protests led by students and teachers have focused on reforms that hiked tuition fees or significantly cut budgets, especially after the global financial crisis in 2008. In 2009, a national campaign in the United States called for a halt to austerity cuts in education. In 2012 and 2013, teachers in Australia and Denmark and students in Hungary and Italy protested cutbacks in public education. Other examples include opposition to expansion of for-profit tertiary education in Colombia in 2011, use of quotas for scheduled castes in tertiary education in India in 2006, the exclusion of Kurdish as a language of instruction in public schools in Turkey in 2010, and the high cost of education in the Philippines in 2013 (Ortiz et al., 2013).

In Chile, which has one of the world's most segmented education systems, secondary school students began protesting the privatization and socio-economic segregation of education in 2006. They were joined in 2011 by university students protesting unsustainable student debt levels in the country's highly privatized tertiary education system (Bellei and Cabalin, 2013). Leaders of the Chilean Student Federation rose to national prominence, eventually playing a crucial role in the change of government in 2014. The new government introduced the biggest education reforms in 30 years, aiming to stem some of the worst consequences of privatization. In a first stage, in 2015, it prohibited state-subsidized private schools from making a profit and selecting students (Government of Chile, 2015). In 2016, free tuition was extended to poorer students attending some types of tertiary education institutions (de Gayardon and Bernasconi, 2016). With more exemptions promised, students say they will continue mobilizing until their demands are met (Peralta, 2017).

Hungary: 'Hungary mulls education reform after string of protests'

~ Reuters, March 2016

In South Africa, only 19% of tertiary education students received state-sponsored financial aid in 2014/5 (Nnadozie, 2017). Annual tuition accounts for 20% to 40% of average annual household income, pricing out many students, while 20% of those with student loans have defaulted (KPMG South Africa, 2016). In late 2015, pressured by the 'fees must fall' protests – the largest student uprising since 1976 – the government announced a 2016 freeze in fees. In September 2016, it released a staggered fee increase schedule, with 2017 increases capped at 8% and a tuition freeze for low earners (Nnadozie, 2017). A fee commission, which was to present recommendations to government, missed its deadlines in November 2016 and June 2017.

The movement is a good example of the growing role of social media, including blogs, social networking sites and interactive websites, which allow users to share information widely, at low or no cost, with no journalist filtering or government censorship (Dempsey and Meier, 2017). Social media lower communication barriers to social movements. The Twitter hashtag #FeesMustFall trended countrywide, played a central role in the national political discussion and was widely used in mainstream media coverage of the protests (Bosch, 2016).

CIVIL SOCIETY DISSEMINATES ESSENTIAL INFORMATION ON EDUCATION

Often working with social movements, CSOs enlist research and surveys, coalition-building and media campaigns to hold national and local governments to account.

CSOs use research and survey information to highlight policy deficiencies and advocate for change. In India, Kenya, Pakistan, Senegal, Uganda and the United Republic of Tanzania, citizen-led assessments evaluated children's basic literacy and numeracy skills (UNESCO, 2015a). In India, the Annual Status of Education Report (ASER) has brought learning to the centre of discussions in the political debate. Between 2006 and 2017, political parties used ASER findings to ask over 70 questions in Parliament related to low and declining learning levels, dropout rates, teacher absenteeism and conditions of rural schools (ASER, 2017). In the United Republic of Tanzania, HakiElimu, founded in 2001, conducted a budget tracking analysis and found that 93% of schools had not received promised capitation grants in 2011. Its report, accompanied by a strong media campaign, prompted government to improve disbursements to schools (Carlitz and McGee, 2013).

CSOs form coalitions to increase pressure on government. Procurement of teaching and learning materials is a common area of focus. In Malawi, the Civil Society Coalition for Quality Basic Education monitored the education budget and found that teaching and learning materials appeared in budget allocations but had not been procured for four consecutive years (Claasen, 2013).

The Campaign for Popular Education, a national coalition of non-government organizations (NGOs) in Bangladesh, is particularly known for its annual *Education Watch* reports, published since 2004 (CAMPE, 2017). In 2015, it held public hearings to discuss the education budget with local communities and organized a policy dialogue on education financing that brought together development partners, teacher associations, legislators and ministers. It appealed to the prime minister to increase the education budget to 20% of the total government budget by 2021; it is currently below the minimum 15% threshold proposed in the Education 2030 Framework for Action (GPE, 2016a).

The media are a primary means by which CSOs bring their work to public attention. In the United Republic of Tanzania, the latest Uwezo Annual Learning Assessment Report received wide broadcast and print coverage, with citations in over 300 news items in 2016 (Twaweza East Africa, 2017). *The Citizen*, the country's leading English-language newspaper, reported on wide regional disparity (Gregory, 2017). The issue of teacher and student absenteeism (25% and 29%, respectively) and its financial implications was another focus (UWEZO, 2017).

THE MEDIA CAN BE A KEY PARTNER IN HOLDING GOVERNMENT TO ACCOUNT

The media have huge potential to raise the visibility of education issues, putting pressure on education actors to meet their responsibilities and pursue policy change. By exposing evidence and directing focus, they can set the agenda for the public and policy-makers. In the United States, more press coverage of politics resulted in better-informed citizens, more active politicians and stronger civil influence on policies (Snyder Jr and Strömberg, 2010).

In England and Wales (United Kingdom), the School Teachers' Review Body, an independent body focused on pay and working conditions, reported teacher earnings grew more slowly than the overall economy and the public sector average over the decade to 2017. The report cautioned that schools risked not being able to recruit and retain a high-quality workforce, and recommended

increasing a proposed 1% pay increase (School Teachers' Review Body, 2017). The recommendations and the government's response received widespread coverage in major respected print and online media outlets, including BBC News, *The Independent* and *Tes* (the former *Times Educational Supplement*) (Coughlan, 2017; Cowburn, 2017; Hazell, 2017).

The media often turn their attention to equity issues. In Turkey, mainstream media outlets, including *Cumhuriyet* and *Hürriyet*, along with digital outlets such as *Al Jazeera Türk*, covered 2014 findings on the strong relationship among socio-economic background, home language, location and learning achievement, as published in the annual monitoring report of the Education Reform Initiative think tank. One finding was that students who did not speak the language of instruction at home were lagging two years behind peers who did (Atalay, 2014; Oral and Mcgivney, 2014; Özkan, 2014; Salman, 2014).

Online publication in particular offers a way to familiarize the public with education research otherwise accessible only to specialists, and to express dissenting views on established policy decisions. Examples include *The New York Times* questioning the effectiveness of performance-based pay and *The Guardian* questioning the design of criteria used to assess the effectiveness of tertiary education (Glaeser, 2010; Wilsdon, 2015). The need to popularize access to research findings has led to dedicated websites, e.g. The Conversation (2017). The role of the media is critical in creating informed public opinion.

The media have played a role in investigating wrongdoing and reporting potential cases of corruption (see **Policy focus 20.1**). Increasing the information flow through the media about funding allocation can help empower the public and increase pressure on education officials to act responsibly. In the late 1990s, Uganda's government initiated a newspaper campaign to publish information on the amount and timing of capitation grant disbursements by the central government to school districts. A decrease in distance of 2.2 km to a newspaper outlet increased the share of funding that reached a school by nearly 10 percentage points (Kuecken and Valfort, 2015; Reinikka and Svensson, 2011).

In Madagascar, the grant received by 20% of schools in 2002/3 did not correspond to the declared amount sent by the district. Anecdotal evidence suggested the funds were diverted to non-education purposes or used privately by local officials. Campaigns via newspapers, radio and television led to decreased probability of such local capture, although the impact depended on local literacy rates. Where illiteracy was widespread, the impact of newspapers and poster campaigns was limited, while radio and television were more efficient (Francken et al., 2009).

In Mexico, the 2013 National Census of Schools, Teachers and Students of Basic and Special Education revealed some 39,000 teachers nobody had seen or known at their purported workplaces. The results were reported in major national and international media outlets, including *El Universal*, *Milenio* and *The Wall Street Journal* (Carballo, 2014; Harrup, 2014; Miranda, 2014). The Secretariat of Public Education revised its administrative records to update personnel statistics and investigated those who were being paid but not working (Rojo and Bonilla, 2017).

In the Russian Federation, the United Kingdom and the United States, an analysis of tertiary education news in 1998–2007 showed the media regularly reported on corruption, including bribes, cheating and plagiarism, but was mostly silent on ethical issues, such as sexual and other misconduct and abuse of public property. There was a stronger emphasis on fraud, plagiarism and cheating in UK and US media, while Russian media focused on bribery in admissions and degree completion (Osipian, 2008).

In 2016, the independence of 12 leading Swiss universities was called into question when their sponsorship deals, especially with the pharmaceutical industry, and the potential conflict of interest were investigated by the national public broadcaster Schweizer Radio und Fernsehen. Transparency standards differed among universities; the privately financed budget share ranged from 9% to 45%. The investigation revealed that one pharmaceutical company reserved the right to alter research results. The findings sparked a national debate on making these contractual arrangements publicly available (SRF, 2016).

The media are not always up to the task

In times of rapid change in education, exposing problems and publicizing information are important media functions to ensure government accountability in education. Yet to achieve these and reflect diverse social views, the media need to be independent, competent, reflective, democratic and accountable – qualities too often lacking, resulting in public distrust. A survey in 36 countries showed that less than half of respondents (43%) trusted the media and almost one-third (29%)

avoided the news. While expansion of the internet and social media may have exacerbated the problem, the underlying drivers of mistrust in many countries have much to do with a politically polarized media landscape. Concentrated ownership, but also restrictions on press freedom, lead to perceptions of media bias (Newman et al., 2017).

In many countries, reporting quality may be poor. In addition to reflecting inherent bias, the media determine what qualifies as newsworthy. An analysis of media coverage of the Programme of International Assessment of Adult Competences in England (United Kingdom), France and Japan showed that it had a brief shelf life, although online and social media, especially those oriented to professional audiences, offered additional possibilities to delve more deeply into the results and influence policy formulation (Yasukawa et al., 2017).

The skills of those researching, analysing, organizing and writing or broadcasting news play an important role in reporting quality. For example, the wide coverage of national and international learning assessments tends to be simplistic, emphasizing league tables and rankings instead of providing more nuanced analysis of causes, caveats and policy implications for which governments can be reasonably held to account.

A comparative analysis of press reports in Finland, France, Germany and the United Kingdom on the results of the Progress in International Reading Literacy Study and the Programme for International Student Assessment showed an excessive, negative focus on country performance instead of policies and practices that explain differences. The extent to which governments, and especially individual politicians, were held directly accountable varied among the four countries, depending on press tradition and education system structure. The extent of the response depended, in turn, on the way results were presented and whether media reporting affected voter intentions, a parameter that varies by country and is known to be stronger in Germany (Dixon et al., 2013).

TEACHERS' UNIONS CAN HOLD THE GOVERNMENT TO ACCOUNT

Teachers' unions, as powerful stakeholders in many countries, can hold the government to account by propelling or resisting education reform. While countries with some of the strongest-performing students often have strong teachers' unions (OECD, 2011), unions' role in shaping reform is mixed. In countries where strong unions oppose reform, the government often focuses on smaller-scale efforts less likely to be blocked. In other cases, government involves and cooperates with unions to implement far-reaching changes in education policies. Political history and the broader rhetoric surrounding labour unions can influence teachers unions' relationships with government and the unions' ability to hold it accountable.

Perceptions of teachers' unions as special interest groups have led to a largely fractured relationship with government in many countries. Critics of teachers' unions believe that, in addition to increasing expenditure through higher wages and prioritizing teachers over students, teachers' unions stop progress, supporting the status quo. While this may sometimes be the case, especially when changes challenge teachers' status or budget allocation (Bruns et al., 2011; Grindle, 2004; OECD, 2011), in other areas unions have supported reform (Honeyman, 2017). In the United States, more unionized states have historically had more stringent teacher licensing laws (Kleiner and Petree, 1988) and since 1996 the Teacher Union Reform Network (TURN) has identified and rallied support for progressive reforms designed to improve the quality of teaching (Eberts, 2007). An analysis of collective bargaining agreements supported by TURN unions identified support for a range of reforms, from professional development to school-based staff and budgets and to greater parental engagement (Kerchner and Koppich, 2004).

Latin America has a history of powerful unions influencing policy. Since the 1990s the increasingly market-oriented environment in the region has led unions to be more protective, especially when teacher statutes are reformed unilaterally. Mexico's Sindicato Nacional de Trabajadores de la Educación is the only union in Latin America to regularly negotiate policy with the government (Gindin and Finger, 2013). With near veto power, it has been able to influence numerous policies, including ensuring that once a teacher receives a performance raise it cannot be rescinded (Hecock, 2014). In Honduras, teachers' unions play a key role in education policies and are politically active (Gavin, 2017), while in Peru union opposition contributed to a new law reforming teacher evaluation (Gindin and Finger, 2013).

Advocating for or against policy can take the form of 'pedagogical movements' that discuss research by teachers' unions and promote education goals the

government may hesitate to address. In Colombia, for instance, advocacy by the Federación Colombiana de Educadores led to discussion of free and compulsory education and greater government responsibility during the creation of the 1991 Constitution. The national confederation of rural teachers in the Plurinational State of Bolivia was instrumental in pressuring the government to recognize the need for Aymara and Quechua mother-tongue instruction and was the chief advocate of indigenous education rights (Gindin and Finger, 2013).

Direct participation in policy-making through institutionalized collaboration with the government can hold the government accountable while improving relationships and increasing teacher buy-in on reform. Under a 2006 education law, the Confederación de Trabajadores de la Educación de la República Argentina was formally included in the National Education Quality Council, an advisory board that helps develop policy and evaluate its implementation. In Uruguay's mostly top-down system, teachers' unions mobilized support and lobbied for more democratic education management. As a result, the central education board has included union representatives (Gindin and Finger, 2013).

> "In a survey of 70 unions in more than 50 countries, over 60% reported never or rarely having been consulted on the development and selection of teaching materials"

Teachers' unions, however, are not regularly consulted in social dialogues or policy discussions on education reform. In an Education International survey of 70 unions in more than 50 countries, over 60% reported never or rarely having been consulted on the development and selection of teaching materials (Symeonidis, 2015). Improving Teacher Support and Participation in Local Education Groups, a project in Benin, Côte d'Ivoire, the Democratic Republic of the Congo, Haiti, Liberia, Mali, Nepal, Senegal, Sierra Leone and Uganda, concluded that teachers in most countries lacked the necessary information and training to participate (Göttelmann, 2017).

GOVERNMENTS MUST BUILD FORMAL MECHANISMS THAT HELP HOLD THEM ACCOUNTABLE

While citizens have a range of options for contesting the government's record in delivering education, it is the government that must demonstrate its commitment to education and its readiness to be held to account. It needs to ensure the presence and proper functioning of formal mechanisms, processes and institutions. These need to make clear who carries the responsibility.

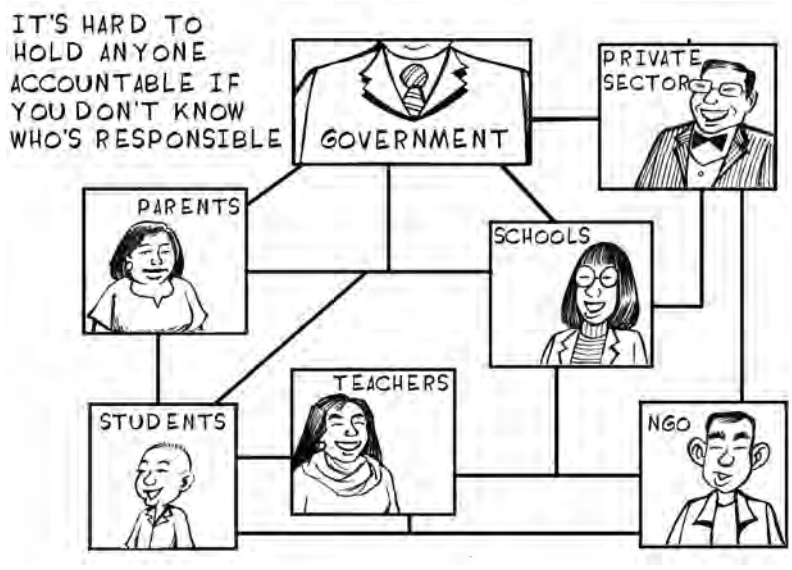
Governments need to formulate credible education plans that match available resources, and set clear targets. The plans need to be reflected in transparent budgets that can be tracked and queried. Clear rules and regulations need to create expectations, while providing responsible actors with sufficient autonomy to take decisions to achieve them. Policy processes that provide the framework for budgets and regulations need to be open to meaningful consultation. Bodies entrusted with addressing complaints or auditing accounts and performance, whether government agencies or independent groups, need to be free of political interference. Laws must enable citizens to challenge governments that neglect or violate their education commitments. Governments, in turn, need to report against their international commitments. And governments need to collect and publicly report information on their record against their targets, both to empower citizens to pose the right questions and to apply results to better future plans and budgets.

EDUCATION PLANS AND BUDGETS NEED TO SET CLEAR TARGETS AND LINES OF RESPONSIBILITY

Education planning documents and processes are important tools for coordinating administrative entities responsible for education. They are also necessary for accountability. They set strategic priorities and targets, and they clarify the activities for which ministries, departments, agencies and institutions at different levels are responsible.

Although each country has a unique approach to education planning, all plans require diagnosing the current situation, setting priorities, translating goals into targets, designing programmes, outlining key activities, estimating resource requirements and establishing a monitoring framework (IIEP, 2010a).

Establish credible education plans with clear targets and lines of responsibility



Increasingly, local governments are given the task of delivering education to the end of secondary schooling. Yet responsibilities between the central and local levels in decentralized systems are often not sufficiently clear. Case studies for this report showed unclear and overlapping responsibilities in Bangladesh, Ghana, the Republic of Korea and Viet Nam (Akyeampong, 2017; Chung, 2017; Hoang, 2017; Hossain, 2017). In Mexico and Poland, lack of clarity on lines of accountability has resulted in officials shifting blame and citizens having difficulty identifying who is right (Cárdenas, 2017; Jakubowski, 2017). Decentralization aspirations set out in Morocco's 1999 National Education and Training Charter have yet to be fully realized, owing in part to insufficient training on new responsibilities (Guedira, 2017).

> In Mexico and Poland, overlapping responsibilities mean citizens have difficulty identifying who is responsible for what

Some central governments have tried to clarify responsibilities by tying local government education financing to performance targets, which vary by country. Targets may relate to inputs: Local governments may need to allocate a certain proportion of spending to education or guarantee a minimum level of spending per student. This is the approach of Brazil's Fund for the Development of Basic Education and Appreciation of Teachers, which tries to equalize spending across states and municipalities (Bruns et al., 2011).

Alternatively, local governments may simply be expected to ensure good practice in planning and public financial management, e.g. formulate a plan, produce accounts on time or establish an internal audit unit. The proportion of local governments in the United Republic of Tanzania that met grant eligibility conditions increased from 53% to 98% within four years of the introduction of such a process (UNCDF, 2011).

Richer countries have shifted away from compliance on provision of predetermined inputs and towards accountability for outcomes. However, strict accountability for centrally determined outcomes can have undesirable consequences. In 2011, the Council of Australian Governments tried to facilitate better collaboration between the central and regional levels with a performance funding system whereby 70% of school funding was available via reward payments. However, manipulation of national literacy and numeracy test scores by selectively including sampled students undermined the approach (Rowe, 2017).

Where outcomes can be measured accurately, data collection is straightforward and policy choices are clear, this approach may lead to improvement. However, these conditions often do not apply in education, where quantitative desired outcomes are disputed, progress is non-linear or takes many years to manifest, and causal pathways to improved outcomes are uncertain. Moreover, ensuring accountability through centrally mandated outcome targets can obscure actual responsibilities; reduce collaboration, flexibility and the considered use of evidence; and prompt service providers to treat targets as the sole objective of improvement, rather than its correlates (Geyer, 2012; Hummelbrunner and Jones, 2013).

Stakeholder participation in education plan preparation can help strengthen accountability

Greater involvement of partners in national planning can not only help avoid incoherency about responsibilities but also promote ownership of the education plan (Fancy and Razzaq, 2017). Institutional mechanisms that grant more formal powers to stakeholders in the preparation process can strengthen accountability, as in Brazil (**Box 2.1**). Colombia has long recognized the value of consultation and feedback mechanisms: Since 1994, the National Planning Council has had subnational, minority and sector representatives review the draft National Development Plan and provide non-binding recommendations. For the 2014–2018 plan, 33 regional dialogues and 27 sector forums (including education) were organized to facilitate local and national participation (OECD, 2016a).

Nepal: 'MoE seeks suggestions on Education Regulations'

~ *Nepali Headlines, November 2016*

Rigorous, truly participatory preparation of an education sector plan is time-consuming, taking at least 8 to 12 months, especially if replicated locally (IIEP, 2010b). To receive a Global Partnership for Education (GPE) grant, eligible countries must not only submit a credible medium-term plan but also follow a participatory process in its preparation to ensure local ownership and accountability to national stakeholders and to prevent national or international experts from taking over (IIEP and GPE, 2015). The GPE has funded civil society engagement in local education groups (LEGs) involved in developing education sector plans. In 2014, 35 national coalitions engaged with LEGs, with a formal written agreement in one-third of the cases. In Cambodia, the LEG is jointly chaired by the NGO Education Partnership (GPE, 2015).

Inclusion of a variety of actors, however, does not always equal participation. In environments where organizational capacity is low, stakeholders may not be representative of constituents or may not contribute effectively (Martinez et al., 2017; OECD, 2016a).

An open budget formulation process is a foundation of accountability

Strong processes are fundamental for a budget to allocate resources to planned priorities and provide a basis for accountability. Informed scrutiny of planned expenditure can increase the extent to which allocations match the education plan and policy objectives. Although costing of education plans is a technical exercise, it may have little influence on the actual budget. Budget preparation is often rushed, with decisions on priorities taken behind closed doors or simply reflecting an incremental change to the previous budget. Line ministries inflate submissions in the expectation that they will be unilaterally curtailed (Long and Welham, 2016; Wilhelm and Krause, 2008).

Once the annual budget has been drafted, scrutiny by an independent legislature is the primary accountability mechanism to ensure that spending decisions are in line with national priorities. Effective oversight requires legislatures having sufficient time to debate and scrutinize proposals and the political will, analytical capacity and power to veto or amend them (Wehner, 2003).

BOX 2.1

Brazil institutionalized broad participation in its education plan preparation

After years of military dictatorship, Brazil's 1988 Constitution, known as the Citizen Constitution, encouraged civic participation in education planning and review. The 1996 education law called for a decennial national education plan (Plano Nacional de Educação or PNE). From 1997, the National Education Council began consulting with CSOs, professional associations and experts to develop national education guidelines. For the development of the second PNE, the government institutionalized dialogue with civil society. The process involved about 3.5 million people, including over 450,000 delegates, and culminated in the 2010 National Education Conference, which developed final amendments to the reference document circulated by the Ministry of Education and submitted to the Chamber of Deputies.

However, the chamber disregarded some proposals and added new ones. Congressional debate on the plan was delayed until after the 2010 election. The following National Education Conference, originally scheduled for December 2012, was postponed by almost two more years, straining the legitimacy and autonomy of the process. During the four years between submission and sign-off by the president, there was disagreement on the public financing target, with civil society submitting amendments to Congress, organizing media campaigns and face-to-face visits with key policy-makers, and producing a technical note detailing why 7% of GDP would not be enough for education of good quality. Ultimately, a 10% target was set in the 2014–2023 PNE.

Sources: Bodião (2016); Brock and Schwartzman (2004); de Andrade Tosta and Coutinho (2016); Federal Republic of Brazil (2014).

Transparency in budget documentation can aid legislative scrutiny. Budgets are commonly grouped by administrative entities and organized in line items, such as salaries and capital expenditure. Presenting budgets in a programmatic form – subdividing them into programmes and activities and detailing associated objectives – can help in evaluating expenditure more effectively. Performance-based budgets, linking programmatic expenditure to desired outputs and outcomes, go a step further. However, preparing these requires significant capacity in line ministries, and implementation in poor countries has been mixed (Fölscher, 2007; Moynihan and Beazley, 2016; Shah and Shen, 2007).

> “CSOs can play an important role in supporting legislators to scrutinize the budget proposal, as occurs in Indonesia and Kenya”

Given the density and technical nature of budget documentation, analytical capacity in legislatures is necessary to enable legislative oversight (Wehner, 2003). CSOs can play an important role in helping legislators scrutinize budget proposals and informing debates and deliberations, as in Indonesia and Kenya (de Renzio, 2016a). In the United Republic of Tanzania, HakiElimu trained members of the relevant parliamentary committee, who, for the first time, sent the 2012/3 budget back with questions to the Ministry of Education and the office responsible for local government issues (Carlitz and McGee, 2013).

LEGISLATURES DO NOT ALWAYS FULFIL THEIR OVERSIGHT POTENTIAL

Parliaments and other types of legislature, whether in plenary sittings or committees, have three key roles. They pass laws (including the budget law), represent citizens and challenge governments. This last role of oversight, which is not universal, has been defined as ‘the review, monitoring and supervision of government and public agencies, including the implementation of policy and legislation’ (Yamamoto, 2007, p. 9). Oversight aims to protect rights from public agency abuses, improve the efficiency of government operations, ensure the effectiveness of legislation, monitor the achievement of government targets and enhance trust in government.

To perform these functions, legislatures have a range of tools at their disposal. The plenary can address questions and call for debates to hold the government to account. In some cases, it may request the dismissal of office holders. Committees can request information or express views and invite experts and interested parties to submit evidence at hearings, thus establishing a link with the public. Countries vary widely in the degree of separation between the executive and legislative powers, the number of chambers and the system of government, which affect the types of accountability exercised (Pelizzo and Stapenhurst, 2013).

Two types of committees are particularly relevant to education. First, audit or public accounts committees follow up on reports submitted by public audit institutions, putting questions to the government to greater or lesser effect. In Sri Lanka, the Committee on Public Accounts demands follow-up on objections raised by the auditor general. For example, action against the director of an education department has been recommended, yet there has been no follow-up (Rahman, 2007).

The second type of committee deals specifically with education. An analysis of permanent committees on education in the legislatures of New Zealand, Norway, Peru, the United States and Zambia for this report showed that their roles varied. While all were involved in reviewing and amending proposed laws and budgets, the New Zealand committee carried out financial reviews of government bodies; other countries had dedicated bodies outside the legislature for the task. Except in Norway, committees usually carried out ex post reviews and provided oversight on legislation and executive actions, e.g. scrutinizing government actions, reviewing existing laws and recommending changes.

Committee hearings or enquiries in the latest annual reporting period shed light on how committees exercise administrative oversight. In New Zealand, most enquiries entailed briefings that did not result in an immediate law or policy proposal. Peru’s committee planned on holding five hearings to review the state of education and one evaluation of the government’s decision to declare an emergency in the education sector due to resource challenges. The committee reached no decision. The US committee held 14 mostly explorative hearings and addressed not specific legislation but broader topics or challenges. The Zambian committee held two hearings on tertiary education and textbooks and posed questions to the executive to follow up on previous recommendations.

Education committees can improve policy proposals when they consist of legislators with specialized

expertise. A formal analysis of the extent to which parliamentary education and skills committees influenced United Kingdom government policy between 1997 and 2005 found that, on 20 occasions, government policy measures were identical or similar to earlier committee recommendations, while on 66 occasions, legislative proposals were not similar to any committee recommendations. The committee's influence was especially visible in the development of legislation to reform the inspection system (Hindmoor et al., 2009).

An empirical analysis of who gives evidence to committees in Denmark, the Netherlands and the United Kingdom showed that open access, with selection at committee members' discretion rather than governed by rules intended to ensure a broad spectrum of voices, increased the dominance of particular interest groups, while more regulated processes helped increase diversity or representation among those giving evidence. This suggests that institutional processes significantly influence who engages in committees, and may not necessarily represent those most in need (Helboe Pedersen et al., 2015). In Ghana, where standing committee hearings are open to the public, 62% of citizens report some or a lot of trust in their effectiveness. On a questionnaire, members of parliament, parliamentary staff, civil society representatives and journalists said Ghanaian standing committees were 'fairly effective' in uncovering fraud, although anecdotal accounts suggest that the committees are more effective in relation to petty fraud than to major corruption (Stapenhurst and Pelizzo, 2012).

In general, many legislatures suffer from weak institutional effectiveness and enforcement of rules and sanctions. In Bangladesh, government agencies are supposed to respond to preliminary audit observations within 45 days, but delays averaged 5 years regarding primary education and 10 years for secondary. The parliamentary committee managed to deal with only 18% of the 800 reports submitted by the Comptroller and Auditor General's Office in the first eight parliamentary sessions since independence in 1971 (Rahman, 2007). High income countries also suffer from poor links between audit institutions and legislatures (Brétéché and Swarbrick, 2017).

INTERNAL AND EXTERNAL AUDITS ARE AN IMPORTANT LINK IN THE ACCOUNTABILITY CHAIN

The integrity of budget execution should be subject to robust audits. Internal and external audits are essential to limit waste, misallocation and corruption and are complementary tools to hold the government accountable. Without sufficient internal controls and accurate financial records, the efficacy of external audits is limited. Even with these conditions met, independent audits are typically narrow in scope and not sufficiently focused on sectors such as education. Their general intent is to review the accuracy of government accounts and a limited number of financial transactions (Wehner, 2003). External reviews of public financial management in sub-Saharan Africa show that systems perform better on budget preparation than on execution (Andrews, 2010).

Internal controls include the capacity to produce reliable financial records, follow cash and asset management procedures, comply with budget rules and regulations, adhere to methods for verifying deliveries and payment, and apply proper procurement procedures (Tommasi, 2007). Internal controls have also begun to encompass non-financial functions, such as monitoring service delivery efficiency, verifying adherence to policies and exercising managerial authority in more decentralized institutional settings (Baltaci and Yilmaz, 2007; Diamond, 2013). Conventionally, finance ministries assume responsibility for enforcing internal financial control and compliance measures regarding education ministries and local authorities. In Pakistan's Khyber Pakhtunkhwa province and in Sierra Leone, finance ministries have established audit units within education ministries (Baltaci and Yilmaz, 2007; Hadley and Welham, 2016).

External audits managed by supreme audit institutions have also gone beyond compliance to audit performance, examining whether service provision is efficient and effective, policies and spending align with wider government and sector objectives, and organizational decision-making is sound. Poland's Supreme Audit Office has carried out audits on issues ranging from the use of public funds for education institutions and research to the education of Polish citizens living abroad (OECD, 2015a; Radio Poland, 2015). The Swedish National Audit Office's audit of the role of tertiary education institutions in providing lifelong learning opportunities led to a recommendation to the government to review incentive structures for such institutions (Sweden NAO, 2016).

Performance audits are increasingly common even in middle income countries. The Royal Audit Authority of Bhutan identified deficiencies in the school feeding programme and recommended setting standard dietary requirements, adapting menus accordingly and establishing a quality control system with an independent assessor (Bhutan RAA, 2017). The Federal Court of Accounts in Brazil, in pursuit of transparency, evaluated the possibility of opening up education data

and issued guidelines to make the data of two major national education funding programmes publicly available (OLACEFS, 2016). The National Audit Office of Mauritius audited the maintenance of public primary and secondary school buildings and found the system lacking. It recommended preventive maintenance, improved monitoring and the drafting of enforceable guarantee certificates establishing responsibilities and liabilities (Mauritius NAO, 2015).

Civil society can support the work of internal and external auditors

CSO participation can complement and augment internal audits. After a media investigation found that 65% of textbook funds were lost to corruption in the Philippines, a nationwide multistakeholder audit collaboration involving the Department of Education and CSOs led to significant improvement in textbook procurement. In the Textbook Count initiative, government information about textbook shipments was transmitted to CSOs at the regional, local and school levels. Volunteers were mobilized to monitor up to 85% of more than 7,000 textbook delivery points. Information on leakage and inefficiency helped reduce textbook costs by almost two-thirds and the procurement time by half (ASG, 2016; Fox and Aceron, 2016).

Where internal financial records are not available or of questionable accuracy, public expenditure tracking surveys can shed light on misuse of funds. About 50 countries have carried out such surveys, commonly identifying leakage in discretionary non-wage expenditure. Such audits, however, tend to be one-off, donor-driven interventions, which do not lead to substantive, long-term changes in public financial management (Gauthier, 2013).

External audit agencies may draw on citizen input. In Chile and the Republic of Korea, online complaints and suggestions can indicate areas for auditors' attention. In El Salvador, the Audit Court established a unit to gather public input on misuse of public funds and a website to register follow-up action (de Renzio, 2016a). The external audit agency in Indonesia organized a forum to receive input from stakeholders and has acted on CSO suggestions.

However, sometimes action does not follow, even after audit reports and civil society mobilization. In Montengro, an audit of the Institute for Textbooks and Teaching Aids found that laws and regulations on public procurement and internal financial control had been violated. The auditor issued a qualified opinion on the institute's financial statement and a negative opinion on its compliance with business efficiency rules (Montenegro SAI, 2013). However, the parliamentary Committee on Education, Science, Culture and Sports rejected the case for a hearing, despite civil society interventions. In fact, the committee has never held a special meeting to discuss any audit report (Institut Alternativa, 2016; Sosič, 2013).

OMBUDSMAN OFFICES PROVIDE A DIRECT PATH FOR THE PUBLIC TO LODGE COMPLAINTS

The ombudsman office is an independent government agency, appointed by the executive or the legislature, with a mandate to receive, investigate and report on complaints against government agencies, officials and employees and recommend corrective action. Known by names such as the People's Advocate (Romania) and the Public Protector (South Africa), ombudsman offices existed in just 21 countries in 1983 but by 2010 the number had reached 118 (Finkel, 2012). Dedicated, independent children's ombudsman offices have been established in Austria, Belgium, Norway and the Russian Federation, while Greece, Romania and Spain have children's ombudsman divisions (Cheshmedzhieva, 2015).

Upon establishment, the office can be flooded with complaints. When Poland set up its office in 1987, it received 120 to 150 complaints per day. Many complaints taken up are politically delicate. This can put the office in conflict with authorities, who may seek to restrict its function by delaying appointments, reducing funding,

limiting powers or appointing 'yes-men' to head the office (Finkel, 2012). To overcome such constraints, ombudsman offices cultivate alliances with other government agencies, the media and civil society. In Honduras, efforts to reduce the office's power were rejected following vocal protests by civil society (Uggla, 2004).

> "The ombudsman in Peru has produced annual reports on the right to education for people with disabilities and indigenous populations"

The ombudsman to human rights in Latin America from 1982 to 2011 helped increase realization of access to education, health and housing, despite the lack of sanctioning power (Moreno, 2016). The ombudsman office in Peru has produced annual reports on such varied topics as corruption and the right to education for people with disabilities and indigenous populations. Although that office has no judicial authority, recommendations are often covered by the Peruvian press and picked up by civil society, prompting government response (Cueto et al., 2017). In Indonesia, the ombudsman office was essential in exposing fraud involving tests being sold to students and answers being shared on mobile phones (Felicia and Ramli, 2017).

INTERNATIONAL LEGAL MECHANISMS ARE STILL WEAK IN HOLDING GOVERNMENTS TO ACCOUNT FOR FULFILLING THE RIGHT TO EDUCATION

As has been noted, all governments have committed to uphold the right to education in at least one of seven international human rights treaties (OHCHR, 2006). These involve reporting to international bodies that require or invite countries to describe how they ensure the right. Treaty committees draw up questions that form the basis of countries' reviews. Governments have an opportunity to respond to a list of issues. Following public examination of government reports, the relevant United Nations committee makes concluding observations and recommendations to countries (Kelly, 2011).

UNESCO's 1960 Convention against Discrimination in Education is unique in having two reporting processes representing two levels of responsibility (see **Chapter 13** on holding governments to account for the right to inclusive education through the Convention on the Rights of Persons with Disabilities). Countries that have ratified it are mandated to report on policy progress roughly every five years; those that have not can report voluntarily. Over the eight completed reporting cycles since 1960, 35% to 67% of mandated countries reported, as did 13% to 40% of other countries. Countries did not report in every cycle. Of the 36 countries that originally ratified the convention, only Australia has reported each cycle, and Albania has yet to report. Of the 96 countries that ratified the convention before completion of the last full reporting cycle in September 2011, just over 85% had reported policy progress at least once since ratifying (UNESCO, 1968, 1972, 1978, 1985, 1991, 1999, 2007, 2013, n.d.).

During the last cycle, 40 countries reported policy changes addressing women and girls, and 48 reported changes concerning people with disabilities. Australia's 2011 Sex and Age Discrimination Legislation Amendment Act legally protected all students from sexual harassment, including via texting or social networks. Bahrain reported nursery schools opening to support mothers studying in continuing education centres. Barbados had improved physical accommodations in its Edutech Programme school for children with disabilities. As part of its national plan for gender equity, Ethiopia adopted positive discrimination measures at key education transition points and tutoring support for female students entering tertiary education. Under Iraq's national project of education integration, schools added resource rooms to create a private place for support services according to each child's needs. Schools or special institutions in Montenegro worked with parents to develop curriculum adapted to the needs of students with disabilities (UNESCO, 2014a, 2015b).

In addition to government reports, individuals and NGOs may submit shadow or parallel reports on the state of the right to education in a country. In 2016, in response to such a report, the Committee on Economic, Social and Cultural Rights recommended that the government of the Dominican Republic 'incorporate comprehensive age-appropriate lessons on human rights, gender equality and sexual and reproductive health' in curricula and guarantee access for children of Haitian descent, including those lacking a birth certificate or identity document (CESCR, 2016a; CLADEM/Colectiva Mujer y Salud, 2016).

Other examples of parallel report findings reflected in committee recommendations include the Philippines' funding of public education and regulation of private schools and Slovakia's inclusivity measures for disabled and Roma children (CESCR, 2016b; CRC, 2016; E-Net Philippines/

ASPAE/GI-ESCR, 2016; MDAC/FORUM, 2016). A role for parallel reporting is also recognized in the non-binding 2030 Agenda for Sustainable Development (**Box 2.2**).

Overall, the inability of treaty bodies to enforce concluding recommendations, and the sometimes limited visibility of their recommendations, can undercut the effectiveness of reporting as an accountability mechanism to improve quality and equity in education. Moreover, countries motivated to ratify may be those most likely to report regardless of ratification status.

CITIZENS CAN TAKE GOVERNMENT TO COURT FOR RIGHT TO EDUCATION VIOLATIONS IN JUST OVER HALF OF COUNTRIES

'I don't think the right to education is upheld in my country. Government has not placed any form of urgency on the need for all to have equal access to education.'

OLAMIPO OSHINOWO, EDUCATION CONSULTANT, NIGERIA

'The right to education is upheld in Fiji, but there are so many hurdles in place, like poverty and accessibility, which hinder its implementation in some areas.'

KRISHNA SAMI RAGHUWAIYA, LECTURER, FIJI

International treaties lay out government responsibilities to respect, protect and fulfil the right to education. To respect it, governments must refrain from interfering with enjoyment of that right. To protect it, they must ensure third parties do not prevent equal access to education. To fulfil it, they must adopt legislative, administrative, budgetary, judicial and other measures to ensure full realization of the right (ActionAid International, 2017).

An accessible, independent and efficient judicial system increases citizens' power to hold government to account. Currently, 82% of national constitutions contain a provision on the right to education (ActionAid International, 2017). However, the right must also be justiciable for there to be legal recourse for violations, which is the case in only 55% of countries. For example, although the right to education is included in the 1977 Constitution of the United Republic of Tanzania, Article 7 precludes its 'enforcement by any court'. A proposed new constitution would make it a justiciable human right (Legal and Human Rights Centre, 2013), but a referendum on the constitution has been delayed indefinitely (VOA News, 2015).

BOX 2.2

The SDG follow-up and review mechanism consists of voluntary national and non-government reporting

The 2030 Agenda is not legally binding. Tracking progress towards achieving the SDGs reflects this spirit. At the technical level, the UN General Assembly endorsed a monitoring framework, and every year the UN Department of Economic and Social Affairs prepares an SDG report on the corresponding monitoring indicators. At the political level, the High-Level Political Forum (HLPF) is the apex institution, overseeing a network of follow-up and review processes globally, with the aim to 'facilitate sharing of experiences, including successes, challenges and lessons learned, and provide political leadership, guidance and recommendations for follow-up'.

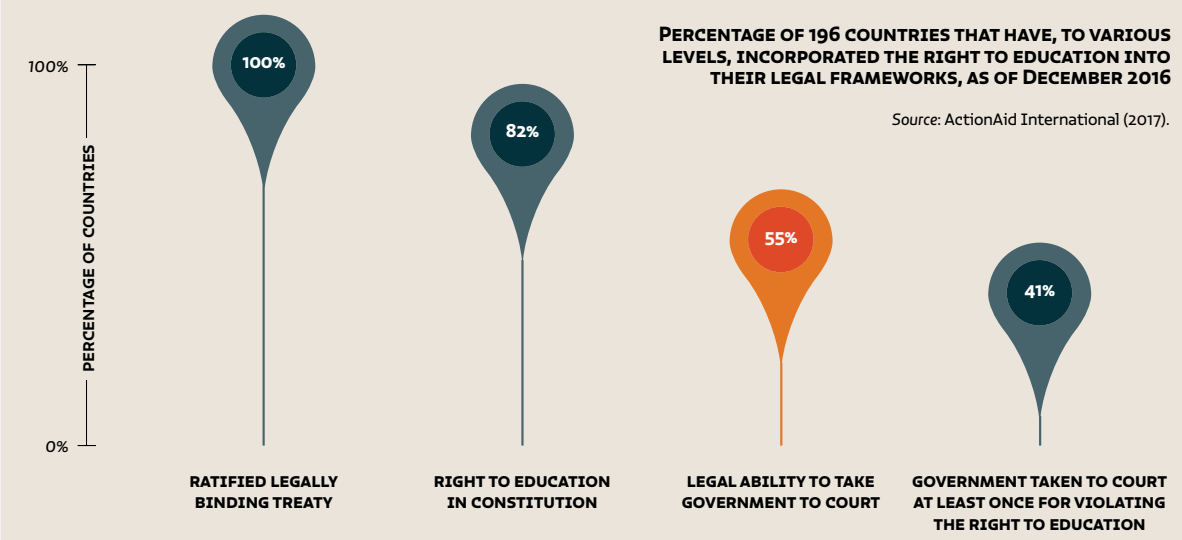
In the development of the SDGs, the United Nations was not viewed as an accountability forum. Instead, responsibility was placed squarely on countries to act. The main input to the HLPF is therefore the voluntary national review. Countries are encouraged to share experiences, challenges and lessons learned. To date, 64 countries have submitted voluntary national reviews. It is too early to tell how effective this country-led, hands-off approach is in advancing the 2030 Agenda. Although there are signs that normative pressures by other countries encourage progress in ensuring the right to education, country reporting on United Nations human rights treaties suggests that lack of external enforcement may delay progress.

In addition to countries, two groups are invited to provide input to the HLPF. First, the UN Economic and Social Council's functional commissions and other intergovernmental bodies and forums provide a thematic perspective. In the case of education, the relevant body is the SDG-Education 2030 Steering Committee, which derives its authority from the World Education Forum. Second, 'major groups and other stakeholders' are invited to report, in official recognition of the role of non-government actors providing perspectives at the global level.

Sources: United Nations (2017a, 2017b, 2017c).

> To date, 64 countries have submitted voluntary national reviews of progress towards the SDGs

FIGURE 2.2:
Citizens can take the government to court in only 55% of countries for violation of the right to education



Of the countries that have incorporated the right to education into their legal frameworks, at least 80 have adjudicated a violation (**Figure 2.2**). In addition to non-justiciability, this low number may be due to a lack of easily accessible data, individual awareness of rights or the resources necessary to go to court (ActionAid International, 2017).

As well as case-specific financial or practical remedies, court decisions can lead to changes in funding or legislation. As human rights are recognized as indivisible, interdependent and interrelated, one effective tactic has been to use the legal authority of other rights when bringing cases on the right to education. A school lunch programme was implemented as a result of right-to-food litigation brought before the Indian Supreme Court, prompting an additional 350,000 girls to attend (ActionAid International, 2017).

Judicial decisions on financing can lead to long-lasting structural change in education. The Constitutional Court of Colombia found that the Education Act, which allowed for the imposition of school fees, was unconstitutional,

> “The Constitutional Court in Indonesia ordered the government to increase the national budget for education in line with the constitution and education law”

leading to a national decree establishing free primary and secondary public education. The Constitutional Court in Indonesia ordered the government to increase the national budget for education in line with the 20% stipulated in the constitution and the Law on National Education Systems. In the United States, the state Supreme Court of Kansas found that the legislature had failed to fund schools equitably, leading to the restoration of US$38 million to the public education system (ActionAid International, 2017).

The right to adjudicate is but a starting point towards achieving real change in policy and practice through the courts. Clearly, pursuing the right to education needs to be coupled with other strategies for social and political mobilization, and rights holders must have the capacity to demand fulfilment of those rights (OHCHR/CESR, 2013; Tomaševski, 2001b). In some countries, civil society action can provide legal support.

In Buenos Aires, Argentina, the Civil Association for Equality and Justice (ACIJ) requested information from the city government on early childhood education budget and expenditure. When the government did not respond, ACIJ litigated successfully under the Freedom of Information Act. Subsequent analysis of the budget showed that the city had not spent 32% of the resources allocated to early childhood education between 2002 and 2005. The ACIJ filed a class action suit based on this evidence, arguing that the city had not met its constitutional obligation. A legally binding agreement stipulated that the government should guarantee and finance universal access to early

childhood education and submit detailed information about all ongoing and planned projects (Basch, 2011).

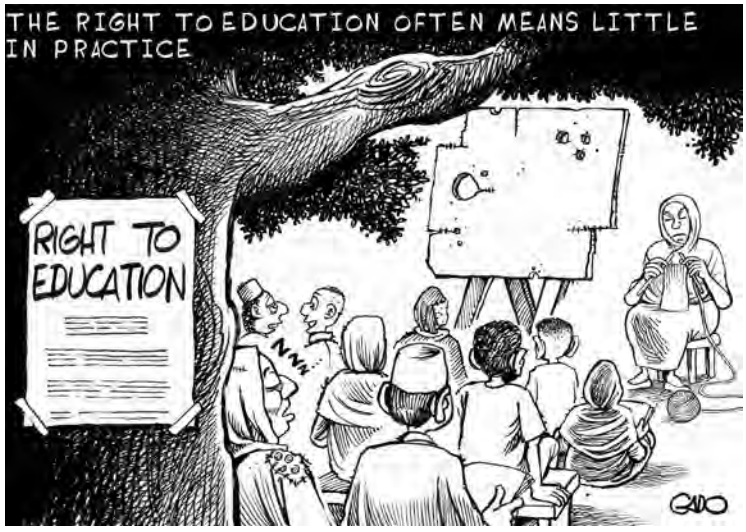
In 2013, the São Paulo state appeals court in Brazil reversed a lower court ruling and concluded that the government had not met its obligation to fulfil the right to education. After hearing from public officials, experts and civil society members, it ruled that the municipality must draft a plan that would provide at least 150,000 new child care and primary school places by 2016 and must provide a monitoring report to the court every six months, with the support of CSOs, the Public Prosecutor's Office and the Public Attorney's Office (ActionAid International, 2017; Figueiredo and Gerber, 2014; Vieira, 2014).

In South Africa, the Legal Resources Centre, a human rights organization, brought a lawsuit against the national and provincial governments on behalf of seven rural schools in Eastern Cape province with weak infrastructure, including some mud buildings. A legally binding agreement obliged the government to allocate funds to replace inadequate structures nationwide, ensure their construction within a short time and report to the court regularly (Tshangana, 2013). In Limpopo, South Africa, the public interest law centre Section27 supported a case on non-provision of textbooks to poor rural schools through a year-long monitoring exercise, which included multiple successful suits and resulted in a court order for the full delivery of textbooks (Section27 and Right to Education Project, 2014).

NATIONAL EDUCATION MONITORING REPORTS ARE A TOOL FOR TRANSPARENCY AND ACCOUNTABILITY

Monitoring should provide management with timely and relevant information on whether progress is being made towards the objectives of a strategy, plan, programme or project. Monitoring reports can also interpret evidence, identify problems to support decisions and follow-up actions, and provide the basis for subsequent evaluation. When the assignment of responsibilities and the links between inputs and results is clear, they also serve as an accountability mechanism.

Data on teacher deployment and pay, school inspection and evaluation, student evaluation and assessment, and financial management may be integrated in advanced education management information systems or, more commonly, remain fragmented (McMeekin, 2013; World Bank, 2014, 2016a). Various challenges can prevent system effectiveness, having to do not only with basic supply constraints, such as cost and the processing capacity required, but also with demand constraints, such as the absence of a monitoring and evaluation framework or



of skills to interpret the data and use them for policy (UNESCO, 2016a).

The monitoring part of this report touches upon a variety of these monitoring challenges. The present section focuses on attempts to synthesize the evidence. National monitoring reports are needed to capture countries' progress on education commitments to both citizens and the international community. While NGOs fulfil this reporting role in many countries, a government report carries special weight. Governments prepare a range of monitoring reports, many of which fulfil statutory obligations to other bodies, e.g. the legislature, the supreme audit institution or an international organization. In addition, citizens need a regular report on the implementation of the national education strategy or plan to be able to hold government to account. Such a document can demonstrate the executive's commitment to transparency and to communicating government expenditure, activities and results to citizens in an accessible manner.

National education monitoring reports vary in purpose and scope

> "Since 2010, 108 of 209 countries have published a national monitoring report giving an overview of at least parts of the education sector"

Research for this report found that 108 of 209 countries have made a national education monitoring report available at least once since 2010 (see **Accountability Annex**). A 'national education monitoring report' was defined as a document (a) prepared by a (central or autonomous) government agency; (b) intended to communicate the state of (all or a big part of) the education system, including some interpretation of the findings; and (c) reporting against targets of an (annual or multiyear) government strategy, plan, policy or

programme and, in particular, against the corresponding budget or monitoring framework. One report was taken to represent a country.

Statistical reports and digests generated by a national education management information system that included only data tables without reference to national education policy were not considered. National Education for All reviews, which were produced for 135 countries in the run-up to the World Education Forum in 2015, were also excluded. However, certain other documents were included, such as progress reports on sector-wide programmes in low and lower middle income countries and country status reports on several sub-Saharan African countries, because of both active government participation and a tight link between data and national policy.

Reports meeting inclusion criteria varied greatly in frequency. Over 2010–2016, 55% of countries that published a report published one or two. Although it is difficult to establish which report series are being discontinued and which have just been launched, about one in six countries worldwide currently prepares annual education monitoring reports. While it is more common among richer countries, several middle income countries regularly produce reports, e.g. *memorias* in the Dominican Republic, annual reports in Malaysia and activities reports in the Republic of Moldova.

The *Annual Performance Report of the Ministry of Education and Sports* in Uganda is a less common example of a regular report in a low income country. Performance from early childhood through to tertiary education is assessed against policies and objectives to inform the next sector review, which seeks to identify priority areas for the coming year. It gives an account of ministry actions and their results at the input, process and outcome levels. It offers some analysis of challenges, discusses factors affecting the achievement of goals and contains budget performance information (Uganda MOES, 2016).

The reports varied in their coverage. Almost all covered primary and secondary education, about three in four covered early childhood care and education, about two in three covered tertiary education and one in three covered adult education. This does not necessarily mean countries had no reports covering the other levels. Rather, it reflects dispersed responsibility among government bodies. Reports covering the entire education system included *Education, Youth and Sport Performance* in Cambodia (Cambodia MoEYS, 2016), the *Accountability Report* in El Salvador (El Salvador MOE, 2016) and the *Swiss Education Report* (SKBF/CSRE, 2014).

Reports also vary in their relative emphasis on assessing the current situation, describing ministry actions relative to a government programme of work and reporting on expenditure. A content analysis suggests that about 60% mainly focus on actions taken and 25% on the current situation.

An example of a report that provides balanced coverage of situation, activities and expenditure is the annual report of the education ministry in Saskatchewan province, Canada. The report covers ministry actions and achievements during the previous fiscal year in areas under the government mandate, from early childhood care and education to adult literacy. It also lays out progress against ministry goals and policy objectives in the ministry's annual plan and the overall provincial government direction. In fact, the report is explicitly structured around these objectives and their indicators. In addition, it contains information on expenditure against the budget and an analysis of variations. Overall, it demonstrates a 'commitment to effective public performance reporting, transparency and accountability' (Saskatchewan MOE, 2016).

Thus, national education monitoring reports are an accountability tool, and what countries choose to emphasize and how they choose to present it may reflect domestic context and expectations. In many countries, reports may offer transparency; where trust is high, reports may speak more to a debate on education priorities. The *Aasta-analüüs* (Annual Analysis) report in Estonia mentions that it 'is important that people are well informed, allowing them to participate in the debate from which decisions are born' (Estonia MOER, 2016).

Legal provisions for accountability sometimes drive national monitoring reports

Context is important in understanding what, if any, type of monitoring report a country prepares. Some are a legal requirement as part of the basic public reporting established, usually, by the legislature. These tend to focus on actions or expenditure. For example, Germany's *Bildungsbericht* (Education Report) is a legal requirement (Germany FMOER, 2016). In Vanuatu, the education ministry's annual report is prepared under the Public Service Act and in accordance with guidelines issued by the Public Service Commission (Vanuatu MOE, 2013).

In Panama, as in several Latin American countries, the education ministry publishes an annual report (*memoria*), as stipulated in the law for transparency in public management: Articles refer to the obligations of 'public servants ... to communicate the results of their management to society' (§1) and of state institutions 'to have available, in printed form, on their respective Internet sites and to publish periodically, up-to-date information' on a range of issues, including general policies, in accordance with the principle of publicity (§9) (Panama Ombudsman, 2002).

The 'transparency seal' provision of the budget law in the Philippines, 'to enhance transparency and enforce accountability', obliges all official national government agency websites to post annual reports for the last three years, and follow the precise requirements of the national budget circular (Philippines DBM, 2012). However, departments differ in their interpretation of this obligation. The Department of Education follows the instructions closely and provides detailed spreadsheets on financial accountability, budget and expenditure (Philippines DOE, 2017). Others, such as the Department of Health, also provide a narrative report that responds to the policy objectives and monitoring indicators and is more accessible to the general public (Philippines DOH, 2016).

Cross-national reports offer another institutional context. The European Commission, for example, produces the annual *Education and Training Monitor*, the monitoring report of the Education and Training 2020 strategic framework, comprising reports on each member country, beyond any national report they may produce (European Commission, 2016). While no such reporting system exists in other regions, regional organizations do increasingly play an important role in influencing national approaches to monitoring education.

For example, the *State of Education Report* of the Association of Southeast Asian Nations recorded progress against the four priorities of the 5-Year Work Plan on Education (2011–2015) (ASEAN, 2013). The African Union *Outlook on Education Report* was prepared with support from the Association for the Development of Education in Africa for the 2014 Conference of Ministers of Education (African Union, 2014). The annual flagship publication of the Organization of Ibero-American States, *Miradas* (Perspectives), monitors progress on the 11 targets of the education strategy Metas Educativas 2021 (Education Goals 2021). Every two years, the report offers a basis for peer learning on a specific theme, including teacher status, training and evaluation (2013); education of indigenous and Afro-descendant people and communities (2015); and professional development and leadership of school principals (2017) (OEI, 2016).

COUNTRY OWNERSHIP OF SYSTEM, POLICY AND PROGRAMME EVALUATION IS ESSENTIAL FOR ACCOUNTABILITY

National monitoring reports and related data published by NGOs, research institutions, think tanks and international partners offer governments a strong basis on which to assess the efficiency and effectiveness of their education systems, policies and programmes, and feed findings into the annual policy and budget cycle. Many governments try to hold themselves accountable by commissioning such evaluations from independent contractors, autonomous agencies or international institutions.

In Norway, the government asked the Organisation for Economic Co-operation and Development (OECD) to review the evolution of its early childhood education and care policies between 1999 and 2014. As input to the process, the Ministry of Education and Research provided a background report (Norwegian MOER, 2015). While commending the sector's use of highly regulated quality standards and public funding that supported the sector's expansion, the evaluation recommended, among other points, that the government should simplify funding for private providers and reduce the proportion of underqualified staff (Engel and Barnett, 2015).

In India, Sarva Shiksha Abhiyan, the main basic education programme, operational since 2000/1, undergoes Joint Review Missions twice a year (UNESCO, 2015c). In addition, the autonomous National Council of Educational Research and Training evaluates specific elements. For example, the school information and communication technology programme, begun in 2004, was evaluated in 10 states and union territories between 2009 and 2013/4 to assess the status of implementation, curriculum, usage and access, among other criteria, following an evaluation framework provided by the ministry (NCERT, 2014). The evaluation of the inclusive education programme in secondary education recommended several improvements, such as better tracking of elementary-to-secondary school transition, a focus on girls and the easing of disability certification requirements (Julka et al., 2013). In July 2017, the ministry contracted with a consulting firm to appraise the overall programme (India MHRD, 2017a, 2017b).

BOX 2.3

Autonomous evaluation agencies in Latin America are playing a stronger role

The heightened focus on results is exemplified by the emergence in the last decade of dedicated, mostly autonomous evaluation agencies in Latin America. These have seen their responsibilities widened through new legal provisions or scope of practice.

The Colombian Institute for Educational Evaluation is responsible for evaluation at all education levels, including tertiary. It is responsible for basic education assessments, state examinations and international assessments. In 2009, it was restructured as a public institution with autonomous funding. It can provide services to individuals and public or private organizations, collect revenue and retain profit to reinvest in technical and programme development. It is governed by a board of directors, including an education ministry representative and members appointed for four years by the president.

As part of a new national constitution, Ecuador established an autonomous National Education Evaluation Institute in 2012, transferring responsibilities previously in the hands of the education ministry. It is in charge of all assessment processes, including teacher performance evaluation. The Peruvian Institute for the Accreditation and Evaluation of Quality in Elementary Education was founded in 2003 as part of a national system of functionally integrated entities, guidelines and processes of evaluation, accreditation and certification that cover all levels of education. It is also mandated to evaluate the achievement of equity objectives.

Mexico's education policy has conferred a central role to evaluation and assessment as tools for planning, accountability and policy development since the early 2000s. The National Institute for Educational Assessment and Evaluation, founded in 2002 by presidential decree as a decentralized public agency, shares responsibility for education evaluation with the Directorate General of Policy Evaluation of the Secretariat of Public Education. A constitutional reform in 2013 gave the institute not only more legal, technical and financial autonomy but also more responsibilities, including the design and leadership of a national educational evaluation system.

In Brazil, the National Institute for Educational Studies and Research is a federal agency linked to the education ministry. It is responsible for assessing basic and tertiary education nationally, including basic education assessment, upper secondary education examinations, examinations for undergraduate programmes, and international and regional assessments. It has considerable discretionary power for self-government, though attempts to establish it as an independent agency were unsuccessful due to a legal vacuum concerning public agencies.

Sources: Ferrer and Fiszbein (2015); OECD (2013a; 2015b); OECD and World Bank (2012); Roggero (2017); World Bank (2016b).

China's Department of Development and Planning in the Ministry of Education developed the National Long-Term Education Reform and Development Plan to guide strategic planning between 2010 and 2020. Local governments are expected to develop five-year plans for national economic and social development, including for education development. At the end of the period, progress is analysed and evaluated, with results fed into the next planning cycle (OECD, 2016b). The State Council released a circular in June 2017 saying it would review how provincial governments met their education responsibilities, with annual assessments and third-party monitoring, and use the results to reward or penalize local governments and leaders (The State Council, 2017).

While many initiatives evaluate the implementation and short-term results of specific education programmes, increasingly some countries, such as those in Latin America, are expanding their evaluation activities to address learning outcomes (**Box 2.3**).

In decentralized education systems, reviews also occur at the local level. Ethiopia's Ministry of Education has developed an indicator framework in line with the sector development strategy and targets. Regions and districts set their own targets based on local conditions. At regional meetings held at least once a year, heads of district offices present performance reports and examine the strengths and weaknesses of education provision. District-level staff appreciate these regional meetings more than the annual national reviews, which they feel do not focus on their particular problems or help them align their plans with national objectives (Oulai et al., 2011).

In countries that receive financial and technical support from donors, evaluations are often carried out jointly by the education ministry and donor agencies (Holvoet and Inberg, 2009). In Nepal, the 2009–2015 school sector reform plan was independently evaluated by a German consulting group using OECD evaluation criteria of relevance, effectiveness, efficiency, impact and sustainability. For instance, the evaluation emphasized the lack of data and targets on children with disabilities (Poyck et al., 2016). In response, the 2016–2022 school sector development plan sets multiple targets, including providing 365 integrated basic education schools with resource classes for children with disabilities, giving scholarships to 13,000 students and providing 50 schools with interactive pedagogical materials for children with disabilities. The evaluation also highlighted the poor frequency of supervision. In response, the new plan aims

to strengthen over 1,400 resource centres and supervision clusters and revisit recruitment policies for resource persons on a pilot basis (Nepal MOE, 2016).

In countries that receive grants from the GPE, joint sector reviews have become an important annual evaluation of the whole education sector. At least once a year, donors, CSOs and other stakeholders meet under the leadership of the education ministry to discuss and evaluate sector-wide progress, culminating in an annual review report. The explicit aim is to streamline previously disparate evaluation activities and promote country ownership and mutual accountability. Two important questions are whether these reviews substitute for national institutions, such as the legislature, and whether they help promote an evaluation culture.

A recent review commissioned by the GPE analysed 39 joint sector reviews held between July 2014 and December 2015. Despite efforts to convene all key stakeholders, finance ministries were present at only 53% of reviews. Teachers' unions were present at half and parents' associations at one-third of reviews. As seen in sector planning, CSOs that do participate tend not to take an active role, usually viewing themselves as observers.

Indeed, despite the aim of mutual accountability, reviews are focused in one direction: whether donor money is being used efficiently by governments, which are considered the primary accountable actors. Accountability to the public is not discussed, and mechanisms to hold donors and CSOs accountable remain unclear. Reviews mostly focus on progress of sector plan activities, excluding most financial aspects of execution. They pay insufficient attention to recommendations made in previous years; only one-third discussed follow-up issues. On average, half of the recommendations made did not include remedial actions for implementation problems or any links to the sector plan, and there was rarely a timeline for implementation or assignment of a responsible party (Martinez et al., 2017).

CONCLUSION

Holding governments to account for their varied education actions and responsibilities occupies the attention of many actors external to the government, such as civil society, think tanks, teachers' unions, the media and donor agencies, reflecting the strong public interest in the functioning of the sector. Government shortcomings in adequately and equitably budgeting and distributing resources, disseminating information on education outcomes and delivery, or engaging in inclusive, participatory planning processes have prompted these stakeholders to engage in exposing wrongdoing or pressuring governments into desirable actions, including through mass social movements.

Governments use formal processes to hold themselves to account, focusing on transparency and inclusivity to improve sector functioning. Many now produce education monitoring reports, although not regularly enough, and evaluate their policies and interventions to influence future planning. However, other mechanisms often lack bite. Oversight arrangements tend to be insufficiently sector-specific to scrutinize education systems effectively. In many countries, citizens lack the right to take their government to court for right-to-education violations. While legislative committees, audits and ombudsman offices deliberate on education policies and financing issues, they often have limited influence in shaping education policy. The lack of clearly articulated, separated lines of responsibility between the central and local government levels limits the ability to hold different government parties to account. The effectiveness of participatory processes, whether in budget decision-making or in providing inputs to legislatures or audit institutions, depends in large part on who gets to participate and their capacity for political and technical discussions.

The evidence on the effectiveness of holding governments to account highlights both the benefits of external inputs in formalized processes and the importance of country ownership. While international actors play a role, in poor and rich countries alike, there is a need to strengthen nationally driven accountability processes. Teachers' unions and CSOs in several countries have helped scrutinize policy and budget proposals, supplement audits and litigate for the right to education, yielding positive results and policy changes. Efforts to institutionalize collaboration with non-government bodies in formal processes is a promising, productive means of improving government accountability.

Parents and teachers meet at the end of the semester to discuss their children's progress in downtown Caracas, Venezuela.

CREDIT: Victor Jules Raison/Arete

CHAPTER

3

Schools

KEY FINDINGS

Schools are increasingly held to account not just by governments, but also by parents, community members and students.

Regulations cover school facilities and teacher qualifications, but less than 50% of reviewed education systems regulated the maximum pupil/teacher ratio. Moreover, data suggest regulations are often aspirational in poorer countries.

In richer countries, school inspections increasingly focus on school improvement. In OECD countries, they targeted low-performing schools in 12 systems, and results were likely to lead to school closure in 6 out of 31 systems.

In poorer countries, inspections are constrained by resources and tend to focus on material inputs rather than processes that affect teaching and learning quality. In Angola, only 45% of inspectors had been trained five years after the reform of the inspectorate began.

Governments in poorer countries often lack capacity to regulate the expansion of private schooling. In Lagos state, Nigeria, only 26% of private schools had been approved by the Ministry of Education.

School choice is meant to strengthen accountability but often concentrates disadvantaged students in disadvantaged schools. In Chile, communities with higher increases in private enrolment had greater socio-economic gaps between public and private school parents.

Information is a foundation for a market but is often not available: Only 29 of 133 education ministry websites provided comparable school-level data. Even if data are accessible, they may not be usable: 72% of parents in Kenya reported not knowing how to use student learning data.

A review found that 17 of 101 education systems used school test scores to sanction or reward schools or educators formally. Evaluations show either no or marginally positive gains from such measures, especially for low-performing schools.

Schools and teachers adjust to test score pressure by narrowing the curriculum, teaching to the test or teaching those on the verge of passing. Schools in punitive systems are more likely to have selective admission practices at least partly based on student achievement.

Social accountability through participation in governance can improve overall accountability, but can be elitist if there is no strong commitment to inclusion, and ineffective without sufficient local capacity, motivated school leaders and a clear understanding of roles.

Regulatory standards help monitor school quality 43
Market competition deepens divides 49
There is mixed evidence that performance-based accountability delivers education of good quality 52
Parents, communities, students and staff can shape and monitor school policies and practices 56
Leadership affects school quality and is affected by accountability mechanisms 59
Conclusion 61

Schools and other education institutions are expected to provide young people with literacy and numeracy skills, general and specialized knowledge, an understanding of their environment and transferable life and workplace competences, such as problem-solving, creativity and interpersonal communication. Additionally, they are expected to shape values and in a safe and healthy environment. Schools are primarily responsible to governments, which finance them and determine their activities. Governments have the power to regulate schools, collect performance information and apply sanctions or rewards.

Less formally, schools are responsible to parents and students, who can question and engage with schools and 'vote with their feet', if they have the resources and other schooling options. This ability of parents, students and community members to hold schools to account depends on the availability of information, school choice and a clear role for parents and communities in school management. Concurrently, more elaborate sanctions and rewards may compel schools to provide accounts of their efforts and progress.

To meet the objectives of complex accountability frameworks, schools must possess resources, relative autonomy and qualified, motivated staff, all of which may be in short supply. Schools need validated instruments to measure desired education outcomes and accountability mechanisms both linked to school functioning and reflective of community and stakeholder efforts. The growing emphasis on accountability places new burdens on schools and can unintentionally undermine professional trust and educator motivation.

> “The growing emphasis on accountability places new burdens on schools and can unintentionally undermine professional trust and educator motivation”

This chapter examines how education institutions are monitored and held accountable for fulfilling core responsibilities. Also analysed is the impact of a growing emphasis on performance-based accountability.

REGULATORY STANDARDS HELP MONITOR SCHOOL QUALITY

Government regulations can hold education providers accountable for compliance with standards on quality, inputs, safety and inclusion. The prevalence of regulations and effectiveness of accountability measures vary by country. In rapidly expanding and diversifying systems, there are evolving regulatory challenges.

Uganda: 'Schools increase fees, govt threatens action'

~ The Observer (Kampala), 2017

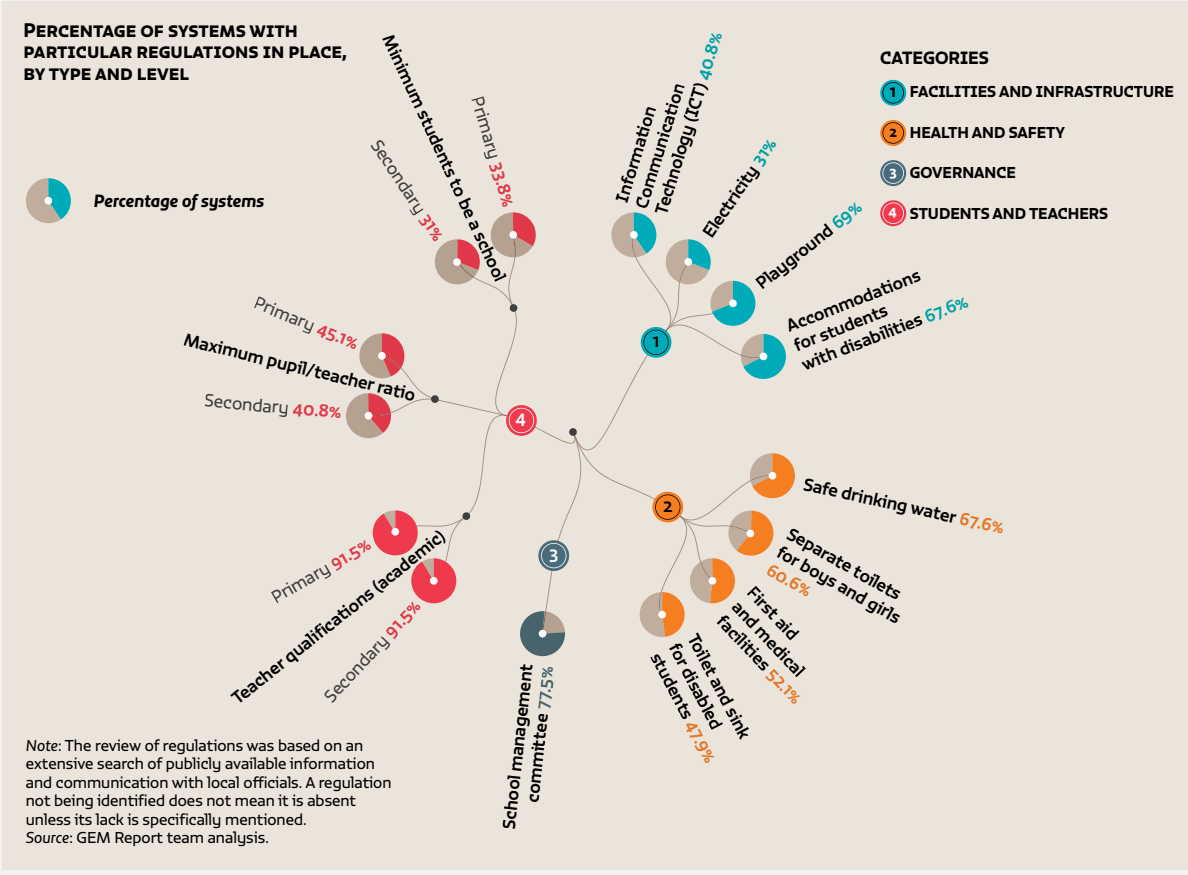
MANY SCHOOLS FACE MULTIPLE REGULATIONS

Regulations determining eligibility as an education provider are typically found in education acts and complementary legislation, such as building codes. This report reviewed regulations in 71 education systems concerning students and teachers, facilities and infrastructure, health and safety, and governance for public and private primary and secondary schools.

Nearly all systems had regulations stipulating teacher qualifications and requirements to form a school management committee (**Figure 3.1**). Regulations on school facilities, such as playgrounds, water supply and separate toilets for boys and girls, were also common. However, less than 50% of systems had regulations on maximum pupil/teacher ratio.

Within systems, the overall number of regulations was similar for public and private schools. Regulations differed between provider types by at least five percentage points in the following categories: primary and secondary teacher qualifications (91.5% of systems had regulations for public schools, 84.5% for private schools); maximum primary pupil/teacher ratio (45% public, 38% private); safe drinking water/water supply (68% public, 75% private); separate toilets for boys and girls (61% public, 66% private); and first aid and medical facilities (52% public, 61% private). There were interesting public–private differences in

FIGURE 3.1:
Less than 50% of education systems regulate the maximum pupil/teacher ratio



Note: The review of regulations was based on an extensive search of publicly available information and communication with local officials. A regulation not being identified does not mean it is absent unless its lack is specifically mentioned.
Source: GEM Report team analysis.

some countries. Japan had requirements for school management committees for public schools but not private. Lebanon had information and communication technology (ICT) regulations for public schools but not private. In Turkey, private schools had more regulations on students and teachers than public schools.

Comparing regulations to reality suggests that, in poorer countries, not all schools meet all regulations. In 2012, only 7% of public primary schools and 24% of public secondary schools in Cambodia had access to electricity, yet the government had a goal of ICT in all public schools (Wallet, 2014). In 2014, 41% of surveyed public schools in the United Republic of Tanzania met minimum infrastructure standards related to toilet availability and a good-quality blackboard (World Bank, 2015). In 2015, only 23% of primary schools in Uganda and 29% in South Africa had libraries despite requirements (Uganda MoESTS, 2015; South Africa DOBE, 2015).

Regulatory compliance may be determined by factors outside school control. Schools in Tajikistan are required to be heated in winter, yet underfunding obliges teachers to collect funds from parents and heat individual classrooms with small stoves. There are practical challenges in holding teachers or schools accountable for such standards violations when the alternative is frozen classrooms (Faradova, 2017) (for quality assurance processes in other levels of education, see **Chapter 10** on early childhood education, **Chapter 11** on tertiary education, **Chapter 12** on professional education, **Chapter 14** on adult literacy programmes and **Chapter 17** on international programmes).

THE SUCCESS OF SCHOOL INSPECTIONS DEPENDS ON OBJECTIVES, CAPACITY AND RESOURCES

School inspections, a key part of country monitoring systems, are often mandated by national or local authorities. Traditionally, inspectorates liaised between decision-makers and school-level actors and monitored regulatory compliance. Increasingly, inspectorates function to improve school processes or outcomes (De Grauwe, 2007; Ehren, 2016).

Inspection systems are evolving to emphasize quality in richer countries

The shift to school improvement through inspections is especially evident in richer countries. Well-established inspectorates in Europe have increasingly taken on new roles of evaluating instructional and managerial processes, reviewing outcomes using data from assessment systems and developing strategies to monitor or manage failing schools (Ehren, 2016).

“The shift to school improvement through inspections is especially evident in richer countries”

As of 2015, 21 of the 32 member countries of the Organisation for Economic Co-operation and Development (OECD) with available data had lower secondary school inspections that always checked compliance with rules and regulations. Many countries also inspected curriculum standards, student performance and staff satisfaction. Results of school inspections had a high likelihood of determining school closures in 6 of the systems studied, and inspections targeted low-performing schools in 12 systems. In Colombia, an OECD partner country, inspections could influence funding to underperforming schools and result in school closures (OECD, 2015c).

The Office for Standards in Education, Children's Services and Skills (Ofsted) is a highly studied, centralized, high-stakes system that regularly inspects all schools in England (United Kingdom). Results have prompted actions to improve student performance, including changes in school management and teaching strategies to help particularly the struggling students (Allen and Burgess, 2012; Hussain, 2012). In an analysis of school principals' perceptions of accountability pressures from inspection systems in seven European countries, over 60% reported they felt pressure to do well on meeting inspection standards. Those who felt strong accountability pressure indicated acting to improve self-evaluation, staff capacity and teacher participation in decision-making. At the same time, school principals also reported that inspections often had significant unintended consequences, including discouraging new teaching methods and narrowing curriculum and instructional strategies, particularly in

United Kingdom: 'Ofsted needs to realise that schools in poor areas can't just be judged on test scores'

~ Tes, 2017

> The human resource capacity for monitoring schools needs to keep pace with education expansion, diversification and the increased emphasis on accountability

systems where principals felt high accountability pressure (Altrichter and Kemethofer, 2015).

Inspection systems in poorer countries face resource and capacity constraints

Inspectorates in poorer countries tend to focus on inspecting material inputs rather than processes that influence the quality of teaching and learning. Inspections are difficult to carry out when resources are scarce. Human capacity constraints are the primary bottleneck, with insufficient supervisors to cover all tasks (De Grauwe, 2008; Eddy-Spicer et al., 2016). In New Delhi, India, the average inspectorate burden in state government facilities is 56 schools (Making Democracy Work, 2016).

Inspections often do not bring about any school improvement. Recommendations are often viewed as generic and unrealistic, calling for changes outside school control. For instance, inspectorates in Ghana, Indonesia, Kenya, Namibia, Uganda and the United Republic of Tanzania could neither sanction failing schools nor motivate school improvement. In countries where schools can be sanctioned by law, such as Indonesia and Uganda, there were often no mechanisms in place to implement such sanctions (Eddy-Spicer et al., 2016).

By contrast, an analysis from China's Gansu province found that giving inspectors more influence to support school quality changes improved school development planning (Brock, 2009). A study in Timor-Leste found that inspections monitoring the collection and disbursement of school grants played a role in reducing embezzlement (Macpherson, 2011).

Historical conditions influence implementation of inspection reforms. South Africa's system was radically transformed to include school self-evaluation instruments and a whole-school evaluation process (South Africa DOE, 2002b). However, supervisors and school officials strongly resisted the reforms because of memories of the apartheid inspection regime, wide disparities in school resources and inadequate professional capacity development (Christie, 2010; De Grauwe, 2007). Unclear roles and responsibilities, shortage of supervisors and lack of support from the Department of Education also hampered adoption (Mazibuko, 2007).

Improving inspectorate systems can be slow. In Angola, for example, a comprehensive review found that around 60% of inspectorate staff lacked required professional qualifications, half were close to legal retirement and inspection modalities did little to foster education quality. A reform in 2010 streamlined inspector tasks, removing responsibility for in-service teacher training, pedagogical guidance to teachers and collection of school statistics. Inspectors' role was redefined to promote and support institutional evaluation of schools and provincial education offices, using participatory methodologies, and to improve communications among school actors, inspectors and provincial authorities.

Provincial inspectorates reported that, by 2015, 45% of the 668 education inspectors had been trained in the new methods. An independent evaluation found that important modifications had been made. Anecdotal evidence suggested that provincial inspectors had begun to adopt a problem-solving attitude, with the inspectorate–school relationship becoming more harmonious. However, in most provinces, the number of

inspectors is insufficient to ensure support to all schools, especially in areas where schools are widely dispersed or face drought and flood challenges (Angola Inspection Department, 2009a, 2009b, 2009c, 2015).

IT IS HARD TO REGULATE RAPIDLY EXPANDING AND DIVERSIFYING SYSTEMS

Regulatory challenges are further complicated when education systems expand rapidly and diversify provision. These broad trends, accompanied by calls for greater accountability, standards and information, test the ability of government or government-managed regulatory mechanisms to control standards at all education levels. The UN Human Rights Council (2015) has urged all countries to ensure the right to education by 'monitoring private education providers and holding accountable those whose practices have a negative impact on the enjoyment of the right' (Article 2, paragraph d).

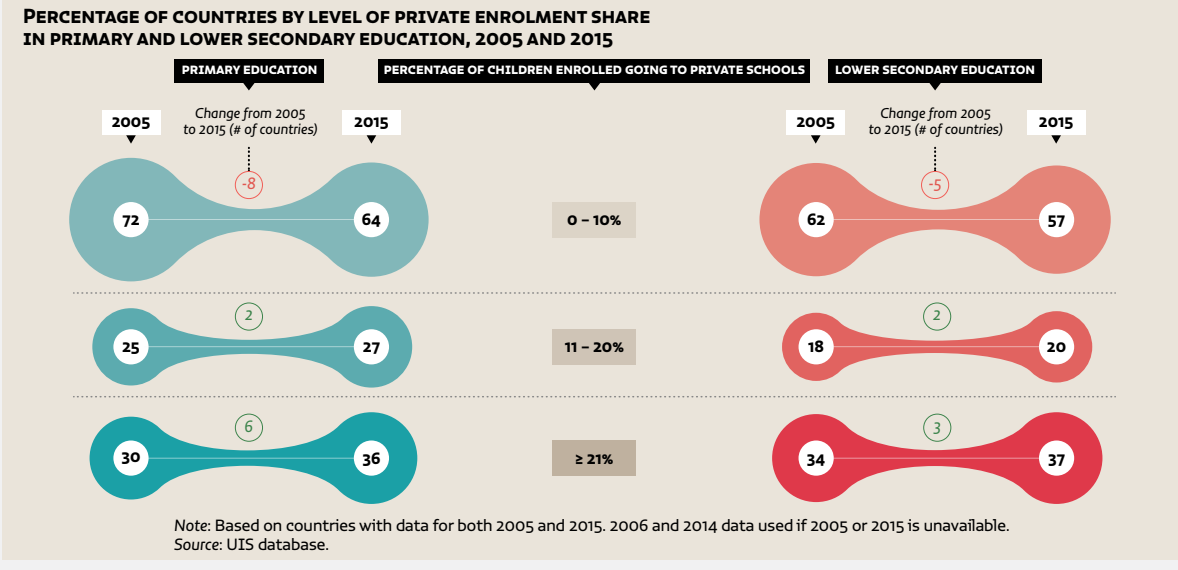
Many private schools are not regulated

With inspection systems already overwhelmed with public schools, the regulatory landscape has been complicated by the increased share of private schools in total enrolment. The proportion of students attending private school increased between 2005 and 2015 (**Figure 3.2**). The private share of primary enrolment rose in 105 of the 127 countries with data and fell in only 22; the private share of lower secondary enrolment grew in 82 of 114 countries. In sub-Saharan Africa one in every four primary school age pupils is expected to be attending private schools by 2021 (Caerus Capital, 2017).

Alongside regulated growth of private schools, the phenomenon of low-fee private schools serving poorer populations has captured global attention. Many of these schools are unregistered and thus outside official inspection systems. In Lagos State, Nigeria, 57% of all students were enrolled in private schools in 2010/1, but only 26% of private schools were approved by the Ministry of Education (Härmä, 2011).

> Philippines: 'Beware of unaccredited schools, parents warned'
>
> ~ *The Manila Times, 2017*

FIGURE 3.2:
Private sector enrolment has expanded in primary and lower secondary education



Note: Based on countries with data for both 2005 and 2015. 2006 and 2014 data used if 2005 or 2015 is unavailable.
Source: UIS database.

> Regulations need to be in place before allowing new or fast expansion of education diversification, and equity considerations need to be kept in mind

Private schools may be unregistered for many reasons. Most countries view slums as illegal settlements, raising issues of land ownership and the legal requirements for serving slum residents (Stern and Heyneman, 2013). Public schools are usually found only at slums' perimeters (UNESCO, 2015a). Governments may lack capacity for oversight (World Bank, 2008). In India, inspection-related sanctions appear to target private schools, even though evaluations have suggested that public schools also meet few of the standards (Francis, 2014; Miranda, 2013). The government of India's Punjab state closed 1,170 of the state's 9,300 private schools for non-compliance on Right to Education Act norms related to teacher qualifications, salaries and pupil/teacher ratio (Singh Kainth, 2014).

Schools may opt out of registration, deeming regulations overly restrictive and too focused on inputs, such as school assets, infrastructure and fees. An assessment of private school regulatory environments in 21 sub-Saharan African countries found that common regulations included teacher qualification standards (19 countries); number, type or size of classrooms (17 countries); and registration fees (15 countries). The analysis argued that the number and extent of regulations worked against their chief aim of ensuring that all schools were under government control. It suggested that a better strategy would be to make regulations more realistic and reasonable, and to refocus them on student outcomes and the accessibility of private schools to the most disadvantaged (Baum et al., 2016).

Lack of foundational regulations or a strong institutional environment is especially problematic when powerful private international actors, such as Bridge International Academies (BIA), expand rapidly in a country (**Box 3.1**).

> Uganda: 'Judge orders closure of low-cost Bridge International schools in Uganda'
>
> ~ *The Guardian, 2016*

BOX 3.1

Bridge International Academies' growth challenged education systems in Kenya and Uganda

BIA is the world's largest private chain of nursery and primary schools. It uses an 'academy in a box' approach to create standardized, replicable and scalable schools targeting poorer communities and families. Major donors include Pearson PLC, via Learn Capital, and Zuckerberg Education Ventures. BIA operates more than 500 schools in five countries. About 80% of the schools are in Kenya, and the others are in India, Liberia, Nigeria and Uganda. While its share in the global number of schools is still small, it warrants scrutiny for its rapid expansion strategy and engagement with influential global networks.

Kenya's initial private sector regulations of 2009 did not account for low-fee private schools and other schools serving communities in slums. Consequently, BIA's rapid expansion, peaking with a new academy opening every two days, far outpaced the government's ability to put in place and monitor appropriate regulations. After new regulations were established, inspections prompted court hearings on school closures. The Kenya National Teachers Union and others called for the closure of BIA schools, citing unqualified teachers, unregistered schools, inadequate infrastructure and unauthorized curriculum. In February 2017, the High Court of Kenya allowed the Education Board to proceed with closing 10 schools that had failed to meet standards, dismissing an appeal by BIA.

In Uganda, where guidelines for private schools were laid out in 2014, legal action against BIA was taken more quickly. In April 2016, the government ordered BIA to halt its rapid expansion after inspectorate reports in districts containing 74% of BIA schools led to a failing evaluation for the organization. In July 2016, all academies were ordered closed for failing to meet minimum standards. After a temporary injunction against the order, in November 2016, the High Court of Uganda ruled in favour of the closures, concluding that BIA was 'operating its academies in contravention of the law' (paragraph 22).

The legal challenges to BIA provision have been accompanied by questions about BIA's funders, including whether BIA violated the International Finance Corporation's Environmental and Social Performance Standards. However, despite the lack of transparency and independent evidence, donors may well renew and expand investment in the organization.

Sources: Brown-Martin (2016); EI/KNUT (2016); High Court of Kenya at Busia (2017); High Court of Uganda at Kampala (2016); Hystra (2014); Kenya MOEST (2015); Migiro (2016); Riep and Machacek (2016); Smith and Baker (2017).

> Improving information production and dissemination, rather than promoting strong sanctions and rewards, helps parents and community members support school improvement

MARKET COMPETITION DEEPENS DIVIDES

'The private sector would be very vital in supplementing what the government is doing but they are too expensive for the common man such that the schools are left for the rich.'

MOSES NDERITU, LECTURER, KENYA

School competition and school choice have gained popularity in education policy (Plank and Sykes, 2003; Verger et al., 2016a). Ideally, choice in the marketplace would better match children to schools and motivate healthy competition (Chubb and Moe, 1990; Friedman, 1962). Given information and options, parents could voice concerns, undertake improvements or move to other schools (Hirschman, 1970). Choice and its effects could improve the functioning of schools and systems, incentivize innovation and result in better student outcomes and parent satisfaction (Schneider et al., 2000).

However, the reality of market competition in education is often far from these ideal scenarios. The main criticisms of market-oriented policies are that they benefit wealthier schools, families and communities, do not improve average schooling performance, increase inequality and cannot function properly because education is incompatible with market assumptions (Diedrich, 2012; Levin, 1998; Ravitch, 2013).

United Kingdom: 'Why new school performance tables tell us very little about school performance'

~ *The Conversation, 2017*

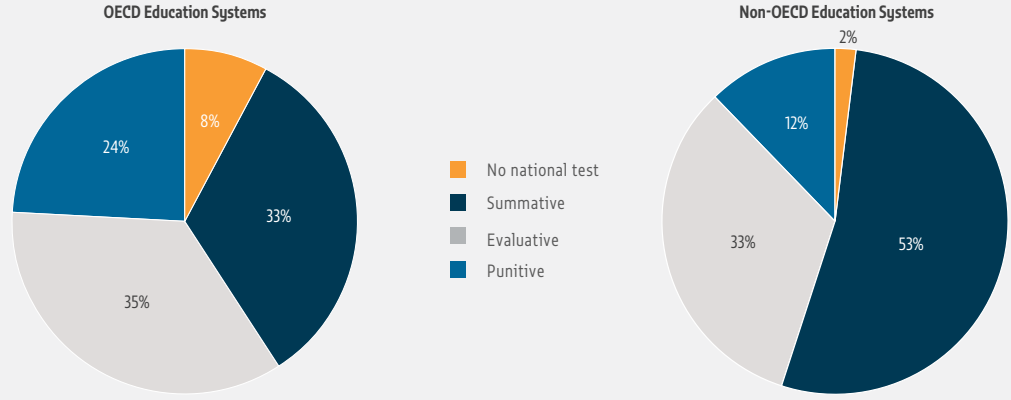
INFORMATION IS A PREREQUISITE FOR MARKET FUNCTION

Market function depends on parents' ability to choose schools based on comparable information. Public availability of school mean test scores influences school behaviour. A review of 101 systems for this report found that 34 use school mean test scores to promote choice (evaluative); 17 use results to sanction or reward schools or educators formally (punitive); and 46 use student test scores only for national or regional analysis (summative) (**Figure 3.3**). An analysis based on the 70 systems that participated in the 2009 Programme for International Student Assessment (PISA) found that evaluative systems were twice as likely as summative systems to have accountability policies, such as posting school-level test results publicly or giving parents aggregated results (Smith, 2016). Punitive and evaluative use of scores is lower in non-OECD countries, perhaps due to lack of data. A review of education ministry websites in 133 low and middle income countries found that 61 had no data available, and only 29 provide comparable school-level data (Read and Atinc, 2017).

> Among 101 education systems analysed, 17 use student test results to sanction or reward schools or educators

Increased demand for information in higher education has prompted the growth of ranking systems (Marope et al., 2013). Popular national higher education rankings include those of *U.S. News & World Report*, *Der Spiegel* in Germany and *Reforma* in Mexico. Global rankings, such as the Academic Ranking of World Universities, increase competition but are limited to about 1% of all universities. Such league tables, often using quantifiable indicators, including school endowment, may highlight certain aspects but not others of potential value to students, undermining equity in school choice (Hazelkorn, 2015). Innovations in rankings include online tools, such as

FIGURE 3.3:
Using student test scores to sanction or reward schools is more common in wealthier systems
Dissemination and use of student test score data across 101 education systems



Notes: The analysis covered 37 OECD and 64 non-OECD systems. Tests included primary and lower secondary assessments and examinations.
Sources: Based on Smith (2017); GEM Report team update of national testing policies.

U-Multirank, that enable multidimensional, customizable comparison (Jongbloed et al., 2013). Whether and how U-Multirank has improved student information and choice has not been assessed; however, for the academic year 2017/8, nearly 1,500 universities have been included (U-Multirank, 2017).

Information can facilitate school choice but is not enough to ensure accountability

School report cards aggregate school-level information to inform and involve the public (Cheng and Moses, 2016) and, in some contexts, determine school-level sanctions and rewards. Since 2007, Brazil's Basic Education Development Index has published student performance information, as well as pass, repeat and graduation rates, for all schools, allowing municipal and national comparison. The 1,000 lowest-performing municipalities receive extra resources to improve (Buchmann and Neri, 2008). School report cards can reduce financial leakage and increase transparency. In Guatemala, online school profiles include the amount of funding for specific programmes (Cheng and Moses, 2016).

Some information-sharing efforts have had positive effects. In North Carolina, United States, test score information helped low income parents who had options for schooling to make informed choices, and improved scores (Hastings and Weinstein, 2008). In Pakistan's Punjab province, when village report cards included test score averages for all schools, scores improved throughout the village (Andrabi et al., 2014). In Uganda, participatory report cards that involved parents and community in selecting indicators reduced student and teacher absenteeism and improved test scores (Barr et al., 2012).

> "Involving parents and community in selecting the information to be shared can reduce absenteeism and improve test scores"

School report cards do not always provide transparency. Implemented in 2011, Ghana's report card system covers enrolment, student performance, attendance, textbooks, teacher attendance, grants and school meetings. Although head teachers are supposed to post the cards openly, most reportedly post the information only in their offices. In Pakistan, Punjab uses data from the province's education management information system to produce report cards for its 54,000 public schools. However, getting all schools to disseminate the information has been difficult, since there are no regulatory consequences for not doing so (Cheng and Moses, 2016).

Widespread, equitable use of information depends on it being relevant, accessible and understandable to target audiences, such as parents or government authorities (Bruns et al., 2011). Online report cards, for instance, are unlikely to reach low income populations. Although available on open data platforms, the United Republic of Tanzania's raw data were not widely used because

under 5% of the population had internet access, and the data were not presented in a simplified summary form (McMurren et al., 2016). Education systems that disseminate information at the local level are likelier to reach target groups. Malawi develops school feedback reports based on thorough data collection on teaching and learning, leadership and management, school governance, and child-friendly practices. The district education office uses the data to develop school-specific graphics that it encourages schools to display to raise awareness (Cheng and Moses, 2016).

> "In Kenya, 72% of parents surveyed said they did not know how to use information about their children's literacy and numeracy"

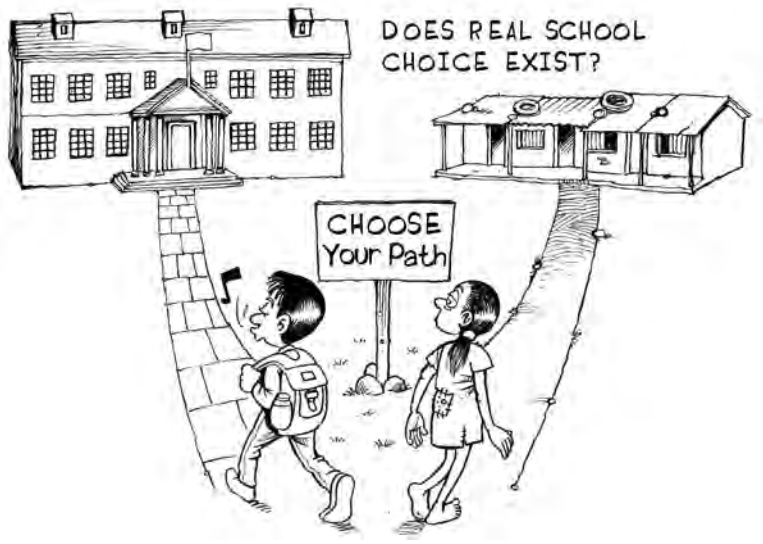
How to use the information is as important as making it available and accessible. When given student literacy and numeracy information, 72% of parents surveyed in Kenya said they did not know how they could use the report card to improve their child's school (Lieberman et al., 2014). In Liberia, an assessment was made of the impact on early reading of three intervention levels: not providing information to parents, providing unguided information and providing information and teacher training. It showed that providing information improved early reading tasks such as letter naming and fluency, while providing information and teacher training improved assessment scores across all indicators, including listening comprehension and unfamiliar-word decoding (Piper and Korda, 2010).

SCHOOL CHOICE INCREASES WITH OPTIONS AND FINANCIAL SUPPORT

In the last three decades, school choice has gained momentum, increasing in more than two-thirds of OECD countries, for instance (Musset, 2012). Across the 72 systems participating in PISA 2015 the parents of around 64% of students reported that they had at least two schools to chose from for their children (OECD, 2017a).

> "In the last three decades, over two-thirds of OECD countries have increased school choice"

School choice creates competitive pressure, and studies have repeatedly shown that it benefits wealthier families while further marginalizing disadvantaged parents and schools. A 1992 New Zealand policy expanding school choice beyond residential zones had negative consequences. A survey of 10% of primary schools showed that teachers, particularly those working in schools facing competition, perceived that competition had negatively affected learning and teaching quality. Even principals did not perceive competition to have impacted learning (Ladd and Fiske, 2003).



Nepal's public schools increased their competitiveness via policies often found in private schools, e.g. changing the medium of instruction and improving school uniforms. However, optimism about the changes was low, as such policies in the unregulated private sector had further entrenched social segregation (Joshi, 2016).

Charter schools in the United States, which are public, independent schools that families can chose, have deepened segregation, with limited choice available for the most disadvantaged students (Frankenberg et al., 2010; Adamson et al., 2015). A long-term study of charter schools in Michigan showed a negative impact on student achievement and efficiency in public schools (Ni, 2009).

Parents generally base school choice decisions on information shortcuts, which often can negatively affect equity and diversity among schools. In Finland, school choice was primarily exercised by educated families whose children excelled academically (Silvennoinen et al., 2015). In the United States, while all parents used networks

extensively, parents with more privileged networks used fewer information sources, relied more on educated peers and had access to more accurate information (Schneider et al., 2000). Likewise, financial and other constraints meant that primarily poorer Nepalese parents had almost no freedom to choose and were consequently less likely to voice dissatisfaction or engage with schools to motivate improvement (Joshi, 2014a, 2014b).

Vouchers can improve ability to choose among schools but at risk of greater inequality

When education is not free, financial constraints can affect the ability to choose schools. School vouchers offer funds to families to help them overcome these constraints to choose schools more freely and therefore foster competition among schools.

In the United States, voucher programmes exist in 14 states (ECS, 2017). Results on student outcomes were mixed. Most reviews indicated that vouchers did not significantly improve student achievement (Epple et al., 2015; Usher and Kober, 2011). Recent studies from Indiana, Louisiana and Ohio showed negative effects (Dynarski, 2016; Mills and Wolf, 2016). However, among low income recipients in New York, vouchers have had a significant positive impact on college enrolment and degree attainment by minority students (Chingos and Peterson, 2015).

In poorer countries, vouchers for private schools aim to improve marginalized groups' access and relieve an overburdened public system (Baum, 2017; Gauri and Vawda, 2003). Colombia's programme targeting low income neighbourhoods increased private school enrolment and improved voucher recipients' achievement levels and graduation rates. However, the voucher covered only just over half the average cost, effectively barring those who could not afford the balance from the benefit (Angrist et al., 2002, 2006). In Sindh province, Pakistan, enrolment levels increased by 30 percentage points in villages where schools received vouchers (Barrera-Osorio et al., 2013).

Making vouchers available may lead to greater inequality in access without necessarily improving student performance, especially if schools are allowed to charge more (Levin, 2017). Since the 1990s, Swedish public and private schools have competed through a universal voucher programme but there are indications of growing segregation in schools (Böhlmark et al., 2015). Uganda's secondary level universal vouchers, introduced in 2007, increased enrolment and improved performance on national assessments. However, schools select which students to accept. Voucher students were found to be from more educated, financially secure households (Barrera-Osorio et al., 2016). Chile's universal voucher programme is a textbook case of adverse impact on equity (**Box 3.2**).

THERE IS MIXED EVIDENCE THAT PERFORMANCE-BASED ACCOUNTABILITY DELIVERS EDUCATION OF GOOD QUALITY

In performance-based systems, school performance is linked to explicit sanctions and rewards on the assumption that they motivate schools and universities to meet objectives, including those related to learning outcomes. Such approaches have significant appeal to policy-makers, given the increasing availability of data and the stronger emphasis on public management. At the same time, there is growing scepticism over such approaches' ability to improve performance on some outcomes or to deliver the full range of education outcomes valued by society. In many important respects, they may be selling students and society short.

TEST-BASED ACCOUNTABILITY TO MOTIVATE SCHOOLS IS HIGHLY DEBATED

The use of aggregated student test scores as the basis for sanctions and rewards in several countries has received considerable attention. Critics argue that tightly tying a single score to school livelihood is unfair, as test results are heavily determined by factors outside school control, such as natural ability, socio-economic background, after-school tutoring and parental involvement (Castro et al., 2015; Dufur et al., 2013; Woessmann, 2016).

Chile: 'Chile's school voucher system: Enabling choice or perpetuating social inequality?'

~ New America, 2017

BOX 3.2

Limits of a market-based approach to school accountability: Chile's failed universal voucher programme

Three decades of linking funding to students in Chile demonstrate the potential for universal vouchers to increase inequality in education. Between 1982 and 1996, communities with higher increases in private enrolment had lower public school test scores, greater gaps in test scores between elite private schools and public schools, and greater socio-economic gaps between public and private school parents. Although the assumption is that test scores are the main factor influencing school choice, only one in four parents of first graders in Santiago chose the highest-performing school from their shortlists. Almost 70% looked at schools only in terms of religious affiliation, and 87% considered only schools with a similar demographic background to their own.

An unintended consequence was that schools benefited more than families from increased choice. While top-tier schools opted out over concerns that universal vouchers would dilute their brands, others charged extra fees and selected among voucher recipients, deepening socio-economic stratification. To combat these serious equity concerns, in 2008, Chile increased voucher values for disadvantaged students by about 50%. The most recent evidence suggests this had little impact on school inputs: There was only a small reduction in class size, and schools did not use the additional revenue for permitted expenditure. Moreover, as incentives were linked to grade 4 learning outcomes, schools could game the system, e.g. by not admitting children of low socio-economic status.

Chile has made no significant improvement on international assessments and its education system is among the most stratified in the world. Despite recent attempts to soften some of the negative aspects of its system, it strongly adheres to market-based principles in education. School rankings are regularly published and widely disseminated through newspapers and other avenues, even though parents were not highly persuaded by this information. A study found that the way national data were presented to parents and schools put the goals of school improvement at odds with the primary parental use of the data to choose schools.

Sources: Feigenberg et al. (2017); Hsieh and Urquiola (2006); Mizala et al. (2007); Mizala and Urquiola (2007); Schneider et al. (2006); Taut et al. (2009); Valenzuela et al. (2014).

> "Critics argue using test scores to hold schools to account is unfair, as scores are heavily determined by factors outside school control"

Such accountability mechanisms depend on governments' ability to conduct regular census-based tests and administer punitive policies. The United States has the most widely studied system applying this high-stakes approach (**Box 3.3**). Others include Brazil, Chile and the Republic of Korea.

In the highly decentralized Brazilian system, the states of Ceará, Minas Gerais and Rio Grande do Sul developed their own assessments to allow for comparisons across schools and use incentives, such as merit bonuses, to reward the best-performing ones (Bonamino and Sousa, 2012; Idados, 2017). Chile added a high-stakes component to its voucher programme in 2008, in which low-performing schools risked closure if performance did not improve over four years (Osses, 2014). Multiple policy shifts in the Republic of Korea's system over the past decade have led to higher stakes for schools. In 2010, the government introduced public reporting of school performance and the "School for Improvement" programme, under which low-performing schools received additional funds to

BOX 3.3

Leaving children behind in the United States

Signed in 2002 and operative through 2016/7, the No Child Left Behind (NCLB) Act was the most widely known and documented national initiative in test-based accountability. It required all students to reach proficiency standards in mathematics and reading as set by the states by 2014. Third- to eighth-graders were tested annually to demonstrate 'adequate yearly progress' towards proficiency. Failure to make sufficient progress prompted intervention by the states, including, eventually, closing low-performing schools. NCLB had marginal positive effects on student achievement, partly because schools or educators gamed the system for fear of punishment.

One unintended result of NCLB was narrowing down the curriculum. For example, an analysis found that introducing NCLB accountability accelerated performance gains but widened the achievement gap between black and white students. In response to accountability pressures, many schools reclassified low-performing students as students with disabilities or excluded them altogether. Elementary schools increased mathematics and language instruction by a combined 230 minutes per week under NCLB, on average, while decreasing time for social studies, science, art and music, physical education and recess.

These practices may have been more common in low-performing schools at greater risk of sanction. For example, 38% of principals in New York schools with high minority enrolment reported decreasing time devoted to social studies, compared with 17% of those in schools with low minority shares. About 90% of principals in Georgia and Pennsylvania reported giving teachers test preparation materials, such as practice tests, and almost all reported helping teachers identify content that was likely to be on the state test.

Sources: Figlio (2006); Figlio and Loeb (2011); Hamilton and Hannaway (2008); Hanushek and Raymond (2005); Jacob (2005); McMurrer (2007); Rothstein et al. (2008).

increase student performance in the National Assessment of Educational Achievement (Yi, 2015) (see **Chapter 9** on further analysis of the availability of school- and student-level outcome data).

There is no clear evidence that raising the stakes for schools leads to better learning outcomes

Cross-national assessments provide mixed evidence on the impact of performance-based accountability on student achievement. An overview of performance in the PISA study showed that sanction and reward systems did not yield substantial improvement. Across 51 education systems participating in PISA, 11 systems used test-based accountability. Of those, 5 saw some increase in their PISA mean mathematics score from 2003 to 2015, while scores decreased in 6. The most studied test-based accountability systems, including those of Australia, the Republic of Korea and the United States, did not show improved PISA performance on average or at the bottom of the distribution (**Figure 3.4**).

> “Of 11 participating education systems using test-based accountability, 5 saw their PISA mean mathematics score increase from 2003 to 2015, while scores decreased in 6”

Statistical evaluations typically show either no or marginally positive gains from such reforms. Their impact on low-performing schools and students, arguably a main reason for such accountability measures (Ladd, 2012), was even more mixed. Analysis of 2006 PISA science achievement data for Australia, Portugal, the Republic of Korea and the United States found that increased school accountability policies had a small negative impact but benefited students of higher socio-economic status (Gandara and Randall, 2015). Analysis of four cycles of PISA data from 2003 to 2012 for the Republic of Korea showed no effect on mathematics scores or the probability of scoring below basic proficiency (Yi, 2015).

One reason for weak association between accountability reforms and student outcomes may be lack of school autonomy. Without decision-making control over hiring, budgeting and resource allocation, schools and communities can do little to change. Conversely, having control has positive effects. For instance, in the Republic of Korea, school autonomy over curriculum and instructional assessment had a statistically positive association with mathematics achievement (Yi, 2015). The relationship between autonomy, accountability and student achievement depends on institutional capacity. An analysis of 4 rounds of PISA data (2000–2009) for 42 countries found that school autonomy affected achievement negatively in low income and low-performing countries and positively in higher income and high-performing countries (Hanushek et al., 2013). Thus, greater school autonomy may increase performance inequality among education systems within and among countries.

Zimbabwe: ‘Headmaster fudges pass rates’

~ The Herald, 2017

Unintended negative consequences of high-stakes accountability outweigh benefits

Often, various types of unintended negative consequences more than outweigh the benefits of high-stakes accountability, particularly among the most disadvantaged schools and students. With explicit sanctions and rewards, test scores may become the central focus of schooling, rather than one objective among many. Schools may initiate practices that maximize test score improvement rapidly but undermine overall quality and learning.

Schools and teachers adjust official and unofficial policies in response to test score pressure in several ways, including shaping the testing pool, narrowing curriculum, teaching to the test, teaching those on the verge of passing, and explicit cheating, where students may also be involved (**Table 3.1**). All such measures can reduce morale and crowd out other reforms. In Chile, punitive accountability policies made low-performing schools more likely to take quick-fix measures, such as after-school tutoring, instead of longer-term strategies, such as investing in teacher training (Elacqua et al., 2016).

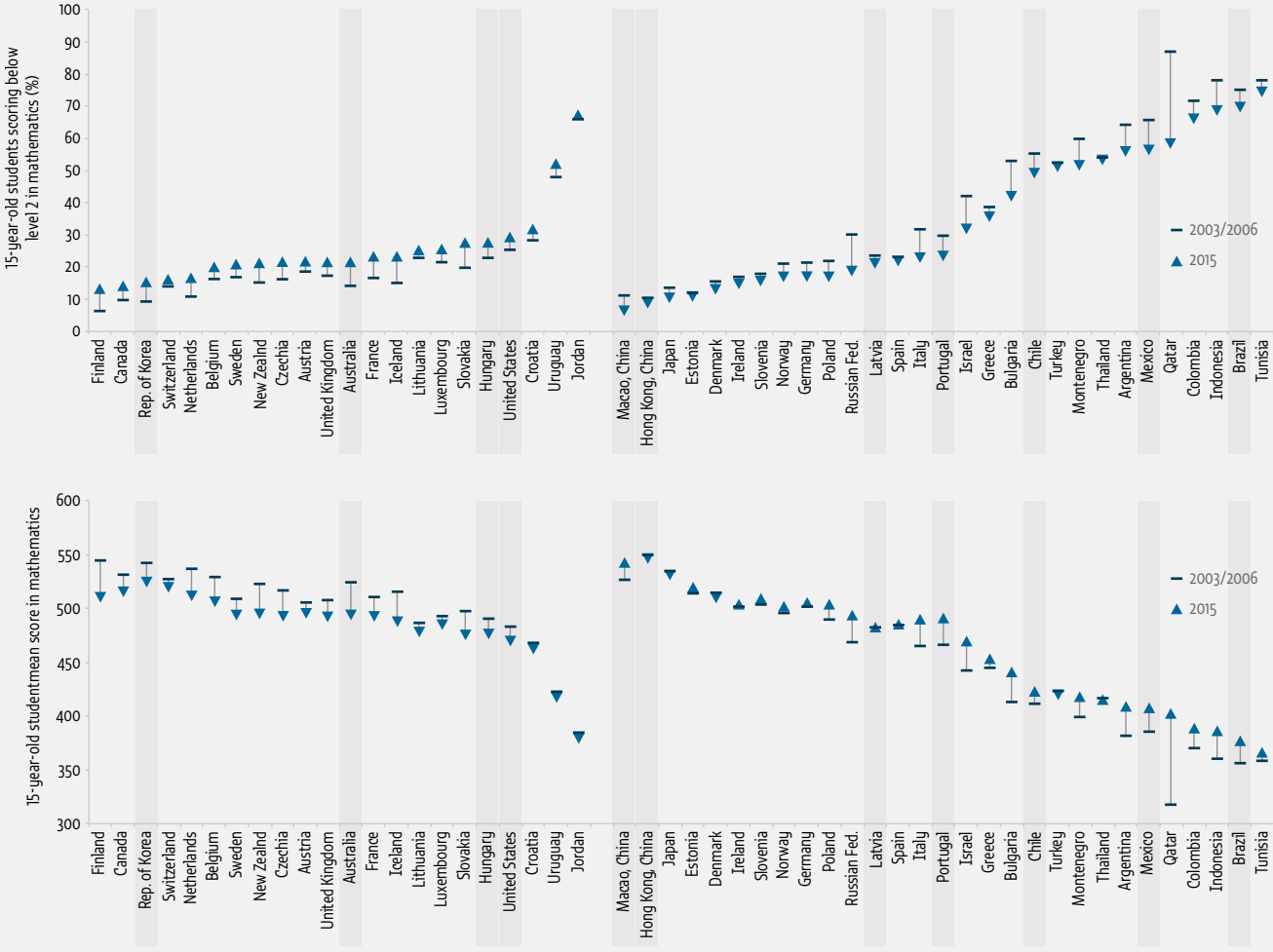
PERFORMANCE-BASED FUNDING IS INCREASING IN HIGHER EDUCATION

Sanctions and rewards based on learning outcomes are not prevalent in higher education, but several countries tie funding to other performance measures, leading to

FIGURE 3.4:

Learning outcomes have not improved in test-based accountability systems

Percentage scoring below level 2 on PISA mathematics test, 2003–2015



Notes: The graphs show all PISA countries with data for 2003 or 2006 and for 2015. Test-based accountability systems, according to a GEM Report categorization, are highlighted.
Source: OECD PISA database.

TABLE 3.1:

Undesirable consequences of high-stakes school accountability

'Gaming the system' practice	How it works	Examples
Shaping the testing pool	Schools change testing pool make-up using admission practices, discipline policies or student reassignment.	In 2009 PISA, schools in punitive systems were more likely to have selective admission practices at least partly based on student achievement: 60% of public schools and 87% of private schools practiced selective admission. In the Republic of Korea, teachers took low-performing students on a field trip during the test.
Narrowing the curriculum	Instructional time shifts towards tested subjects and away from non-tested subjects.	In Australia, low-performing students were prescribed additional intensive literacy and numeracy classes instead of non-tested subjects, such as non-English languages. In Brazil, primary school teachers overvalued reading and mathematics, paying little attention to other parts of the curriculum nurturing creativity, culture and the arts.
Teaching to the test	Instructional strategies focus on preparing students for test content, structure and environment.	In Australia, 3 in 4 teachers surveyed agreed or strongly agreed that accountability pressure had led them to teach more to the test.
Helping students more likely to pass	Students closest to the proficiency mark or passing score receive extra attention.	Teachers in Texas admit focusing more attention on students more likely to meet the standard. In the United Kingdom, students have been clustered into groups based on likelihood of meeting assessment objectives, with greater resources provided to those nearest the target score.
Explicit cheating	Test scores are directly manipulated.	In Hungary, 1.5% to 1.8% of classes are suspected of cheating on the national test. In the United States, 178 teachers and principals in Atlanta public schools were implicated after finding that erasure marks resulted in scores virtually impossible to occur without human intervention. In 2015, 11 educators were convicted on racketeering charges for changing test scores.

Sources: Aronson et al. (2016); Booher-Jennings (2005); Chung (2017); Hardy (2015); Horn (2012); Ignácio (2014); Marks (2014); Polesel et al. (2014); Smith (2016, 2017).

changes in institutional practices. With increasing student enrolment and broader public management reform, most OECD countries tie at least some public institution funding to selected outcomes. In 2007, 19 of 23 OECD and partner economies gave block grants for teaching and learning; 17 had targeted funding initiatives (Santiago et al., 2008). Funding formulas may relate to enrolment, faculty qualifications or performance factors, such as graduation and job placement rates, faculty research productivity and student satisfaction (McLendon and Hearn, 2013). Some countries include an explicit equity objective. Australia, for instance, provided block grants for enrolment of students of low socio-economic status, from remote or rural areas, or with a disability. In Japan, an external quality evaluation determined block grants for national universities (Santiago et al., 2008).

In the United States, funding incentives were associated with changes in institutional practice, but evidence on student outcomes was mixed. Positive changes included greater awareness of institutional performance and government priorities, increased competition among institutions, greater use of data in institutional planning and policy-making, and changes in academic and student service policies (Dougherty and Reddy, 2011; Miao, 2012). However, multiple studies showed that performance funding was not significantly related to greater graduation rates (Hillman et al., 2015; Tandberg and Hillman, 2014; Umbricht et al., 2015). Some even showed a negative relationship; an examination of 500 institutions across all US states over 18 years found that performance funding policies were not linked to student learning and may have contributed to a decline in graduation rates (Rutherford and Rabovsky, 2014).

Pressures to meet higher education targets pose a risk of unintended negative consequences similar to those at lower levels. To increase graduation rates, institutions may restrict access to less capable or financially disadvantaged students (Hillman, 2016). Performance-based funding may weaken academic standards and institutional cooperation, as a survey of over 200 personnel at 18 community colleges and public universities in the United States found (Lahr et al., 2014). Argentina set up a professor-researcher incentive programme in the early 1990s to tie monetary and non-monetary awards to university outputs. Although the number of professors involved in research rose from 11% to 23%, with increased pressure to publish came fraudulent behaviour, such as plagiarism, and a shift in focus from teaching to research (Araujo, 2001, 2003). Performance-based funding may also increase inequality. In the Russian Federation, where funding has been based on enrolment, student entry exam scores and research since 2015, divisions between universities increased, with state funding concentrated on large, wealthy universities while others suffered funding declines (Semyonov and Platonova, 2017).

> “Pressures to meet higher education targets can mean institutions restrict access to less capable or financially disadvantaged students”

PARENTS, COMMUNITIES, STUDENTS AND STAFF CAN SHAPE AND MONITOR SCHOOL POLICIES AND PRACTICES

Social accountability through monitoring or participation in governance can improve responsiveness to local needs by increasing direct contact with schools. It can also increase efficiency, with transparent finances reducing leakage and incentivizing investment in good teachers and materials.

COMMUNITY MONITORING OF SCHOOLS IS MORE SUSTAINABLE WHEN EMBEDDED IN EXISTING PROCESSES

Community monitoring generally focuses on infrastructure, staff attendance and budgeting. But sustainability is a challenge (Lapham, 2017). The Nigeria Northern Education Initiative (NEI), funded by the US Agency for International Development, trained civil society members in two poorly performing states to monitor local budgets and to collect information on schools with various initiatives, such as School Performance Kits. Despite some success in raising community awareness, the programme lost momentum, partly because participants lacked political power. Its complex approach made community members dependent on project staff to facilitate interactions with officials. Lack of government response to local demands, partially attributed to lack of resources and the limited control local authorities had over centrally allocated resources to education, reduced the effectiveness of the programme (Wetterberg et al., 2016).

For sustained impact, efforts should be linked to formal mechanisms (Grandvoinnet et al., 2015). In Ethiopia and Malawi, Link Community Development (LCD) partnered with local and national governments to improve education data collection and increase community dialogue. It

devoted training and resources to increase capacity among those already collecting data and worked within the country's monitoring schedule. It trained local officials to collect and upload information to a database used for electronic school report cards. These included a visual representation of school progress on various indicators, enabling discussion regardless of literacy level (LCD, 2017).

In Wolaita Zone, Ethiopia, LCD helped develop a gender action plan through school performance appraisal meetings. These public meetings were held to develop awareness among parents and community members about gender-related education barriers with the aim to mobilise them to take decisions in schools and change their attitudes towards girls' education. Midpoint and final evaluations show positive effects on student attendance, achievement and attitude towards girls' education. An external, quasi-experimental evaluation found significant improvement in achievement scores and lower gender disparity. Girls' attendance improved, their primary school completion doubled to 60%, more parents encouraged girls to attend school and gender-sensitive teaching increased (Visser et al., 2017). Following project completion, school performance appraisal meetings continued in many participating schools.

Since 2014, the UNICEF Data Must Speak project, supported by GPE and the Hewlett Foundation, similarly aimed at more inclusive community involvement in school accountability. Operating in various countries including Nepal, Peru and Togo, it seeks to strengthen the use and transparency of education management information system data and create easily understood reports to use locally for accountability purposes (UNICEF, 2015).

Although LCD and Data Must Speak complement existing government processes, lack of government resources can threaten sustainability. The final evaluation in Ethiopia called financial resources the largest barrier to sustainability and scalability (Visser et al., 2017).

COMMUNITY PARTICIPATION IN SCHOOL GOVERNANCE CAN REFLECT LOCAL PRIORITIES

Community stakeholders in school governance vary by education level. Students take on a greater role in higher education (**Box 3.4**). At lower levels, school committees of parents, students, school leaders and community members influence decision-making. School-based management (SBM) transfers decision-making authority and responsibility for school operations from central government to local stakeholders to better reflect local priorities and improve student outcomes (Carr-Hill, 2017).

Bermuda: 'Community brainstorms education solutions'

~ The Royal Gazette, 2017

The effects of school-based management are context-specific and depend on local resources

The level of decision-making transferred to local actors varies. A school committee may carry out one or more school tasks, such as monitoring teacher and student performance, hiring and firing contract teachers, procuring materials, improving infrastructure and developing school improvement plans (Barrera-Osorio et al., 2009; Bruns et al., 2011; Demas and Arcia, 2015). SBM has been adopted in numerous countries for over 30 years and more recently in several low and lower middle income countries (Carr-Hill, 2017).

BOX 3.4

Representation in higher education decision-making is a key way to involve students

Student governments play a prominent role in voicing collective concerns over government and institutional issues affecting students. Student representation on university committees is a main way institutions field such concerns and involve students in decision-making.

Most governing bodies of institutions in the 48 countries of the European Higher Education Area include elected student representatives. In the Bologna Process, a series of formal agreements establishing a European Higher Education Area, European ministers have spoken in favour of student involvement in policy-making and in higher education decision-making at institutional, national and European Union levels. However, as some universities have gained institutional autonomy and adopted a more managerial structure, student representation in decision-making has declined. For instance, provisions about university assemblies in Portugal stipulated student participation but did not specify minimum student participation, signifying the decrease in the political weight of student representatives.

Institutionalized student representation in higher education decision-making in Africa, while less documented, has increased, partially due to the increased influence of party politics in student organisations. An analysis of 20 African flagship universities found student representation in at least two-thirds of councils and half of the senates. Many quality assurance mechanisms include legal requirements for student inclusion at the board level.

Sources: Klemenčič (2012); Luescher-Mamashela and Mugume (2014).

Ireland: 'Education bill may see pupils sitting on school boards'

~ The Irish Times, 2016

SBM has had a positive impact on student achievement and attendance in some countries. Studies have attributed to SBM increased test scores in Indonesia (Pradhan et al., 2014) and lower levels of grade repetition, failure and dropout in Mexico (Bando, 2010). Test scores improved in Kenyan schools that received an additional teacher and teacher performance monitoring training as a result of SBM (Duflo et al., 2008). Three years after the Philippines introduced SBM and provided grants, mathematics scores on the national assessment test increased by about four percentage points. Schools with more experienced principals and teachers appeared better prepared to introduce SBM (Yamauchi, 2014).

Educators and community members must understand SBM for it to succeed (Carr-Hill et al., 2015). In Gambia, the Whole School Development programme provided block grants and comprehensive SBM training to principals, teachers and community representatives. After three to four years, student absenteeism had declined by 21% and teacher absenteeism by 23%. Yet the programme had a positive impact on learning outcomes only in communities with higher local capacity, e.g. adult literacy of at least 45% (Blimpo et al., 2015). The most marginalized groups tend to be less involved, as they often have the least time to participate in meetings, monitor teachers or parse complicated information (Shafir and Mullainathan, 2013).

> "In Gambia, school-based management training given to principals, teachers and the community reduced student absenteeism by 21% over 3-4 years"

Similar capacity gaps hinder many SBM initiatives. In Madagascar, SBM improved student performance in mathematics and Malagasy but not French, a subject many primary school teachers are poorly equipped to teach (Lassibille et al., 2010). Parents and teachers in Mexico had insufficient information to make informed decisions about using the SBM grant (Santibanez et al., 2014). School committees in rural Niger invested in infrastructure, equipment and agricultural projects rather than initiatives more likely to affect education outcomes. Thus, where SBM initiatives prove ineffective, one explanation is that parents and others responsible, most of whom did not go to school, may lack sufficient capacity to make investments likely to improve education quality (Beasley and Huillery, 2016).

Willingness to share responsibility with parents and community members in education processes is crucial. In Indonesia, an analysis of information dissemination strategies found that facilitated school meetings and text messages effectively increased parents' knowledge of and participation in a school grant programme, with the exception of the grant planning process, which was dominated by school principals (Cerdan-Infantes and Filmer, 2015). Unclear responsibilities also hamper engagement. The lack of active school committees in many Indonesian schools is partly due to unclear roles. One study found that, across 393 schools sampled, only 1% of school committee members could correctly identify school committee responsibilities (Felicia and Ramli, 2017).

SBM is more likely to succeed in and benefit advantaged communities. Schools in wealthier areas are less prone to the issues described above and likelier to have higher initial institutional capacity. Thus, SBM can increase inequality. In Argentina, gains in secondary schools were exclusively in better-off municipalities, and local areas with abundant financial and human resources were better positioned to maximize decision-making power (Galiani et al., 2008).

SBM can increase financial transparency and accountability and reduce leakage by ensuring service delivery to schools. Decentralisation can be associated with corruption in the absence of democratic institutions that give citizens information on government behaviour and the capacity to act upon this information (Karlström, 2015). In Zimbabwe, an education ministry audit of 1,697 schools found that school authorities were embezzling parent funds for personal use (Education Coalition of Zimbabwe, 2017).

School management committee composition should be diverse and inclusive

Ensuring that SBM committees are inclusive is a challenge. The politicized nature of SBM in some countries can affect composition and lead to elite capture. School

officials in Bangladesh suggested that politically driven selection led to uneducated or uninterested people being appointed to committees (Ahmed and Nath, 2005). In rural Ghana, local elites and more educated community members became brokers of decision-making, limiting participation by others (Essuman and Akyeampong, 2011). In Nepal, elites' monopoly on committees excluded the most marginalized and made accountability difficult (Pherali, 2017). District officials expressed frustration that committee formation hinged on political representation over interest in improving education quality (Joshi, 2017). In the United Republic of Tanzania, analysis of community empowerment in schooling decisions found that gender, access to information and membership in a school management committee were related to individual perceptions of empowerment. Men dominate decision-making in the largely patriarchal culture (Masue, 2014).

Student achievement improves with wider community representation on school committees. An Indonesian study tested the effects of committee reforms entailing (a) increased capacity and knowledge (through training and financial resources), (b) increased community representation (through democratic elections) and (c) improved ties with a local governing body. The first reinforced committee structures, with limited impact on learning. However, interventions that changed these structures through wider representation and/or links to the local community were associated with higher Indonesian language scores (Pradhan et al., 2014).

Nigeria has consistently faced challenges with lack of awareness about SBM (Humphreys and Crawfurd, 2014). A large-scale integrated school improvement programme conducted in six states included interventions aimed at community engagement and learner participation in school management committees. Participation by women and children in SBM committees improved but remained low. Records showed that only 30% of schools overall reached a benchmark of at least one women attending at least two meetings (**Figure 3.5**). Schools receiving interventions reported higher levels of inclusivity and participation (Daga, 2016).

LEADERSHIP AFFECTS SCHOOL QUALITY AND IS AFFECTED BY ACCOUNTABILITY MECHANISMS

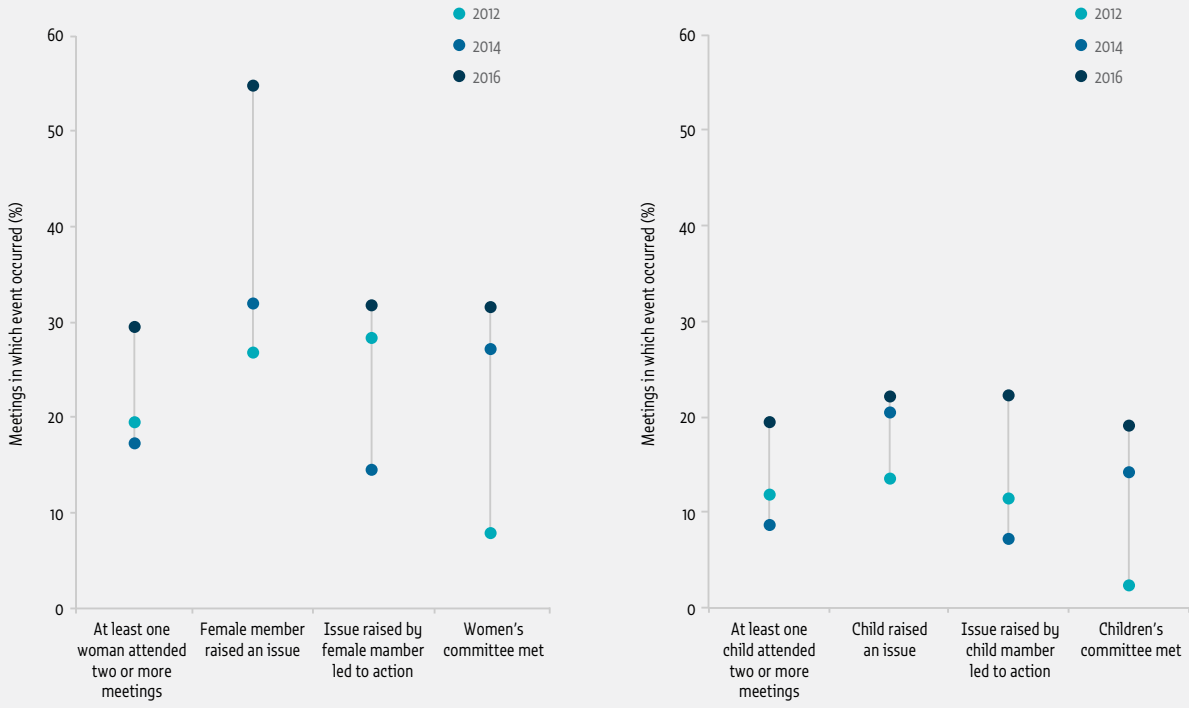
Leadership and management, as vested in the senior school staff and especially the head teacher or principal, are increasingly considered priorities for school improvement. Education institutions that showed significant improvement in student achievement on international tests had strong leadership (Mourshed et al., 2010).

The trend towards more accountability, including SBM, decentralization and performance-based metrics to assess schools and teachers, has significant implications for principals in terms of workload, nature of responsibilities, and skills and knowledge required to fulfil more complex roles (see **Chapter 18** on further analysis of this question). Decentralization requires leaders to focus on communication, cooperation and coalition-building. Emphasis on school performance adds to paperwork, time constraints and expectations of school improvement (Pont et al., 2008).

PRINCIPALS ARE OVERBURDENED AND UNDERPREPARED

Today's principals are expected to be managers, instructional leaders and problem-solvers, and serve as the interface among the school system, the bureaucracy and the community. Many countries increasingly view principals more as instructional leaders, supporting teachers to improve learning, than as traditional school administrators (Vaillant, 2015). In the 2013 Teaching and Learning International Survey (TALIS), principals said they were overburdened with administrative tasks, especially at the upper secondary level, and unable to devote themselves to instructional leadership (OECD, 2014a). In Australia (Pont et al., 2008) and many African contexts (UNESCO, 2016b), the added stress of an increased workload deterred prospective leaders.

FIGURE 3.5:
Active engagement of women and children in SBM committees in Nigeria has improved, from a low starting point
Women and children participating in SBM committee meetings in six Nigerian states



Notes: The intervention and survey took place in the states of Enugu, Jigawa, Kaduna, Kano, Kwara and Lagos. The survey samples were 585 schools in 2012 and 735 schools in 2014 and 2016.
Source: Daga (2016).

In poorer countries, emphasis on instructional leadership is less evident, though the principals' role in influencing school improvement has grown. In Ghana, school leaders regard themselves as no more than keepers of school possessions and implementers of government policies. In Kenya and Cameroon, school leaders have wide-ranging responsibilities. However, they are usually not well-prepared to deal with these challenges. Where preparation is offered it is usually in the form of brief professional training sessions (UNESCO, 2016c). Principals may even discount the importance of instructional leadership. A study in six African countries found that principals viewed management, organization and record-keeping as their key jobs and did not mention the importance of their role in teaching and learning processes (Mulkeen et al., 2007).

> "Accountability pressure affects principals, but they often lack the capacity or motivation to use the opportunity to improve their school"

Accountability pressure affects principals, but they often lack the capacity or motivation to use the opportunity to improve their school. In Canada, growing emphasis on assessment has increased pressure on principals and narrowed their instructional leadership to short-term inspecting and directing over longer-term teacher development. While principals are expected to manage assessments, most preparation programmes do not require related training (Newton et al., 2010). With increased accountability, 88% of South African schools had developed school improvement plans in 2011. However, the rewards and sanctions in the quality assurance system have not induced behavioural change since there is high job security, due to stringent labour legislation. Teacher unions and principals may also resist implementing sanctions, because they view them as unfair, with too many variables outside school control (Wills, 2015).

Schools with fewer resources are likely to face heightened leadership challenges. Head teachers in remote areas of Botswana, Namibia, the United Republic of Tanzania and Zimbabwe tended to receive little or no administration support (De Grauwe, 2001). Principals in low income inner-city schools in the United States reported mostly dealing with emergencies instead of instructional issues (Tucker and Codding, 2003). In all OECD countries surveyed, principals who agreed their effectiveness was somewhat or extremely influenced by inadequate resources were also more likely to claim that a higher workload affected their ability to do their job effectively.

Analyses of mobility found that principals used positions in low-achieving schools as stepping stones to more affluent schools (Béteille et al., 2012). An analysis from South Africa found that the racial match between the principal and student body was significantly associated with principals' decisions to move within the system (Wills, 2015). High-stakes accountability linking principal performance to student test scores may motivate transfers out of schools with underperforming students (Clotfelter et al., 2006; Li, 2012), which is likely to aggravate inequality in distribution of principals.

CONCLUSION

The growing emphasis on data gathering and a desire to involve more actors has not easily translated to more effective and equitable schools. This is hardly surprising, since improving education provision, whether in basic or higher education, is a complex, long-term process. It encompasses a variety of outcomes and involves the coordination of many actors with overlapping responsibilities, while the strategies to reach education goals are often uncertain.

The evidence discussed in this chapter suggested that productive accountability policies require carefully considering equity, quality and capacity issues together, and situating policies in the socio-political context in order to fulfil education objectives and minimize undesirable consequences. Encouraging education systems to function more like markets is likely to benefit better resourced schools and families, leading to greater inequality. High-stakes systems linked to test score performance are unlikely to improve quality in the classroom, may further disadvantage the vulnerable and can lead to schools gaming the system. Efforts to increase community participation in school decision-making can be counterproductive in heavily politicized or under-resourced contexts, where such processes are susceptible to elite and political capture. Capacity issues that limit stakeholders' ability to hold schools accountable or perform their responsibilities need to be recognized and remedied through additional resources and support.

Nevertheless, complementary internal and external accountability approaches should be encouraged, as long as they involve multiple stakeholders contributing towards a shared aim. Standardized tests, transparent information and engagement by communities and parents help schools, teachers and systems track progress over time. Overemphasizing a single approach to school accountability may result in undesirable consequences. The application of approaches requires prudency, commitment and consideration of context to ensure that accountability systems improve education.

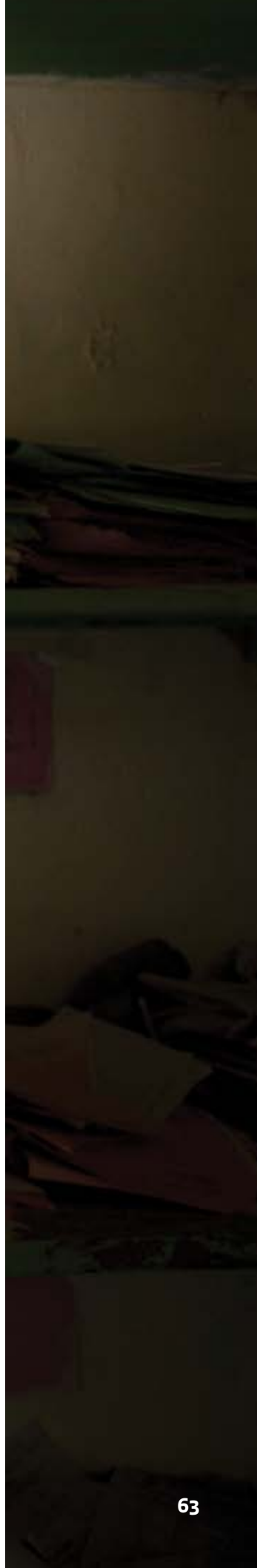
Teacher Efa Phillip Ekono at the Primary School in Turkana, Kenya.

CREDIT: Karel Prinsloo/Arete/UNESCO

CHAPTER

4

Teachers



KEY FINDINGS

Teachers have primary responsibility for providing high-quality instruction, but they are expected to do far more than teach.

Teacher absenteeism is a concern: A study of six low and middle income countries suggested it averaged 19%. But a closer look shows that this is often a problem of weak systems or teacher management: In Senegal, schools were closed for 50 out of 188 official school days.

Classroom observation is the core of teacher evaluations around the world. But the time and capacity development required to ensure it generates useful feedback to improve teaching should not be underestimated.

In 33 education systems in mainly high income countries, 83% of lower secondary school teachers reported student surveys were part of their evaluation. However, an international review showed these were not based on informed analyses of teaching.

Student test scores increasingly form part of teacher evaluations. But scores reflect more than the impact of a single teacher – and even isolating the effect of a particular teacher fails to recognize that scores are insufficiently reliable as indicators of teacher effectiveness.

Teacher sanctions based on student test scores or evaluations are increasingly popular, but have multiple negative consequences for instruction, learning and equity.

Performance-based pay tends to promote an unhealthy competitive environment, reduce teacher motivation and encourage teaching to the test, at the expense of weaker students.

Professional learning communities are an accountability approach that has helped increase teachers' pedagogical and content knowledge, with associated changes in practice. But they are less common in poorer settings, where mentoring and collaborative practices can be rare.

Most countries have national codes of ethics developed by teachers' unions, but lack of clear enforcement mechanisms hinders their effectiveness and codes do not always specify breach reporting or sanction mechanisms.

Community monitoring of teachers has been used but often infrequently and is most effective when observations focus on easily identified and interpreted tasks, such as teacher attendance. Its usefulness for accountability purposes is especially poor for parents from disadvantaged backgrounds.

Providing high-quality instruction is teachers' core responsibility 65
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Conclusion 83

'I teach maths at Faiz Muhammed, from 7th to 10th grade. There are about 45 students in each class, so I am responsible for the education of 180 students. This is too many students for one teacher. We do not have enough books for all of our students, and the classrooms are very small. Some students must share books, and the conditions are very crowded. We do not have enough for all of our students. I try to help as many of our students as I can, but sometimes it is very difficult.'

JAWED BAHZAD, TEACHER, LEBANON

Teachers, instructors and professors have primary responsibility for educating students in formal and non-formal settings. Pressures on teachers are well documented (Done and Murphy, 2016; Smith, 2014; Verger et al., 2013) and appear to be increasing, in part owing to new expectations (Eurydice, 2008; Yan, 2012). Beyond instruction and facilitating learning, teachers are asked to be counsellors, researchers or data analysts. High-quality instruction alone entails multiple tasks, including preparing, giving and grading lessons, assignments and tests; managing classrooms; developing instructional materials; and providing feedback to students and parents. The complexity and variety of tasks can create conflicting demands on teachers' time and commitment, complicating efforts to hold them accountable for quality of instruction and learning outcomes. This chapter outlines teachers' responsibilities and examines the mechanisms used to hold teachers accountable.

PROVIDING HIGH-QUALITY INSTRUCTION IS TEACHERS' CORE RESPONSIBILITY

Teachers' main responsibility is ensuring high-quality instruction. In practice, good teaching is a complex and demanding task. Teachers need to manage and convey curriculum, ensure engagement and learning, and adapt instruction to student needs and changing classroom dynamics. In addition, they need time to prepare instruction materials and to organize and grade assessments.

> "Net teaching time for primary school teachers in OECD countries averaged 776 hours in 2014"

Most countries regulate teachers' annual work time. The vast majority of it is allocated to teaching, with only a small portion given to responsibilities and activities outside the classroom (Benavot, 2004). A comparison of country regulations revealed considerable variation, even among higher income countries. For example, net teaching time for primary school teachers in member countries of the Organisation for Economic Co-operation and Development (OECD) averaged 776 hours in 2014, ranging from under 600 hours in Greece and Hungary to over 1,100 hours in Chile. In Colombia, it was 1,000 hours. In the Russian Federation, it was 561 hours (OECD, 2016c). Globally, between 2000 and 2010, instruction time in primary and lower secondary schools decreased (UNESCO, 2015a).

In most education systems, instruction time policies focus on transmitting core subjects: language, mathematics, history, geography, science and social studies (Benavot, 2008). Increasingly, countries are emphasizing cross-curricular skills, as well as social, behavioural and emotional competencies, such as interpersonal understanding, critical thinking, empathy, teamwork, perseverance, interpersonal communication and self-discipline (Eurydice, 2008). An approach to education incorporating social and emotional learning has been associated with more positive social behaviour, improved relationship skills and increased academic performance (Durlak et al., 2011). This type of approach may be especially important for marginalized and low income students, who struggle with a sense of belonging and need more diverse support (Dotson, 2016).

Such skills and competencies can be embedded in existing school subjects or offered as stand-alone courses. In Vanuatu, a guide for teaching history encourages teachers to stimulate student creativity and critical thinking and make students feel they can express their opinions (UNESCO, 2016d). Within Singapore's Framework for 21st Century Competencies and Student Outcomes, self-awareness, social awareness, self-management, relationship management, and responsible decision-making have been specified as necessary competences for students to thrive (Singapore MOE, 2016). In South Africa, a life orientation course develops skills and knowledge in health; social, personal and physical development; and orienting to the workforce (South Africa DOE, 2002b). As it is the only course not assessed externally, teachers are largely responsible for choosing, setting and reviewing student assessments (South Africa DOBE, 2011).

Overall, teachers should carry out their instruction responsibilities in an equitable manner so that no student is left behind. This includes taking care of potential gender biases in the classroom (**Box 4.1**).

RESPONSIBILITIES OUTSIDE OF INSTRUCTION ARE INCREASING BUT ARE NOT ALWAYS REWARDED

Additional teacher responsibilities can depend on cultural and historical elements or school character. They include, for example, how the school community promotes student well-being and fosters peer support. In some contexts, supplemental teacher responsibilities are not explicit. In the Republic of Korea's Free Semester System, teachers

BOX 4.1

Gender-equitable instruction affects student achievement

Teaching is shaped in part by teachers' assumptions and stereotypes about gender, which in turn affect students' beliefs and learning. In Australia, female teachers felt particularly responsible for boys' underachievement, indicating they lacked resources, training or tools to address the underlying dynamics. A study in Norway found that girls were awarded higher grades when assessed by teachers rather than anonymized state exams. By contrast, in the United States, the mathematics anxiety of many female teachers was associated with female students' lower achievement in mathematics and belief in the stereotype that boys are better at mathematics.

Countries aiming to close the achievement gap between boys and girls have engaged in teacher training initiatives explicitly targeting gender equity in learning. Morocco, in cooperation with Japan, launched the Promoting Education with Equity and Quality initiative, which aims to improve the quality of mathematics and science learning and ensure equal opportunities to learn for boys and girls by collecting information through classroom observation and assessing the teachers' ability to understand student thinking. Additional interventions focused on changing the curriculum, providing more teacher training and increasing awareness-raising programmes for teachers and students.

Policy interventions aimed at teaching can also have unintended gender-related effects. In 2011, Peru's education ministry started science education reforms to increase student-centred teaching and learning and stimulate a more hands-on experience. Initial evaluations from a pilot project in Lima showed improvement in science scores concentrated among boys in urban schools, with little or no effect on other populations. A new programme in 2013 focused on training teachers to build girls' confidence in their skills and, among rural teachers, to boost the skills of boys and girls. The gender and urban–rural differences then disappeared, and the performance of weaker students improved from additional sessions.

Sources: Beilock et al. (2010); Falch and Naper (2013); Hodgetts (2010); IDB (2016); Mullis et al. (2016).

> Teacher absenteeism can be reduced by overcoming factors that demotivate or draw teachers away from their primary responsibility of providing high-quality instruction in the classroom

are expected to help students develop their dreams and talents, but critics argue its ill-designed activities may increase already high teacher workloads (UNESCO, 2016d).

Responsibilities for administrative tasks can include designing curriculum, collaborating with administrators and other teachers, participating in internal evaluations and developing assessments (OECD, 2014a; UNESCO, 2014b; World Bank, 2012). However, highly demanding systems can increase teacher frustration, already a major issue in under-resourced schools, where increased workloads are compounded by limited instructional materials and overcrowded classrooms (Badenhorst and Koalepe, 2014; UNESCO, 2014b). A review of systems in Hong Kong (China), Japan, the Republic of Korea, Singapore and Taiwan Province of China found that enhanced school autonomy had transferred new responsibilities to teachers, adding to their workload and contributing to the challenge of teachers being overwhelmed (Cheng, 2017). Moreover, teachers in Eastern Asia tended to see their roles as going well beyond formal school activities. For instance, teachers participating in the Teaching and Learning International Survey (TALIS) spent about two hours a week on extracurricular activities, on average, ranging from about half an hour in Sweden and Finland to nearly eight hours in Japan (OECD, 2014b).

Many countries do not recognize the time teachers spend on supplemental responsibilities. Statutory working time is limited to teaching hours in Benin, Bulgaria, Cambodia, Côte d'Ivoire, Djibouti, Guinea-Bissau, Guyana, Mali, Ekiti (Nigeria), Palestine and Tunisia. Côte d'Ivoire and Djibouti do not stipulate all tasks expected (World Bank, 2017a). Teachers whose work is not properly recognized and rewarded often feel overburdened and undervalued, which can influence absenteeism, motivation and effectiveness.

SOLUTIONS TO TEACHER ABSENTEEISM MUST ACCOUNT FOR SYSTEM-WIDE FACTORS

'Sometimes teachers do not show up to class because the school is very far, and there is no road for the teachers to drive on, only a bumpy dirt track. We do not have electricity, and there is no toilet. In the winter, it is very cold, and there is no heating. Even the teachers have no heating in their office. Our teachers are very good, and they try to teach all of us, but we do not have many books, and sometimes we do not even have desks.'

MUHAMMAD REZZA, GRADE 10 STUDENT, AFGHANISTAN

Multiple, sometimes competing responsibilities pull teachers away from classrooms and instruction. Absences that reduce instruction time are problematic, but understanding reasons behind absenteeism is necessary to find solutions and avoid simply blaming teachers. Many countries face the challenge of unfulfilled instruction time, with substantial cost implications, given salaries' share

Argentina: 'Docentes no iniciarán clases por demandas salariales'

Teachers not starting classes due to salary demands

~El Telegrafo, 2017

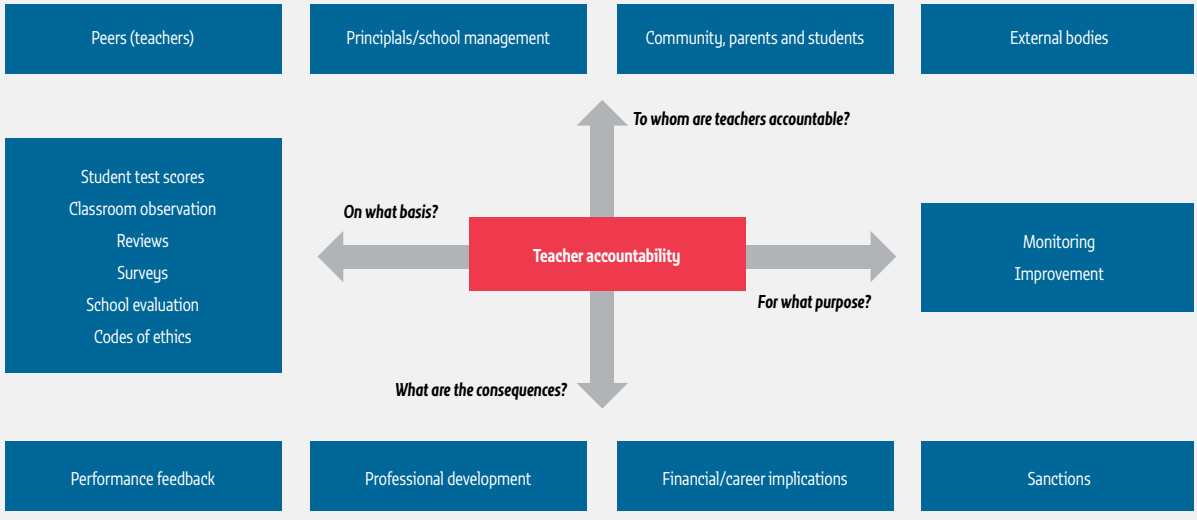
of expenditure. Absenteeism in lower income countries can exacerbate already high teacher shortages (UNESCO, 2014b). A study of six low and middle income countries in the early 2000s suggested that the average teacher absenteeism was 19% (Choudhury et al., 2006).

A recent review of Kenya, Mozambique, Nigeria, Senegal, Togo, the United Republic of Tanzania and Uganda found that 44% of teachers were either absent or at school but not in the classroom as expected (Bold et al., 2017). In the United Republic of Tanzania, unannounced school visits in 2014 found 14% of teachers absent despite being listed on the school roster (Wane and Martin, 2016). In India, estimates differed among studies. A representative panel of 1,297 villages found almost 24% of rural teachers were absent during unannounced school visits in 2010 (Muralidharan et al., 2016). Another study of 619 schools in six states found 18.5% of teachers absent: 9% on leave, 7% on official duties and 2.5% on unauthorized absence (Behar, 2017). Effective policy responses are complicated by the many factors influencing teacher absenteeism, e.g. distance to school, pupil/teacher ratio and poor working conditions (UNESCO, 2014b) (**Box 4.2**).

TEACHER ACCOUNTABILITY SYSTEMS CAN TAKE MANY FORMS

Teachers are held accountable through various approaches that rely on feedback from multiple stakeholders. There are four key questions: To whom are teachers held accountable, on what basis, for what purpose and with what consequences? Historical trends and national values often dictate the structure of accountability systems, and many permutations are possible (**Figure 4.1**). The pull of different teacher responsibilities and dependence on other actors to fulfil their own responsibilities make holding teachers accountable challenging. While individual absenteeism, for example, can be tied to a teacher's chosen behaviour, fulfilment of the primary responsibility of high-quality instruction can be harder to evaluate.

FIGURE 4.1:
Peers, community, parents and students also have roles in holding teachers accountable
Components of teacher accountability systems



Sources: GEM Report (2017/18) interpretation, based on OECD (2013c).

BOX 4.2

Structural factors cause most teacher absenteeism in Senegal and Indonesia

Between 2007 and 2014, Senegalese students received, on average, 108 of the 188 official school days allocated annually, or 57%. Most reasons for teacher absence were beyond teachers' control. Only 12 of the 80 missed school days, i.e. 6% of the official working days, were due to individual teacher absence (**Figure 4.2**). Most lost days reflected system factors, such as school closure for weather damage, renovations or wider system planning issues. For instance, primary schools close at the end of June so primary teachers can monitor secondary and technical school final exams in July. The start of the school year in October is often delayed, particularly in rural areas, for school cleaning (often performed by students) or because learning materials are lacking, leaving families struggling to cover the costs. On average, just over 10 days are lost to strikes, mostly teacher strikes.

In Indonesia, school visits in 2013 and 2014 found that 10% of primary school teachers who were expected to teach were absent from the school, down from 19% in 2003. As a follow-up, principals reported on annual days lost and the reasons for the absences (**Figure 4.3**). The predominant reason was time for study, including preparing for classes. Few days were lost to tardiness or leaving early.

Important factors contributing to teacher absenteeism included contract status and employment at a single school. The work environment also made a difference. In schools with no or low community monitoring or parental involvement, or very poor resources and facilities, teachers were more likely to be absent. Many of these characteristics are common in schools in remote areas, where having a principal also influenced teacher attendance. Teacher absenteeism in remote schools without a principal averaged 47.5%, compared with 17.5% with a principal.

Education policies in Indonesia affected absenteeism. Teachers receiving an additional allowance for working in remote areas, and those working in schools with more frequent and more recent district office supervisory visits, were less likely to be absent. Some policies increased absenteeism. For instance, the requirement for full-time teachers to complete 24 hours of face-to-face teaching per week cannot always be met at a single school, resulting in one in five teachers working in multiple schools, increasing the odds of absenteeism.

FIGURE 4.2:
Senegalese students lose over 50 school days annually owing to school closures

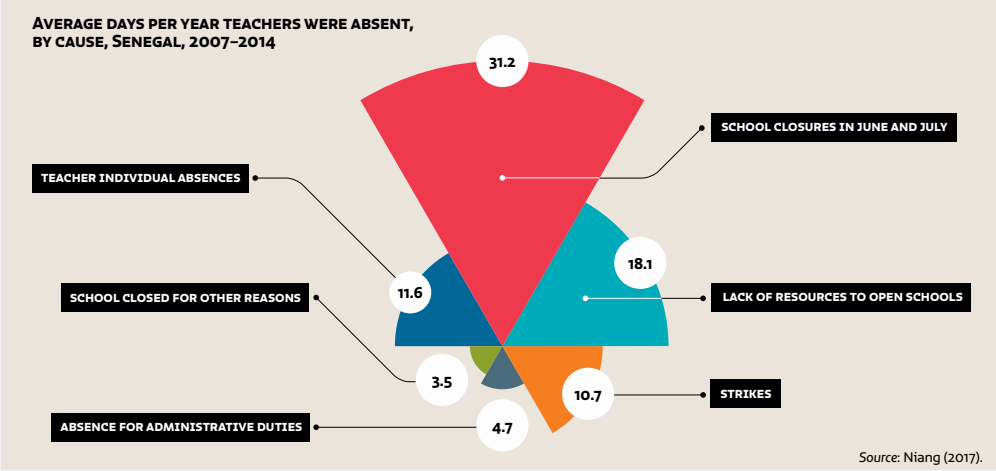
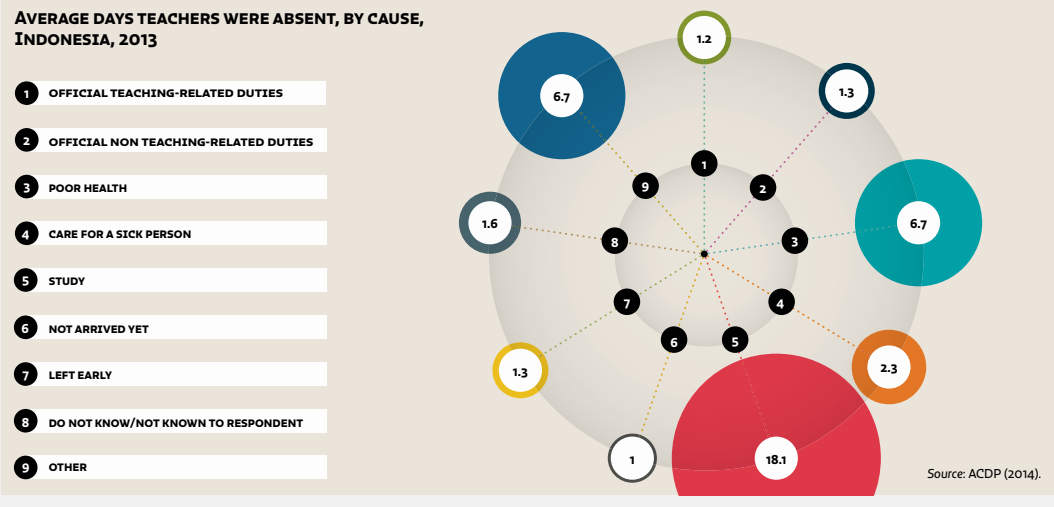


FIGURE 4.3:
Nearly half of teacher absences in Indonesia were excused time for study



Sources: ACDP (2014); Niang (2017).

TRUST IN THE TEACHING PROFESSION HELPS DICTATE HOW TEACHERS ARE HELD ACCOUNTABLE

Trust plays an important role in teacher accountability. Teaching tends to be among the five most trusted professions (GfK Verein, 2016). However, trust in the profession does not necessarily mean teaching is valued by society or that teachers feel trusted (**Box 4.3**). Fewer than one in three teachers in TALIS countries reported that teaching was valued (OECD, 2014b).

Respondents in most of the 21 countries surveyed for the Global Teacher Index 2013 trusted teachers more than education systems to deliver high-quality education (Varkey GEMS Foundation, 2013) (**Figure 4.4**). Government and public trust in the profession, and teachers' trust in the process, influence an accountability approach's effectiveness (Verger and Parcerisa, 2017b). In a study of seven European countries – England (United Kingdom), Finland, Greece, Ireland, Portugal, Spain and Sweden – teachers were sceptical that accountability, especially the kind based on student test scores, could help overcome the real issues affecting their classrooms and schools (Müller and Hernández, 2010).

Mutual trust between stakeholders that responsibilities will be fulfilled shapes accountability in Finland. Teacher accountability policies originate with and are governed by teachers, underscoring the high regard for the profession. Finnish teachers have considerable autonomy and are actively involved in determining policy content, for instance through consultations on matters such as national core curriculum (Aurén, 2017). Autonomy is also strongly supported and protected in the Netherlands. There is no systematic evaluation of teaching or evaluation of individual teachers. Accountability approaches focus on the school as a whole rather than on individual teachers (Scheerens, 2017).

Japan has one of the lowest levels of trust in teachers overall. Historically, teaching was an honourable, high-status position in Japan. Underperformance in 2003 and 2006 in the Programme for International Student Assessments (PISA) prompted additional external accountability mechanisms (Volante, 2015), including discussions on the use of student performance in teacher evaluations (Williams and Engel, 2013). This added reporting responsibilities to a workforce already averaging nearly 54 hours per week in 2014 (Bannai et al., 2015; Katsuno, 2012).

BOX 4.3

Contract teaching has implications for teacher trust, motivation and accountability

Initially a stopgap measure to overcome teacher shortages, hiring teachers on short-term contracts is increasingly seen as an accountability mechanism. Systems use the incentive of contract renewal to improve teacher performance and motivation. Countries with weak trust in teachers or in system capacity to monitor them – often the same countries facing major teacher shortages – have seen an expansion of contract teaching. Fixed-term contracts have increased sharply in India and parts of sub-Saharan Africa, where younger, undertrained and underpaid teachers are hired locally and often teach in the more remote and marginalized areas. In Madagascar, the number of primary school contract teachers increased from 33,500 in 2008 to 50,000 in 2015, over 50% of the teaching workforce.

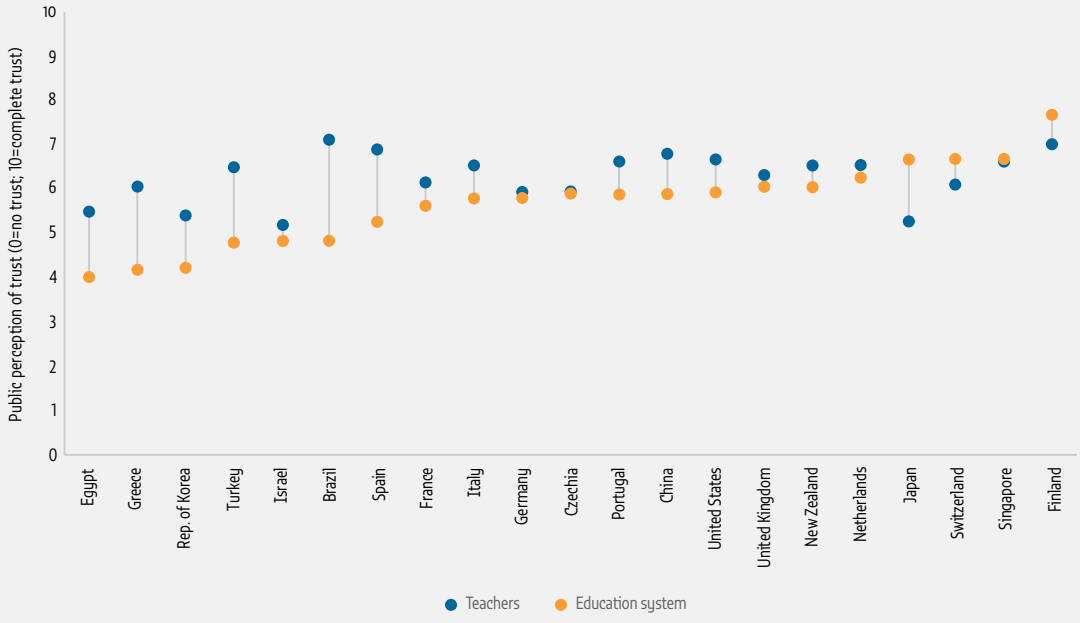
Globally, there is significant variation in contract terms. All teachers in Malaysia work as civil servants, while four in five in Mali and Niger work on fixed-term contracts. A dearth of tenured positions often coincides with increased staff workload, reduced public funding and diminished staff and organization rights. In some countries, a majority of teachers were on short-term contracts with inferior working conditions, status and qualifications compared with their peers. Reliance on contract teachers can also aggravate teacher shortages by increasing turnover.

Evidence on the effectiveness of contract teaching is mixed. In many cases, contract teachers tend to be underqualified, unsupported and underpaid, which can negatively affect motivation and performance. In Niger, learning outcomes based on achievement tests were higher with tenured teachers, possibly due to the lower skills of contract teachers. Yet with clear guidance, quality assurance and parental involvement, contract teachers can raise learning outcomes. While contract teaching may fill dire teacher shortages, it can decrease equitable access to qualified teachers and cannot be considered a long-term solution.

Sources: Bruns et al. (2011); Chudgar et al. (2014); Duflo et al. (2015); EI (2009); ILO (2012); ILO/UNESCO (2015); OECD (2014b); Rabiou et al. (2010); UIS (2016); UNESCO (2015a); Venart and Reuter (2014).

Trust and accountability are not mutually exclusive. External accountability requires trust in stakeholders and the process. In Singapore and in Shanghai, China, teachers are trusted and have many responsibilities for their own professional learning, while teacher evaluation systems are well-developed and institutionalized. In both systems, accountability aims to support professional development and involves inputs from the profession (Jensen et al., 2016).

FIGURE 4.4:
Trust in teachers is greater than trust in education systems
Public trust in teachers and belief in the education system in 21 countries



Source: Varkey GEMS Foundation (2013).

FORMAL EVALUATIONS ARE THE MOST COMMON MECHANISM FOR HOLDING TEACHERS ACCOUNTABLE

No single measurement strategy can capture the full range of teacher performance or the composition of qualities important for effective teaching. Moreover, principals, peers, parents and students value different teacher capacities and knowledge, and have different perceptions and degrees of objectivity about high-quality teaching. It is critical, therefore, to use as many complementing sources of information on teacher performance as possible to produce more accurate evaluations (Stronge, 2006).

Formal teacher evaluations are used in the majority of OECD countries (OECD, 2014a, 2014b). Countries use a range of tools, depending on political and social context, to provide performance feedback and hold teachers accountable (Isore, 2009). Data from the World Bank's Systems Approach for Better Education Results (SABER) show that 24 of 26 low and middle income countries, including Cambodia, the Russian Federation, the Solomon Islands and Tunisia, employ some form of teacher evaluation. Twenty-one SABER countries base evaluations on most or all of the following: content knowledge, teaching methods, student assessment and student academic achievement (World Bank, 2017a). This section explores common evaluation tools and examines the purposes and consequences of teacher evaluations.

While 63% of teacher evaluations in the 2013 TALIS incorporated six components (Smith and Kubacka, 2017), many other countries rely on uniform measures of teacher effectiveness that do not present a comprehensive view of teaching. Uruguay's evaluation system largely draws on formal class visits by principals and supervisors. In-depth interviews with principals, teachers and key informants suggested that teachers were highly critical of evaluation based only on short, sporadic visits to classes (Vaillant and Gonzalez-Vaillant, 2017).

CLASSROOM OBSERVATION IS NECESSARY TO EVALUATE TEACHERS' ABILITY TO ENGAGE WITH STUDENTS

Classroom observation is a staple of teacher evaluations. It relies on a common understanding between teacher and observer of good teaching. Observers focus on instructional practice and ability to structure and maintain high-functioning and nurturing classrooms (Marshall, 2009). Observing classroom interactions can capture on-the-spot decision-making, content focus and depth of instruction. In the 2013 TALIS, 96% of participating teachers in 33 countries reported that observations were part of their evaluation (Smith and Kubacka, 2017), while 22 of 27 SABER countries used observations as part of their evaluation, including Benin, Jordan, Kazakhstan, Palestine and Papua New Guinea (World Bank, 2017a) (**Table 4.1**).

> "In the 2013 TALIS, 96% of participating teachers in 33 countries reported that observations were part of their evaluation"

Observations, announced or unannounced, are usually undertaken by the principal or a school management member (OECD, 2013d). In Chile, announced 45-, 60- or 90-minute observations are videotaped for the national institution responsible for teacher evaluation (Bruns et al., 2016). In Malaysia, unannounced daily 'learning walks' are part of principals' responsibility to observe teachers more informally, including entering classrooms to observe teaching and help maintain discipline (Harris et al., 2017).

Consequences of observation vary. Germany and Singapore mostly use the information for formative purposes. By contrast, in high-stakes systems such as those in Tennessee and the city of Chicago, United States, results represent between 50% and 70% of the overall evaluation used in personnel decisions (Martinez et al., 2016). In Israel and the Republic of Korea, observations are part of teacher evaluation for promotion (OECD, 2013d).

Reliable and useful observation requires fine-grained, actionable feedback

The impact of observation on instruction quality depends on who is observing, the observation's focus and the feedback's usefulness. In the United States, while primary school principals accurately differentiated between the most and least effective teachers, they had greater difficulty identifying teachers in the middle of the distribution (Jacob and Lefgren, 2008). This may be due in part to outside factors, including bias. For instance, both male and female principals rated male teachers lower than female teachers (Jacob and Lefgren, 2005).

Observations are more likely to improve instruction if the observation form is subject-specific and captures fine-grained practices that can generate actionable feedback. In the United States, regular observers with subject and pedagogical expertise provide more consistent feedback (Hill and Grossman, 2013). The reliability of observation ratings is also important. Comparing observation ratings with other teacher evaluation measures, such as student test scores, has had mixed results (Garrett and Steinberg, 2015; Kane et al., 2013; Kane and Stager, 2012). Reliability improves with multiple observers or a single observer completing multiple observations (Hill and Grossman, 2013).

Having multiple evaluators is indeed important (Isore, 2009; Looney, 2011). In Singapore, evaluation is based on multiple classroom observations throughout the year by peers, experts and administrators (Jensen et al., 2016). In Chile, principals share the responsibility with external accredited evaluators, a local assessment centre and peer evaluators (OECD, 2013d). Such systems require considerable time and resources from both evaluators and teachers, along with resources from other stakeholders, particularly to translate results into policies. While such approaches may give more reliable results, systems might compromise quality if budgets decline.

TABLE 4.1:
Criteria used as basis of teacher evaluation in low and middle income countries

Number of criteria used for teacher evaluations	Regions employing the criteria in teacher evaluations
All four criteria used	Benin; Cambodia*; Egypt; Guyana; Jordan; Kazakhstan; Kyrgyzstan; Lebanon; Rep. of Moldova; Anambra, Bauchi and Ekiti states (Nigeria); Papua New Guinea; Tomsk (Russian Federation); Samoa; Solomon Islands
Three criteria used	Côte d'Ivoire; TFYR Macedonia; Mali*; Palestine; Ivanovo and St Petersburg (Russian Federation); Serbia; Tunisia*; Uganda
Only one criterion used	Bulgaria, Georgia*, Guinea-Bissau

Note: The four criteria are: subject matter knowledge, teaching methods, student assessment and students' academic achievement in teacher evaluations. Countries denoted with asterisk (*) are those where classroom observations are not part of teacher assessment systems.
Source: World Bank (2017a).

> Evaluators' capacity and effectiveness should be increased by ensuring they have the pedagogical and content knowledge to assess high-quality instruction

The time and capacity challenges of ensuring multiple observations completed by knowledgeable observers, and of generating continuous actionable feedback, suggests teachers should have a larger role in observation. This could mean including teachers among several observers to improve reliability or distinguishing between observations whose purpose is system monitoring and those aimed at improving instruction (Hill and Grossman, 2013). Knowing the supervisor is focused on instruction allows teachers to be more open to feedback and transparent, as teachers know admitted challenges will not be used in personnel decisions (Nolan and Hoover, 2011).

Evaluators must be trained to recognize high-quality instruction

To observe and evaluate high-quality instruction effectively requires a common understanding of good teaching. All evaluators need basic training. In practice, evaluators may lack the training, time and other resources to conduct proper evaluations. A study of secondary schools in Uganda found that many principals did not review lesson plans or other resources used in the classroom as national teacher evaluation instructions required, demonstrating a need for more training for both teachers and principals (Malunda et al., 2016). In a small number of school districts in the United States, the Peer Assistance and Review programme offers teachers peer assessment skills training. Beyond teachers' willingness and skills, sufficient training requires support from school leadership and adequate resources, such as teachers' time (Easley II and Tullowitzki, 2016).

A review of 40 national education plans found that training for principals in matters of teacher governance was highlighted in Belize, Cambodia, Guinea-Bissau, Jamaica, Kenya, Malawi, Papua New Guinea and Sierra Leone (Hunt, 2014). A target in Belize's 2011–2016 National Education Strategy was to train principals and supervisors in observational skills to better monitor and support curriculum delivery by teachers (Belize MOE, 2012). Similarly, Norway introduced a national programme in 2009 to improve principals' ability and confidence in appraising quality, including training in setting goals for teaching work, setting and enforcing quality standards, and guiding and giving feedback (Nusche et al., 2011).

PEER REVIEWS OF TEACHING ENLIST EVALUATOR EXPERTISE

Formal or informal peer reviews of teaching (PRTs) typically involve teachers in a given school reviewing their peers' work through a feedback form or checklist (Golparian et al., 2015). Although less common than observations by principals or management, PRTs can be based on classroom observation, as in Singapore or in the state of Victoria, Australia. Formal evaluation in Chile combines peer review interviews, analysis of videotaped instruction, a supervisor questionnaire and self-assessment (Martinez et al., 2016). The Netherlands' peer-assessment programme includes teachers from one school visiting those at another, with their assessment of the school discussed with school authorities and included in a written report (OECD, 2013d).

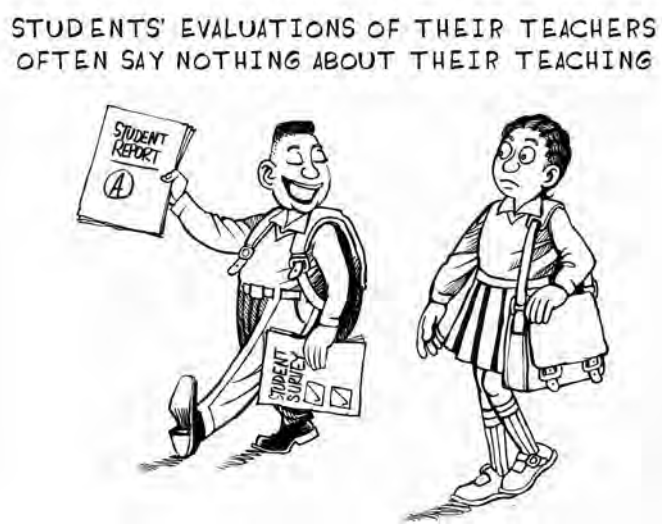
PRTs aim to strengthen teaching by creating better internal teaching rules and identifying best practices. They can reduce the time burden on the principal and help ensure observers have relevant pedagogical expertise (White, 2014). By fostering teacher well-being and higher job satisfaction and motivation, they can be an element of professional accountability. They can also support professionalism by strengthening teacher collaboration and improving the knowledge base within the profession. Teacher collaboration and peer networks, although significant in all schools, have the greatest positive impact on teacher satisfaction in schools in areas with high poverty (OECD, 2016d).

In higher education, PRTs are becoming more widespread. In Hungary, a PRT programme at Budapest University of Technology and Economics reviews about 20 courses annually in a single department, focusing on about 100 lecturers. PRTs are combined with student reviews and self-evaluations (Andor and Toth, 2016). A review of studies on higher education PRTs in the United States found that effective PRTs had clear and transparent structure and rules, rested on a culture of trust, included training in both giving and accepting reviews and feedback, and promoted professional debate and development (Thomas et al., 2014).

STUDENT INPUT INTO TEACHER EVALUATIONS CAN BE UNRELIABLE

Increased emphasis on outcomes and local control has elevated the role of students in holding teachers accountable. Although the use of student evaluations to measure teacher performance is more common in higher education, 83% of teachers participating in the 2013 TALIS reported that student surveys were part of their evaluation, and 65% reported that student surveys were a criterion in high-stakes decisions (Smith and Kubacka, 2017). Evaluations generally include questions not only about course content (e.g. clear instruction, course structure, classroom management) but also on other factors, such as the instructors themselves (e.g. responsiveness to students and ability to generate enthusiasm) (Wagner et al., 2013). Evaluations are administered towards the end of term in class or, more recently, online.

Beginning in the late 1960s and early 1970s, higher education institutions in Canada and the United States started using formal student evaluations to provide teacher feedback and make administrative decisions about salary, retention, tenure and promotion. The practice has since spread, including to Australia, India, Israel, Nigeria, the Philippines, Switzerland, Thailand, the United Arab Emirates and the United Kingdom (Al-Issa and Sulieman, 2007; Murray, 1997; Watkins, 1994). In primary and secondary education, countries including Mexico, Spain and Sweden make limited use of student surveys for teacher evaluation, e.g. in certain grades or in special cases, such as a complaint procedure (Isore, 2009).



The validity of student evaluations rests on the assumption that students understand, observe and recognize good teaching, and report it truthfully. A comprehensive international review of the evidence since 2000 cautioned that student evaluations can be subject to bias (Spooren et al., 2013). Their reliability and validity depended on the evaluation tool used, how it was developed, how it was administered and its degree of detail (Goe et al., 2008; Zabaleta, 2007).

> “A review of the evidence since 2000 cautioned that student evaluations can be subject to bias”

Students may care only about their grades and reward lenient teachers. In France and Italy, teachers who gave higher grades received better evaluations (Boring et al., 2016; Braga et al., 2014). Students in many countries perceived and evaluated female and male teachers differently. In France, the Netherlands and the United States, female teachers received more critical

assessments, even after controlling for other background factors and course- and teacher-specific characteristics (Boring, 2017; MacNell et al., 2015; Wagner et al., 2016).

An analysis drawing on data from a higher education institution in France showed that male professors were 20% more likely to receive an excellent overall satisfaction score, even though students performed equally well with male and female professors, suggesting no differences in teaching (Boring, 2017). Teacher gender can also influence student ratings. While in many instances students rate teachers of their own gender more highly, female students in France and the United States both rated male teachers higher (Boring, 2017; Boring et al., 2016; Young et al., 2009).

Survey design can address concerns over students' capacity to respond meaningfully, especially among younger students. Evidence from Germany and the United States suggested that, given explicit questions that address concrete teacher behaviour and well-designed measures, primary and secondary student responses were likely to be consistent with other measures of teacher performance (Ferguson, 2012; Wagner et al., 2013).

STUDENT TEST SCORES SHOULD NOT BE USED DISPROPORTIONATELY IN TEACHER EVALUATIONS

Student test scores are increasingly incorporated into teacher evaluations to address concerns over evaluators' capacity and biases. Many consider test scores easy to quantify, often more objective than evaluations, and reflective of high-quality teaching and student learning, even though they result from the efforts of multiple actors (Clarke, 2017; Isore, 2009). Test scores were the most common component of teacher evaluations among participants in the 2013 TALIS, reported by 97% of teachers (Smith and Kubacka, 2017). More recently, scores have been used in many middle income countries, including Kenya, Mexico, Pakistan and Peru (Snilsveit et al., 2016).

Test scores, however, are influenced by many more factors than teaching, including students' skills, expectations, motivation and behaviour; parental background and support; peer pressure and aspirations; school organization, resources and culture; and curriculum structure and content. Teachers' impact on student performance, furthermore, is cumulative; a student is influenced not only by current teachers but also by former ones. Average scores thus reflect much more than the impact of a single teacher (OECD, 2009). In Uruguay, teacher opposition stopped efforts to use student test scores for accountability purposes (Bruns and Luque, 2015). Instead, results are included as one of many tools to develop instruction, and teachers view the overall assessment as legitimate (Clarke, 2017).

More sophisticated approaches to using test scores draw on longitudinal data and complex models that seek to isolate the effect of a particular teacher on student achievement gains (Meyer, 1997). These approaches, generally called 'value-added models' (VAMs), take many forms. Originating in England (United Kingdom) and the United States, VAMs have recently spread to Chile and other parts of Europe (Sørensen, 2016). VAMs lend themselves to more robust teacher comparisons than evaluations based on test scores at a given time or comparisons of different same-age students at two time points. Yet there is broad agreement that student test scores alone are insufficiently reliable indicators of teacher effectiveness, due in part to measurement problems and the complexity of teaching and learning (Darling-Hammond, 2015). Hence some question the validity of basing teacher-related personnel decisions solely on VAMs (Baker et al., 2010).

> "There is broad agreement that student test scores alone are insufficiently reliable indicators of teacher effectiveness, due in part to measurement problems and the complexity of teaching and learning"

TEACHER EVALUATIONS ARE BECOMING INCREASINGLY HIGH STAKES

High-stakes teacher evaluations are present when performance is 'tied to increases in salary, promotion and maintenance of employment' (Larsen, 2005, p. 296). Linking performance to salary through performance-based pay mirrors the shift towards incentivizing outcomes through test-based accountability in schools and results-based financing in government. Performance-based pay is likely to expand, as it is the number one policy solution proposed in World Bank knowledge products to address teachers' contribution to education quality (Fontdevila and Verger, 2015).

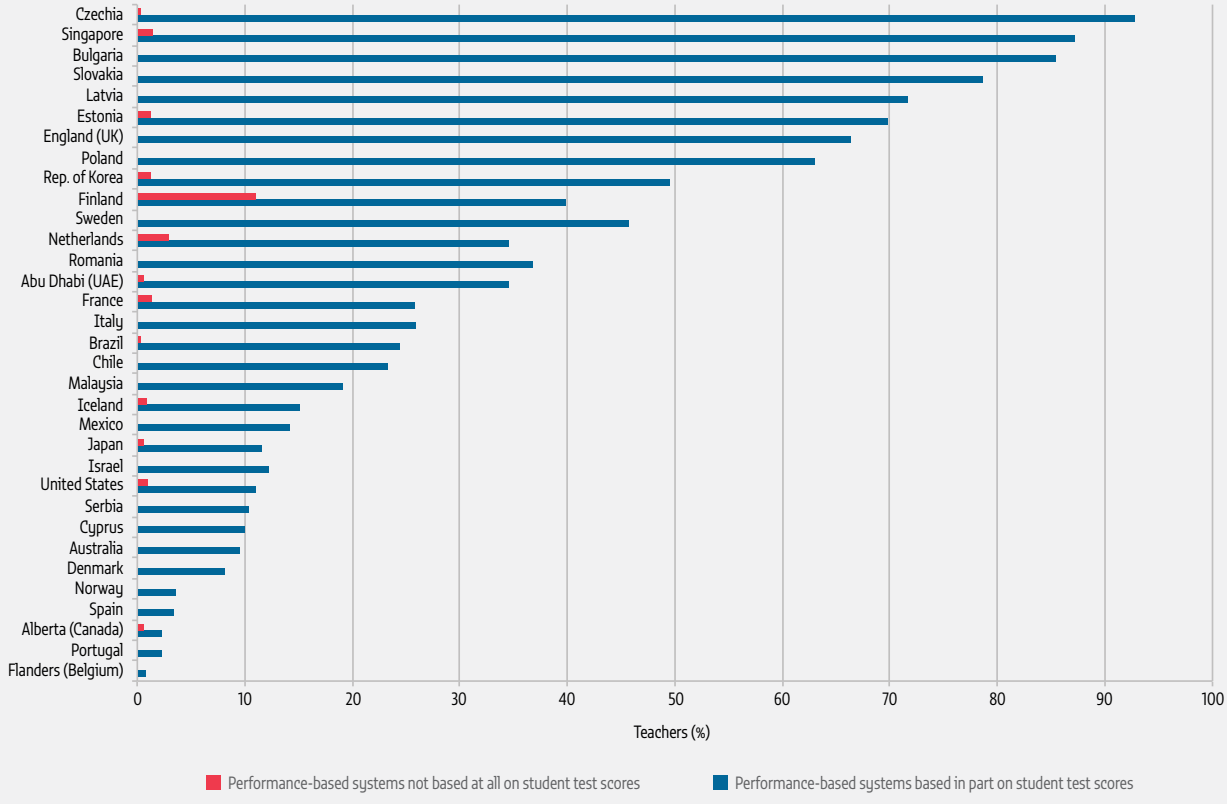
Basing teacher pay on student performance has intuitive appeal. It draws on the assumption that teachers will be motivated to adapt professional practice to address performance criteria, such as student test scores. There are multiple ways to measure and define teacher performance and high-stakes systems often rely on multiple indicators. Some performance-based pay ties incentives to bilingual instruction, action research, additional responsibilities or in-service training. In China, 30% of teacher salary is based on additional responsibilities and contributions, action research and student test scores. In Estonia, additional responsibilities, overtime and school mean performance on standardized student tests are factored into teacher pay. In Sweden's decentralized system, head teachers have ultimate authority in deciding each teacher's salary (Barnes et al., 2016; Irs and Türk, 2012). Some countries, including the Plurinational State of Bolivia, Chile, Israel, Kenya, Mexico, Portugal, the United Kingdom and the United States, have adopted performance-based pay linked to test scores (Barnes et al., 2016).

An analysis of 33 TALIS countries for this report found that in 20 systems, all teachers on performance-based pay had their performance linked, in part, to student test scores (**Figure 4.5**). Even in Finland, where the national pay structure does not connect salary with student performance (Sahlberg, 2015b), principals for 78.5% of teachers receiving performance-based pay reported including student test scores as a measure of teacher performance, indicating that 40% of all teachers had their performance based in part on student test scores. In general, among lower secondary teachers participating in the 2013 TALIS, 75% of high-stakes evaluations used test

FIGURE 4.5:

The majority of performance-based pay systems in high income countries are based in part on student test scores

Percentage of teachers for whom student test scores are a factor in performance-based pay systems, selected countries



Sources: GEM Report team analysis based on OECD (2013b) TALIS data.

> Performance-based pay linked to student test scores should be avoided; there is little evidence of its impact on outcomes, and it does not increase motivation

scores or teacher observation as a determinant of teacher continuation, promotion or salary level. Other common inputs to high-stakes teacher evaluation included parent feedback (71%), student surveys (65%), self-assessment (65%) and assessment of content knowledge (62%) (Smith and Kubacka, 2017).

Linking student performance to teacher salary reduces equity

Evidence on the effectiveness of performance-based pay in increasing student performance is mixed. There were student gains under performance-based pay in western China (Loyalka et al., 2016) but not in Peru (Obrero and Lombardi, 2016). Evidence of negative impacts on equity was abundant, with lower-performing students often excluded in policy and in practice. Performance-based pay tends to promote an unhealthy competitive environment, reduce teacher motivation, and encourage 'teaching to the test' and the neglect of weaker students (Rossiter, 2017; Smith, 2016).

Performance-based pay can have a disproportionately detrimental impact on low-performing students as teachers transfer to higher-performing schools (Verger and Parcerisa, 2017b) and lower-performing students are denied admittance to some schools, as has occurred in Brazil (Brooke, 2016). Individual performance incentives can also discourage collaboration among teachers and among schools. In Australia, teacher rivalry has increased, with friction between teachers of tested and non-tested grades and competition to avoid jobs in low-performing schools (Thompson, 2013). In Chile, sanction pressure and increased surveillance put significant stress on teachers and students in low-performing schools and entrenched the social prestige of high-performing schools, effectively increasing inequity in the system (Verger and Parcerisa, 2017b).

Much research draws attention to the risks of using test scores for teacher accountability. A review of 10 studies in Chile, China, India, Kenya, Mexico, Pakistan and Peru found that interventions that increased accountability by linking incentives to test scores altered classroom practices. Additional time was spent on test preparation to improve scores and secure bonuses (Snilsveit et al., 2016). In an experiment in Kenya, primary school teachers were rewarded for good test scores and penalized if students did not take the year-end examinations. Test scores and examination attendance increased, but teachers focused on preparing students for tests, narrowing the curriculum. Test scores did not increase in subject areas not taken into account in the teacher pay formula. Moreover, wider anticipated benefits, such as reducing teacher absenteeism and student dropout, did not materialize (Glewwe et al., 2010). The incentive element of such schemes can also be different by teacher gender (**Box 4.4**).

Teacher evaluation feedback is poor in high-stakes systems

In high-stakes systems, the more summative nature of evaluations limits their ability to improve instruction. Without a link to professional development opportunities, evaluations often become an exercise teachers greet with mistrust. Among TALIS teachers, more than 50% report that their evaluation is merely an administrative task (OECD, 2014a). Still few countries link evaluation systems with ongoing professional development (Isore, 2009).

BOX 4.4

The impacts of performance pay may vary by teacher gender

Evidence showing that performance pay can affect female and male teachers differently is mixed. Experimental research that had teachers in Israel compete in a tournament with cash bonuses based on student performance showed no gender-based difference in teacher performance. A recent review of 18 studies in various fields found no difference in how performance-based pay affects men and women.

Other research points to differences in men's and women's reactions to policy. A study of teachers in the Republic of Korea found that performance-based pay had a more positive effect on male teachers' reported commitment, motivation and morale. In the United States, a study of a representative sample of teachers found that performance-based pay was associated with more negative effects on female teachers' practice, e.g. decreased working hours and participation in voluntary school activities. Irrespective of outcomes, some studies suggested that male teachers might be more positive and optimistic in their perception of performance-pay models, as was found in Israel and Japan.

Sources: Bandiera et al. (2017); Joo et al. (2012); Jones (2013); Katsuno (2016); Lavy (2012).

Feedback is not always provided, and may not be useful (Smith and Kubacka, 2017). Research on teachers in Belgium's Flemish community showed that useful feedback was among the determinants of positive use of the evaluation for professional practice, along with positive attitudes by principals and low teacher experience (Delvaux et al., 2013). However, an analysis of participants in the 2013 TALIS found that, when feedback placed disproportionate emphasis on student performance, teachers were likelier to believe evaluations were administrative box-checking, with little impact on instruction (Smith and Kubacka, 2017).

> "An analysis of the 2013 TALIS found that teachers were likelier to believe evaluations were administrative box-checking, with little impact on instruction, when feedback stressed student performance"

PROFESSIONAL ACCOUNTABILITY CAN SHAPE TEACHING CULTURE

Teachers can hold peers accountable through professional accountability. Professional accountability is generally designed by or with teachers and relies on their expertise and professionalism (Fullan et al., 2015). Systems incorporating professional accountability generally enjoy greater public trust in the profession to deliver high-quality education. The more formalized approaches to professional accountability can be part of formal teacher evaluation, as with peer reviews of teaching. Additional approaches involve teachers reporting to individual peers or peer groups on classroom activities and lessons learned, along with feedback on co-teaching and collaborative work, peer learning, mentoring, reviewing academic research, and other forms of feedback. Professional rules can also provide accountability. They can be formal, developed by or applied to teachers (e.g. codes of ethics), or informal, operating through peer pressure. Over time, as teachers internalize informal norms, they become implicit codes of professionalism, as distinct from explicit rules of conduct (Kandel and Lazear, 1992; OECD, 2016d).

Effective professional accountability approaches can shape teaching culture and engage teachers. Such approaches can have long-lasting effects when embedded in the profession's intrinsic ethics and ideals, and seen as mechanisms empowering teachers to be in control of their work. In systems with sufficient teacher professionalism, this type of accountability can reinforce the profession's values. Such internally driven approaches can strengthen the role of teachers as autonomous professionals and promote job satisfaction (Smith and Persson, 2016).

Professional accountability is less common in high-poverty settings, where mentoring and collaborative practices can be rare and prescriptive curriculum and test preparation requirements, which decrease teacher autonomy, are more prevalent. The challenge of teaching in high-poverty schools is compounded by a teacher 'support gap', where less aid is given to support teachers' success (Moore Johnson et al., 2004).

COLLABORATIVE LEARNING CAN IMPROVE INSTRUCTION AND OUTCOMES

Although rarely considered an accountability tool, collaborative or peer-to-peer learning can improve instruction and monitoring of teacher practices. Teachers reporting back on or sharing their activities with peers, typically by presenting evidence and explaining it in relation to instruction, has a subtle accountability effect. Collectively, teachers question and learn from each other to improve their practice (Lassonde and Israel, 2010).

Professional learning communities (PLCs) provide a formal structure for collaborative learning. Although the variety of PLCs makes a universal definition difficult, they generally involve a group of educators working to improve teaching and learning through ongoing critical reflection on instructional practice (Dogan et al., 2015; Hairon and Tan, 2017). Sharing lessons and activities with peers and the larger public is a core part of PLCs (Newmann et al., 1996).

PLCs are typically found in middle to upper income countries and often differ in implementation. In the Learning Rounds in Scotland (United Kingdom), educators observe their peers teaching in many classrooms within a school, using the evidence recorded to provide a picture of teaching and learning in the school (Philpott and Oates, 2016). In 2011, around 24 of 32 local authorities conducted Learning Rounds (Education Scotland, 2011). In Singapore, each school has multiple professional learning teams. The education ministry guides school focus with three big aims and four critical questions that promote collaboration, emphasis on student learning and critical reflection. Schools choose one of three PLC models: action research, learning circles or Lesson Study (**Box 4.5**) (Hairon and Tan, 2017). Shanghai's PLCs, in place since the 1950s, involve both teaching–research groups in all schools and, less commonly, grade-level lesson preparation groups. In teaching–research groups, 3 to 10 teachers meet weekly during scheduled work time to share current pedagogical research, discuss teaching experiences and conduct research linked to their teaching. Plans and achievements are regularly reported to other schools or the district (Hairon and Tan, 2017).

Evidence suggests that PLCs improve teaching practice and student achievement (Vescio et al., 2008). A review of 14 studies from Bangladesh, the United Kingdom and the United States found that PLCs increased science teachers' pedagogical and content knowledge, with associated changes in practice (Dogan et al., 2015). Instruction improved among teachers who collaborated to review and assess student work and observe and provide peer feedback. Collaborative assessment of student work was associated with higher student achievement scores (Ratts et al., 2015).

BOX 4.5

Lesson Study uses collaborative processes to improve lesson delivery

The Lesson Study PLC involves collaborative planning, observation, analysis and refinement to improve lesson delivery and student learning. Started in Japan in the early 1900s, it is now used in Australia, Hong Kong (China), Singapore, Sweden, the United Kingdom and the United States. In Japan, 99% of primary school teachers, 98% of lower secondary teachers and 95% of upper secondary teachers participate in Lesson Study. In primary school, teachers of a grade level devise and conduct one to three 'research lessons', or demonstration classes, per year, based on a schoolwide research theme. One instructor delivers the class to selected students, with colleagues observing teaching practices. The group then convenes to share observations and discuss the instructor's thoughts on the lesson. A cycle is complete once the lesson is refined, new hypotheses are formed and a different teacher implements the lesson. The entire process usually takes three to six months. After multiple cycles, the lesson is shared publicly.

Like PLCs in general, Lesson Study can affect both teachers and students. A systematic review of nine studies of Lesson Study concluded that it was a powerful tool to help teachers reflect on their practice and improve student learning. In England (United Kingdom), increased collaboration via Lesson Study was associated with teachers' reduced feelings of isolation and greater willingness to take instructional risks that led to more interactive class activities. In the United States, Lesson Study was associated with increased content knowledge, improved student performance and a more collaborative and reflective school community.

Sources: Cheung and Wong (2014); Cajkler et al. (2015); Droese (2010); Dudley (2014); Hird et al. (2014); Lewis (2013); Perry and Lewis (2013).

Effective peer learning approaches require substantial time

While collaborative learning is a promising tool, multiple challenges make it difficult to implement in many contexts. The large time commitment can be a barrier, putting stress on already overburdened teachers. When time and resources are scarce, teachers tend to focus on their own instruction (Hairon and Tan, 2017). Both Japan and Shanghai have incorporated PLC and Lesson Study

into salaried time (Hairon and Tan, 2017; Lewis, 2013), and Shanghai compensates group leaders for additional responsibilities (Hairon and Tan, 2017). By contrast, teachers in the United States must often use personal time to meet in Lesson Study groups (Hird et al., 2014). The additional financial and human resources needed to allow teachers to participate and be paid for time outside of instruction may make PLCs and associated models difficult to implement in countries with teacher shortages.

Culture can also play a role in implementing collaborative peer learning. Societies that emphasize the collective good of the group over an individual are more likely to embrace the opportunity. This may indeed be a prerequisite, since the investment is long term and involves transforming school culture. Schools that use lecture-style, teacher-centred instruction are less likely to see the benefits of Lesson Study, partly because participants tend to complete a minimal number of cycles, thus making fewer lesson refinements (Hird et al., 2014). Finally, teachers need autonomy to enable risk-taking. The Scottish curriculum's flexibility allows for experimentation (Philpott and Oates, 2016). By contrast, standardized testing in the United States limits teacher freedom (Hult and Edström, 2016): Teachers were four times more likely than Japanese teachers to report that standardized tests played a major role in their instructional decisions (NCES, 2006).

PROFESSIONAL CODES OF ETHICS CAN UPHOLD THE RESPONSIBILITIES AND VALUES OF TEACHING

'Code of ethics' and 'code of conduct' are often used interchangeably, despite their respective emphasis on ethics and behaviour. Codes of ethics are usually written by a professional association to guide members, protect beneficiaries, maintain professional standards and offer moral, regulatory and legal guidelines (Banks, 2003). The main objective of all teacher codes is to provide self-disciplinary guidelines for the profession via formulized professional norms (Poisson, 2009).

Most countries have national teacher codes of ethics developed by teachers' unions (IIEP, 2009; Steiner-Khamsi and Batjargal, 2017). In addition, Education International (EI), a global federation of teachers' unions and other education professionals, drew up an international Declaration on Professional Ethics, which outlines teacher commitments to the profession, students, colleagues, management personnel and parents, as well as community commitments to teachers. The document is a guideline for both teachers and national or regional teacher codes of ethics (EI, 2004).

> "A review of teachers, school administrators, parents and officials in 24 countries found that 54% believed the codes of ethics had a very significant impact on reducing misconduct"

In a recent EI survey, 26 of 50 respondents from teacher organizations around the world indicated that their countries had teacher codes of ethics (EI, 2017). A separate review of teachers, school administrators, parents and officials in 24 countries found that 67% believed the codes had a very significant impact on improving professional identity, and 54% believed the codes had a very significant impact on reducing misconduct (McKelvie-Sebileau, 2011).

Codes must be carefully designed and implemented. Effective design and use of professional codes of ethics require consultations with stakeholders to encompass different views of the profession (Poisson, 2009). Codes can also be useful for other education stakeholders' interactions with teachers. For instance, principals can use them as a basis for professional development policies (Van Nuland, 2009). Codes should explain terms clearly in language understandable to all stakeholders and translate the profession's ideals into actionable items.

To be effective, codes require clear breach reporting and enforcement

Professional codes require gradual implementation to facilitate whole-system collaboration and efforts to ensure all teachers are aware of the content and its meaning (Van Nuland, 2009). A review of codes of conduct in 24 countries on 5 continents found that a significant challenge was lack of knowledge among education ministry officials and teachers: Fewer than two-thirds of respondents indicated at least good knowledge of the codes (McKelvie-Sebileau, 2011). Effectiveness depends equally on wide agreement on underlying values. For instance, a 2008 survey of teachers in the Bahamas found that one in four administered corporal punishment, despite knowing it was prohibited, and 62% declared that abolishing corporal punishment had diminished their authority (Taylor, 2017).

TABLE 4.2:
Teacher codes and breach reporting procedures in selected countries

Country	Type of document	Breach reporting mechanism	Deciding authority	Possible consequences
Australia	Teachers' Code of Professional Practice	Breaches must be reported to officers, e.g. a principal or executive director	Chief officer at the employing authority, allowing for teacher's voice	Counselling, written admonishment, financial penalty, transfer to other duties (incl. below current salary), reduction in incremental points, temporary/permanent reduction in classification/salary, employment termination
Nigeria	Teachers Code of Conduct	Heads of institutions must report breaches to the Teachers Registration Council of Nigeria (TRCN) or Teachers Investigation Panel (TIP); any education stakeholder can also report to TRCN or TIP; TIP investigates and decides whether to send it to the Teachers Tribunal	TRCN, TIP, Teachers Tribunal	Written reprimand, striking name from the Teachers Register (thus barring teacher from the profession in Nigeria)
Poland	Code of Ethics (Kodeks etyczny nauczyciela)	Teachers should make all efforts to stop unethical behaviour, including asking colleagues in the school for help and, if that fails, asking the teachers' unions	Colleagues in the school, teachers' unions	Not specified
South Africa	Code of Professional Ethics of the South African Council for Educators	Educators should inform the South African Council for Educators of any breach; the council's disciplinary committee refers it to an investigating panel, which may lead to a disciplinary hearing, and makes a recommendation to the disciplinary committee/the council	South African Council for Educators	Caution/reprimand, fine (not exceeding one month's salary), removal of name from the register (temporarily, permanently or subject to conditions)
Uttar Pradesh state, India	Uttar Pradesh Educational Manual	Complaints should be made to principals, who are responsible for teacher character rolls; they can be then forwarded to the District Inspector of Schools, if grave enough	Head teacher, principal, District Inspector	Entry into the teacher's character roll, withholding of annual integrity certificate, contract termination

Sources: Australia DOET (2006); Centrum Edukacji Obywatelskiej (2008); IIEP (2009); South African Council of Educators (n.d.); Teachers Registration Council of Nigeria (2010); UK National Union of Teachers (2014); Van Nuland et al. (2006).

Lack of clear enforcement mechanisms can also hinder effectiveness. Codes of ethics do not always specify breach reporting mechanisms or identify sanctions (**Table 4.2**). One reason for a lack of enforcement may be lack of capacity among those involved in assessment. Research suggests that those evaluating misconduct should be trained in legal issues, which may not be possible in countries that lack the resources for legal education (Maisel, 2006; Poisson, 2009).

CITIZENS CAN HELP HOLD TEACHERS ACCOUNTABLE

There is growing awareness that communities and parents can play an important role in school and teacher accountability (World Bank, 2009). At the same time, social accountability approaches are not always well defined in the literature or education policies. A review of the national education plans of 40 mostly low and middle income countries, and in-depth case studies of Bangladesh, Cambodia, South Africa and Timor-Leste, found that many policies refer to the increasing role of parents and communities in teacher accountability, but few provide details on what this means in practice (Hunt, 2014). In the absence of clear guidelines, participatory approaches can be organized in a bottom-up manner, relying on community motivation to monitor teaching.

COMMUNITY MONITORING OF TEACHERS CAN AFFECT ABSENTEEISM BUT MAY NOT BE SUSTAINABLE

Apart from community member inclusion in formal teacher evaluations, community monitoring of teachers can take different forms, including the use of technology (**Box 4.6**). Representatives of local communities can visit classrooms, for instance, to ensure that teachers are present. Community report cards are a more complex tool, usually used to hold schools accountable but typically including a focus on teachers. Community-led surveys concerning teachers have been used in several low income contexts, especially in rural or disadvantaged regions. Parent–teacher meetings are the most basic avenue for parents. However, they are often infrequent and offer limited opportunity to monitor teaching and learning. Their usefulness in accountability is especially poor for parents from disadvantaged backgrounds,

> “The usefulness of parent–teacher meetings is especially poor for parents from disadvantaged backgrounds, who might not have the knowledge or skills to follow their child's progress”

BOX 4.6

Most monitoring technology focuses on teacher absenteeism

Technological advances and improved accessibility of devices such as digital cameras, tablets and smartphones have facilitated their use by communities in holding teachers accountable. Some teachers believe this form of monitoring is overly intrusive and demonstrates a lack of trust.

Most use of technology focuses on reducing teacher absenteeism. In Udaipur, India, students used cameras with tamper-proof dates to photograph their teachers at the start and close of the day. Initial research suggested that this, jointly with the financial incentives provided, helped decrease absenteeism. A Ugandan project to raise teacher attendance in 180 rural public primary schools distributed mobile phones equipped with software to report teacher absence to education officials. Phone monitors were head teachers or parents from the school management committee. Although the impact on absenteeism was promising, success may have been over-reported, as parents tended to monitor on Mondays or Fridays, when rates of teacher attendance were higher.

Pakistan has monitored the attendance of over 210,000 education staff in 26,200 schools using biometrics: fingerprints and photos, coupled with Global Positioning System coordinates. As of February 2017, 40,000 absent teachers and 6,000 absconders (employed but long absent) have been disciplined. India's 2016/7 economic survey recommended using biometrics to tackle teacher absenteeism in primary schools. However, the suggestion was met with protests from teachers, along with technical implementation challenges.

Engaging with and monitoring teachers through the internet can have negative consequences if not conducted properly. Thousands of classrooms in China are live-streamed, allowing parents and the public to monitor and comment on teaching practices and student behaviour. Critics are concerned continual surveillance violates teachers' and students' privacy rights and could negatively affect instruction. In the United Kingdom, one in five teachers reported that derogatory comments about them were posted online by parents or students. Government guidelines to help prevent such cyberbullying urged schools to educate students and parents on proper ways to voice concerns.

Sources: Duflo et al. (2012); Hernandez (2017); The Telegraph India (2017); The Times of India (2016); United Kingdom DOE (2014); World Bank (2017b).

who might not have the knowledge or skills to follow their child's progress, or in contexts with high pupil/teacher ratios, where teachers cannot devote enough time to each parent.

Evidence on the effectiveness of community approaches is mixed. They can be particularly useful in shedding light on teacher absenteeism. In Uganda, community monitoring was successful in lowering absenteeism through community-designed report cards (Zeitlin et al., 2011). Other community-led interventions addressing absenteeism in low income countries have also been effective (Guerrero et al., 2013). However, reliance on parents to hold teachers accountable is not sustainable. In Kenya, for example, gains in learning outcomes from training parents in monitoring and evaluating teachers wore off one year afterwards (Grandvoinnet et al., 2015).

Community-led interventions can also affect structural issues contributing to absenteeism. In Malawi, a combination of report cards and participatory expenditure tracking looked at the administration of salaries in primary schools. The results were used to improve payment of teacher salaries by minimizing payment system inefficiency (Mwanza and Ghambi, 2011).

LOCAL MOTIVATION AND CAPACITY FOR MEANINGFUL ACTION SHAPE COMMUNITY ENGAGEMENT

Several issues can impede parental and community involvement. Engaging in teacher monitoring can be affected by socio-economic status and individual capacity to understand available processes and take meaningful action to hold teachers accountable. Disadvantaged parents often lack the skills, knowledge or confidence to interact with teachers (Faingold, 2017). In Kenya, community members, particularly parents, were trained in school-based management to monitor contract teachers, including assessing teacher effort or performing a formal teacher review. This allowed parents to participate actively in selecting contract teachers and holding them accountable (Duflo et al., 2015).

In fact, multiple conditions must be present to foster effective community monitoring of teachers. Community members and teachers should be involved in deciding criteria and in designing the accountability mechanism. Roles and responsibilities must be clearly defined, and relevant information shared. A review of community monitoring in Benin, India, Liberia, Mexico, Pakistan and Uganda emphasized the importance of providing communities with adequate information to enable monitoring and of community motivation to engage (Molina et al., 2016). In India, the *Annual Status of Education Report* summarizes learning processes in a manner that gives illiterate parents the information necessary to engage in community accountability efforts (Save the Children, 2013).

Teachers' attitudes towards community involvement, especially who is accountable to whom, also play a role. A study on community involvement in school monitoring in Ghana found teachers unresponsive to community action, partly because they felt accountable to the school hierarchy that hired them, not the community (Essuman and Akyeampong, 2011). Improperly conducted, parental or community involvement can be a source of tension with teachers. To overcome potential issues, the University of South Africa introduced a Certificate in Parent Involvement, introducing teachers to the theory and providing practical advice to stimulate involvement and adapt models to fit their diverse school communities, including those with different home languages and from disadvantaged socio-economic backgrounds (Lemmer, 2007). Positive community-teacher engagement affects teachers' work beyond strict measures of accountability. A study of teachers with many students from disadvantaged families in Chicago, United States, found that parent–teacher relations and parental engagement were key to teacher retention (Allensworth et al., 2009).

CONCLUSION

Given the challenges of evaluating teachers' primary responsibility of high-quality instruction, most systems default to holding them accountable for the most easily quantified measures, such as absenteeism and student performance. However, even attendance and, to a much greater extent, student performance depends on others. Education policies, management, communities, students and parents affect teachers' performance. Attempts to reduce absenteeism only by punishing teachers, for example, are unlikely to be effective if some causes are systemic. Successful accountability approaches need to address issues arising from conflicting responsibilities and ensure that teachers get adequate time and compensation for work outside of instruction.

The work of teachers and those holding them to account requires specific skills and knowledge bases. Educators participating in teacher evaluation should be trained to identify good teaching practices based on a shared, jointly developed understanding of good teaching. Support for teachers needs to be provided through timely, continual feedback that has direct utility for their instruction, with evaluation outcomes linked to necessary professional development. Although formal teacher evaluations have the potential to feed into professional development, high-stakes, summative evaluations focused on test scores often reduce teacher motivation, making feedback less likely to improve instruction. Additionally, the inclusion of student test scores in performance-based pay have led to multiple undesirable consequences for teaching, learning and equity, with disproportionately harmful impacts on low-performing and disadvantaged students and schools.

Stakeholder trust is essential in developing and implementing effective teacher accountability systems – trust in the purpose of evaluation, the fairness of measures, the competence of evaluators and the ability of the process to produce promised outcomes. Teachers' trust and motivation are improved by early involvement of teachers in establishing accountability systems, which also ensures shared bases of accountability and active union involvement in social dialogues. Reinforcing and increasing trust in the profession are important for teacher accountability. Collaborative learning and other forms of professional accountability enlist teachers' expertise, and the collective process affirms professional norms and good teaching practices. Professional accountability should be the primary means of increasing teacher motivation and ensuring the presence of qualified evaluators, supplemented by external evaluations and other approaches.

A child watches as his mother signs him in on the first day of preschool in Des Moines, Iowa.

CREDIT: Des Moines Public Schools

CHAPTER

5

Parents and students

KEY FINDINGS

Parents have the main responsibilities for their children's attendance and behaviour in basic education. Students take on more of these responsibilities as they get older.

In 34 countries with truancy laws, over one-third stipulated fines and almost one-third jail time for parents of truant juveniles. But no evidence suggested these reduced chronic absenteeism, and punitive measures imposed harsh burdens on poor families.

Cash transfers conditional on attendance encourage poor families to meet their education responsibilities and, if well targeted, can help overcome barriers due to low finances or low parental education.

Students have the right to feel safe and supported in their learning environments. Yet school violence is prevalent in many countries. School codes of conduct and parent–teacher contacts through meetings and training have been shown to reduce violence.

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'Here, the family takes almost no responsibility for education, delegating these tasks to the government. This lack of responsibility turns the problem bigger and deeper, since the public schools and the governments cannot rely on the support of the family to improve quality in education. If they are not involved in the educational life of their children, encouraging the practice of reading and writing, talking about new subjects and helping them with homework, etc., it is unlikely that the school will have success with the education of all these children.'

FILOMENA SIQUIERA, STUDENT AND TEACHER, BRAZIL.

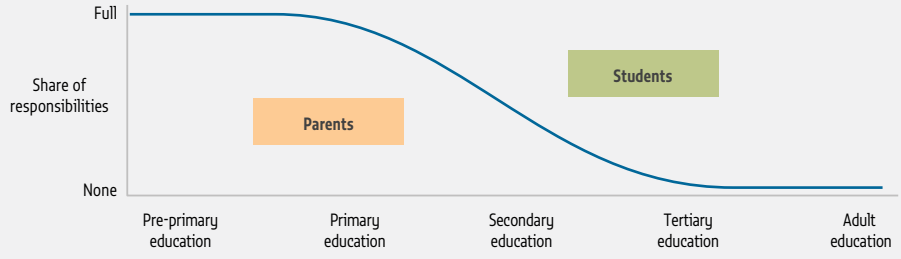
The Convention on the Rights of the Child recognizes that parents or legal guardians have the primary responsibility for the upbringing and development of their children (§19) and for securing the corresponding necessary living conditions, within their abilities and financial capacities (§27).

A supportive and stimulating home environment is a critical foundation for cognitive and emotional development. The depth and quality of parent–child interactions and the provision of key inputs influence, to a large extent, how children stand to benefit from education, determining their vocabulary, attitudes towards others and disposition towards learning when they enter the school system. Parents' role is to support their children in school, monitor their progress and guide them in response to their needs (Wilder, 2014; Hemmerechts et al., 2017). They are expected to meet with teachers, follow school instructions and, in many education systems, participate in school life.

> "Parents are responsible for the attendance, effort and behaviour of younger students, while older students take on these responsibilities for themselves"

Parents are responsible for the attendance, effort and behaviour of younger students, while older students progressively take on these responsibilities for themselves (**Figure 5.1**). Some argue that 'the attribution of blame to parents for their children's behaviour ... underestimates children's independence and overestimates the ability of parents to

FIGURE 5.1:
Responsibilities for attendance, effort and behaviour shift from parents as students advance in education
Relative responsibility share of parents and students for attendance, effort and behaviour over education levels



Source: GEM Report team analysis of current literature.

Australia: 'Higher fines for parents of truant school students won't work, say principals'

~ The Advertiser, 2017

control the behaviour of young people as they grow older' (Henricson and Banhaim, 2005). Students grow increasingly responsible for ensuring that their behaviour does not deny others the right to learn and teach in a safe learning environment.

Nearly all countries have compulsory education laws that outline government responsibility to provide education. A few governments recognize parental responsibility for students' enrolment and regular attendance (Faingold, 2017).

This chapter highlights how parents and students are formally held accountable for education-related responsibilities, in particular for ensuring regular attendance and a safe learning environment.

MECHANISMS EXIST TO HOLD PARENTS ACCOUNTABLE FOR REGULAR SCHOOL ATTENDANCE

Truancy, or unauthorized absence from school, is a problem in most countries. Among OECD countries participating in the latest Programme for International Student Assessment (PISA), nearly 20% of 15-year-old students reported having skipped school at least once in the previous two weeks (OECD, 2016e). On average, among the 33 countries participating in the Global School-based Student Health Surveys, one in three adolescents aged 13 to 17 reported having skipped in the previous 30 days, ranging from 20% in the Bahamas and Uruguay to over 40% in the Lao People's Democratic Republic, Oman and Tokelau.

> "Among countries participating in the latest PISA, nearly 20% of 15-year-old students reported having skipped school at least once in the previous two weeks"

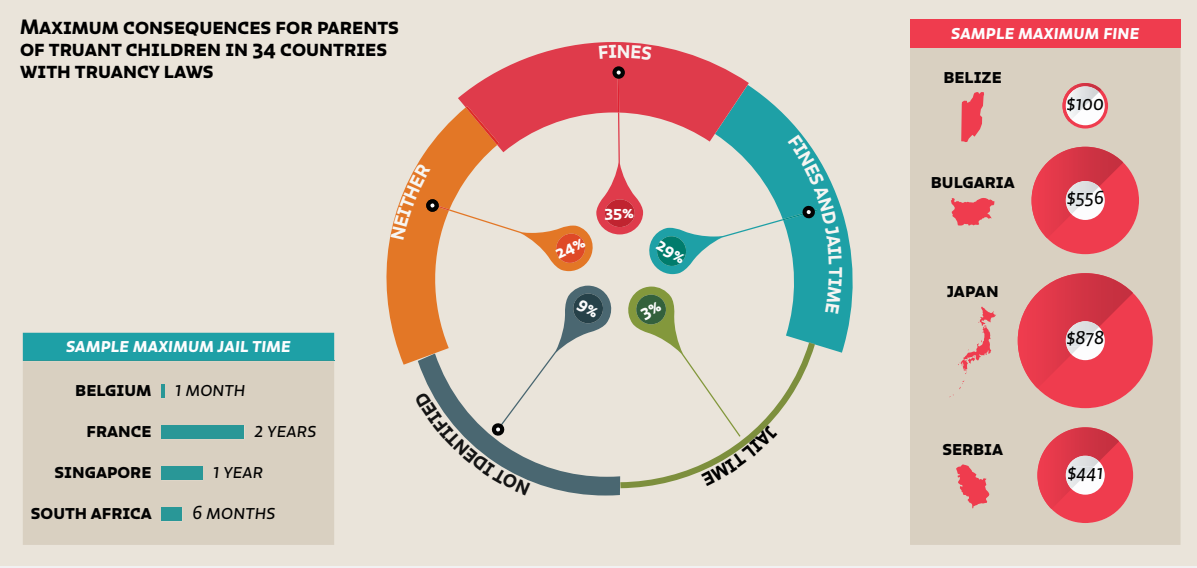
Truancy is associated with various short- and long-term negative consequences, such as failing a grade, dropout, teen pregnancy, substance use and crime involvement (Hutchinson et al., 2011; Rocque et al., 2016). It is a multidimensional phenomenon, in which parents' role is a factor. In Swaziland, where adolescent truancy rates were 27% for boys and 18% for girls, students who received parental support at home (e.g. checking homework, understanding their problems and worries, supervising in general) were less likely to report having been truant in the previous 30 days than those who did not (Siziya et al., 2007). In Sweden, grade 6 to 9 teachers rated home environment and parenting style among the most important causes of truancy (Gren-Landell et al., 2015).

Many countries enforce compulsory education by taking legal action against parents and students through truancy laws. Truancy laws are less prevalent than compulsory education laws and differ from them in defining responsible parties, violations and possible consequences. An analysis of 34 countries with truancy laws conducted for this report shows that over one-third of countries have enacted laws stipulating fines, and almost one-third of laws stipulate jail time for parents of truant children (**Figure 5.2**). In Bulgaria, parents who do not ensure attendance during compulsory education are subject to fines (Bulgaria Grand National Assembly, 1996). In England (United Kingdom), parents of children who fail to attend compulsory education regularly may be prosecuted by the local authority (ASCL, 2017).

TRUANCY LAWS ARE NOT ALWAYS EFFECTIVE

There is no substantial evidence to suggest that truancy laws reduce chronic absenteeism (Atkinson, 2016). Moreover, socio-economic factors influence truancy patterns, with disadvantaged or low income students consistently at greater risk (Hutchinson et al., 2011; UK Department for Education, 2017). Research suggests that punitive measures can impose harsh and undue burdens on disadvantaged families and students. In England and Wales (United Kingdom), severe sanctions disproportionately affected low income families and women, who head most single-parent households (Donoghue, 2011). Until 2013, fines

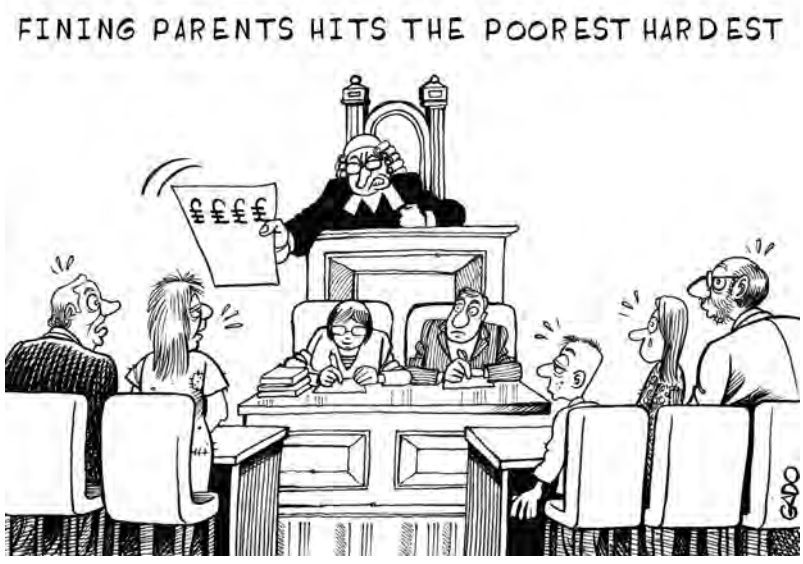
FIGURE 5.2:
Fines are the most common consequence of truancy



Notes: Fines were converted from local currency using mid-2017 exchange rates. National and regional laws and guidelines are included. Regional representation includes Ontario province, Canada; Bogotá, Colombia; and Naga, the Philippines.
Source: GEM Report team analysis of truancy laws.

of US$250 could be compounded by court fees of up to US$1,000 in Los Angeles, United States, leading to crushing debt for poor families. The fines actually increased truancy from 5% to 28%, suggesting that some students skipped school to avoid interacting with law enforcement (Ahmad and Miller, 2015).

While truancy laws can provide a legal framework, they need to be accompanied by a supporting structure for prevention. Improving parental accountability starts by understanding and improving the school–parent relationship. In an educationally disadvantaged area of Paris, France, a programme offered parents information on how schools functioned and advice on supporting and monitoring their children's schoolwork. By the end of the school year, the proportion of parents actively engaged in the parents' association was 37% for classes that participated in the intervention, compared to 25% for those that did not. The programme led to about a 25% decrease in unexcused absences in participating classes (Avvisati et al., 2014).



> Rewards for parents to ensure their children's school enrolment and attendance work better than punishments

In Queensland, Australia, a small, randomized trial that expanded initial parent–teacher meetings to include students, police and support service representatives led to significant reductions in absenteeism among students aged 10 to 16 (Hutchinson et al., 2011). In Ireland, 9-year-olds whose parents did not attend parent–teacher meetings were over three times more likely to have been absent more than 20 days in the previous school year (Thornton et al., 2013).

CONDITIONAL CASH TRANSFERS HELP INCREASE REGULAR ATTENDANCE

Although conditional cash transfers (CCTs) are not strictly an accountability mechanism, they encourage poor families to meet their education responsibilities through targeted financial support conditional on school attendance. CCTs were pioneered in Latin America with programmes including Bolsa Familia (Brazil) and Oportunidades (Mexico). They now are also used in low and middle income countries in other regions (Barrientos et al., 2010; Garcia and Moore, 2012).

Most CCT programmes have had a positive impact on enrolment, attendance and retention in a range of countries, including Bangladesh, Cambodia, Honduras and Nicaragua – in some cases with larger benefits for girls. In Bangladesh, the Female Secondary School Stipend Programme increased the schooling of eligible girls by 2.7 years and that of younger siblings by nearly 10% (Begum et al., 2017). Transfers have increased girls' enrolment in Pakistan (Fiszbein and Schady, 2009). In Zimbabwe, an intervention covering fees and providing supplies and additional help to orphan girls was associated with improved retention: Dropout rates were 22%, compared to 41% for those who did not benefit from the intervention (Iritani et al., 2016).

> The effectiveness of CCT programmes depends on size, conditionality, targeting and sustainability

The effectiveness of CCT programmes depends on size, conditionality, targeting and sustainability (Azevedo and Robles, 2013). The transfer must be large enough to increase demand for schooling. The universal transfer programme in the Plurinational State of Bolivia was ineffective in part because many jurisdictions lacked public schools. The long distance and high costs associated with attending schools in other jurisdictions discouraged enrolment (McGuire, 2013). In China, transfers were not large enough to lead to a behaviour change (Li et al., 2017).

In Europe and Northern America, CCTs generally apply negative incentives (Medgyesi and Temesváry, 2013). For low income families, these act like truancy fines. Romania interrupts the child allowance to low income households following any month with more than five unexcused absences. Universal child allowances in the Czech Republic and Slovakia have similar conditions (Medgyesi, 2016). By contrast, Australia's Education Maintenance Allowance gives vulnerable families 230 to 460 Australian dollars annually for a child's attendance (Medgyesi and Temesváry, 2013).

Targeting the poor with conditional programmes can carry a risk of stigmatization, especially when negative incentives are used (Medgyesi and Temesváry, 2013). External rewards, moreover, may undercut the intrinsic motivation necessary to sustain the desired behaviour (Medgyesi, 2016). Yet, CCTs have a greater impact on attendance and enrolment that unconditional cash transfers (Baird et al., 2016; Maurizio, 2016).

PARENTS AND STUDENTS PLAY ESSENTIAL ROLES IN SAFE LEARNING ENVIRONMENTS

Students have the right to feel safe and supported in their learning environments. Yet school violence is widespread around the world (see **Chapter 16** for an analysis of school-related gender-based violence). As active participants in learning environments, students

have a responsibility to ensure their behaviours do not deny that right to others (UNICEF and UNESCO, 2007). In that respect, there are mechanisms of varying degrees of effectiveness to hold them to account.

Use of school-wide codes of conduct to teach students appropriate social interaction is increasing (Horner et al., 2010). Such codes clearly state rules for acceptable and unacceptable behaviour at school, with detailed disciplinary measures and procedures effectively communicated to all students and modelled by all adults. One of the factors to ensuring an impact on bullying or violent behaviour is school staff consistently applying rules and enforcing sanctions (Ttofi and Farrington, 2011).

School codes of conduct have been shown to be effective in reducing school violence. Students were more likely to show more positive and fewer negative social behaviours after such codes took effect (Durlak et al., 2011). Evidence linking codes with improved social skills and academic achievement is also growing (Horner et al., 2010). On the other hand, disciplinary strategies that removed students from the classroom or school (detention and in-school or out-of-school suspension) were not always effective in deterring violent behaviour (Ttofi and Farrington, 2011).

> “School codes of conduct have been shown to be effective in reducing school violence”

A systematic review showed that the most important predictors of bullying and victimization in schools were abuse, neglect and maladaptive parenting (Lereya et al., 2013). In helping children develop peer relationship skills, and through their own attitudes and behaviours, parents have a direct and indirect influence on their children's peer relationships. The incidence of student bullying and victimization is higher among students from homes with few rules or with parental domestic violence (Holt et al., 2009). In Egypt, Morocco and Tunisia, greater parental involvement (as measured by supervision, emotional support and parent–child communication) was associated with reduced likelihood of peer victimization (Abdirahman et al., 2013).

Among countries participating in the 2015 PISA, the percentage of students who said they were bullied at school was twice as high among those who reported their parents had not been supportive (19%) as among those who reported they had been supportive (10%) (OECD, 2017b). In the Netherlands, responses by parents of bullied primary students varied: 24% did not try to stop it, 4% tried and the victimization worsened, 16% tried and the victimization remained the same, and 17% tried and the victimization became less frequent (Fekkes et al., 2005).

Initiatives to increase school–parent contact through parent meetings and training are an important component of anti-violence programmes. A systematic review of 44 evaluations of anti-bullying programmes found that parent–teacher meetings were associated with decreased bullying and victimization (Ttofi and Farrington, 2011). Yet, on average, in 15 countries with available data, 46% of parents of frequently bullied students reported having exchanged ideas with teachers on parenting, family support or the child's development in the previous academic year, compared to 41% of parents of students not bullied. In France and Ireland, less than 30% of parents of frequently bullied students had had such exchanges (OECD, 2017b). There is considerable scope for interventions that boost and support parental responsibility for ensuring an inclusive learning environment.

CONCLUSION

Parents are largely responsible for their children's school attendance, effort and behaviour. Given the many influences on attendance, holding parents accountable may underestimate their inability to monitor or control it, especially in conditions of poverty and disadvantage. Cash transfers have provided a successful incentive in many cases to help overcome opportunity costs that burden poor families. However, transfers do not work if governments do not provide adequate education opportunities.

Students take on an increasingly share of responsibility in ensuring that their behaviour does not deny others the right to learn and teach in a safe learning environment. Policies that enhance student responsibility also enhance the role they play in fulfilling it. Still, students are more likely to fulfil their behaviour responsibilities in collaboration with schools, teachers and parents. Mutual accountability approaches, programmes that set clear guidelines for students, and consistent application of procedures prove the most effective solutions.

A meeting of the Steering Committee for the fourth Sustainable Development Goal on education.

CREDIT: UNESCO/A Fernández

CHAPTER

6

International organizations

KEY FINDINGS

International organizations have considerable influence and responsibility regarding the development of global education, as they are responsible for reflecting all voices in formulating global education goals. But there is an accountability vacuum concerning their role and responsibility in achieving those goals.

Accountability is conspicuous by its absence in the foundation document of the UN Sustainable Development Goals and its presence in the Education 2030 Framework for Action.

Countries hold international actors to account for setting formal global standards, including monitoring frameworks for goals. Importantly, such frameworks also help other actors hold their countries to account for progress. In some cases, organizations without a formal mandate set international standards, such as education indicators, leaving it hard to hold them to account.

There is a stark lack of donor accountability for ensuring that adequate, effective and well-targeted aid reaches countries in need. In 2015, only 6 of 28 OECD-DAC countries met their commitment to allocate 0.7% of national income to aid. And aid predictability, at least in the short term, slightly decreased between 2010 and 2015.

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Complex, bureaucratic international actors can seem removed from day-to-day decisions in education systems. Yet international, transnational and supranational organizations are increasingly expected to mobilize and support countries in meeting international standards for inclusive, equitable, quality education.

In this chapter, 'international actors' refers to multilateral organizations, whether education is part of their agenda (e.g. UNESCO, World Bank) or not (International Monetary Fund). It also encompasses organizations whose membership is defined on regional grounds (e.g. European Union [EU], Southeast Asian Ministers of Education Organization), economic grounds (e.g. Group of Seven, Organisation for Economic Co-operation and Development [OECD]) or cultural grounds (e.g. Organization of Ibero-American States, the Commonwealth). International and regional development agencies and banks may also fund education.

The intensified globalization of recent decades has meant the global education agenda is being shaped by an increasingly diverse set of non-state international actors (Mundy, 2007). These include research networks promoting standards and methodologies, non-government organizations (NGOs) focused on advocacy, and corporations invested in education products and service provision.[1] This chapter draws attention to common misconceptions about holding international actors to account and points to promising, more inclusive ways to address them.

MAPPING THE RESPONSIBILITIES OF INTERNATIONAL ACTORS

International actors are associated with two main responsibilities. First, through negotiation, advocacy, advice and communication, they can help countries set common aims, rules and standards to improve education. Second, through development assistance, they can support countries to improve education in line with agreements and commitments.

The basis on which organizations are held to account for their responsibilities deserves careful analysis. Some organizations have defined roles in implementing legally binding global or regional instruments. In addition, individual organization missions may include responsibility to improve education through financial or technical assistance.

Ultimately, the basis on which international actors are held to account is not reflected in their official mandates. Rather, it is how they exercise the power they draw from tackling global problems and the extent of their authority

> "International organisations are responsible for supporting countries to meet their global education commitments"

and legitimacy (Finnemore, 2014). Accountability is, after all, a 'power-laden concept' (Keohane, 2003). For example, expert knowledge and competent performance confer authority (Avant et al., 2010).

For global governance organizations to gain legitimacy, their actions must be perceived as appropriate with respect to accepted norms. In practice, however, organizations act out of varied motives that may or may not include moral principles, public interest, pursuit of profit, self-preservation or quest for power. Some organizations prioritize specific groups and ideas (Koppell, 2008).

Accounting to multiple stakeholders can lead to contradictions. For example, the United Nations (UN) is accountable to both member states and the people whose rights member states may be violating. Similarly, the World Bank is accountable to member states, yet its actions may infringe upon the rights of their citizens (Woods, 2001). When organizations expand their missions, it may be impossible to hold them accountable for the standards they then set.

As for how international actors may be held accountable, a range of mechanisms requires global actors to provide information to their constituencies, which can then raise questions and impose sanctions (Bovens et al., 2014). The diversity of actors and responsibilities has led to an array of accountability mechanisms, from financial audits to performance monitoring to media scrutiny.

SETTING COMMON GOALS

Two primary roles of international actors are to help states and non-state stakeholders reach consensus on common goals and to devise implementation mechanisms to ensure follow-through. Responsibility for achieving goals clearly rests with countries. Less clear is the level of responsibility of international actors in realizing the goals they helped establish. At a minimum they should be accountable for (a) conducting negotiations transparently and ensuring diverse voices are heard and reflected in agreements, and (b) helping put in place effective mechanisms that foster country commitments, even when states are not bound by agreement to commit to common goals.

FORMULATING GLOBAL GOALS: THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Unlike the UN Millennium Development Goals established in 2000, the SDGs adopted in 2015 arose from negotiations led by governments rather than United Nations agencies. There is no perception that targets in the 2030 Agenda for Sustainable Development (the SDG foundation document) were dictated by rich countries, and there is a clear sense that the SDGs – including SDG 4 on education – are universally applicable. The process satisfied the first responsibility of international actors regarding transparency. The UN Secretary-General called it 'the most inclusive and transparent negotiation process in UN history' (UNSG, 2015). However, the second ideal of fostering effective mechanisms is wanting. Accommodating diverse interests has meant cumbersome goals with unclear prioritization and relatively weak monitoring.

> "'Accountability' is conspicuously absent from the SDG foundation document"

'Accountability' is almost absent from the SDG foundation document (Bissio, 2015; United Nations, 2015a). Instead, references to 'accountability' and 'monitoring' have mostly been replaced by the more neutral terms 'follow-up' and 'review', as countries were reluctant to cede control and be held to account for their actions. In sharp contrast, there are abundant references to accountability in the 2030 Education Framework for Action, which multilateral organizations played a larger role in formulating (UNESCO, 2015d).

The annual High-Level Political Forum is at the apex of the global follow-up and review process. Voluntary country-led national reviews are the key inputs to its deliberations.[2] By sharing experiences, national reviews aim to strengthen government policies and mobilize partner support to accelerate fulfilment of the 2030 Agenda (United Nations, 2016a). However, a synthesis of the 22 reviews submitted in 2016 suggested no obvious way that sharing successes, challenges and lessons at this level can be used to identify priority areas and plan coordinated interventions in education (United Nations, 2016b).

Non-government 'major groups and stakeholders' are also invited to engage in the process to 'promote accountability, build trust and transparency of partnership efforts and ensure that the UN values and mandates are preserved' (§107) (United Nations, 2016a). However, in the absence of a precise description of who is responsible for what, there is an accountability vacuum, not only for states not living up to their commitments but for international organizations, preventing an objective assessment of the United Nations system (Ocampo, 2015). A 2016 evaluation of the global Education for All (EFA) coordination mechanisms pointed to 'the lack of clarity of the role of each EFA partner and convening agency at global, regional and country level, aggravated by the absence of well-defined accountability mechanisms' (UNESCO, 2016e).

The SDG-Education 2030 Steering Committee, the body entrusted with global coordination of education work in the sustainable development agenda, has developed an initial roadmap of activities that would guide the international education community from 2017 to 2019. However, the assignment of responsibilities and deadlines need to be more precise to supply a sufficient basis for member organizations to give an account of their activities.

This does not mean international organizations are not accountable. On the contrary, countries formally delegate tasks to them, such as expressing their collective will and coordinating their actions. All organizations also have management boards overseeing adherence to their founding purposes (Grant and Keohane, 2005). However, accountability is diluted by realities on the ground. First, the responsibility to promote a global agenda is diffused among many organizations. Second, organizations have multiple roles, only one of which is to promote global goals. Third, they have competing institutional agendas, which undermined attempts to develop roadmaps during the EFA era (Faul and Packer, 2015). Last, countries calling organizations to account must invest resources that may be in short supply.

> "The accountability of international actors in relation to the SDG goals is diluted by realities on the ground"

FORMULATING REGIONAL GOALS: THE CASE OF THE EU

While responsibility for setting goals and facilitating their achievement tends to be considerably diluted in global education agendas, the situation may be different at the regional level. One example is ET 2020, the EU strategic framework expressing the contribution education and training make to Europe 2020, the overall EU growth strategy.

The EU is often criticized for a 'democratic deficit', in that 'voters do not feel that they have an effective way to reject a "government" they do not like' (EC, 2017). Critics argue that EU institutions do not ensure that the policies they promote respond to citizen preferences (Follesdal and Hix, 2006). The EU's dense institutional structures, however, provide ample opportunities to address accountability challenges, especially in coordinating actions with member countries.

Within the ET 2020 governance framework, the European Commission prepares the *Education and Training Monitor*, an annual publication that follows member countries' progress against headline targets (school dropout and

> "Countries need to build their capacity to be more strongly represented in international bodies"

tertiary attainment) and benchmarks (early childhood education, learning outcomes, employment rate and adult education) (EC, 2016). The European Council and the Commission also prepare a report every five years on priority areas and concrete issues that represent common challenges best tackled through cooperation (EC, 2015).

Still, accountability for coordinated actions under ET 2020 remains fragmented (ECA, 2014). An independent evaluation criticized the complexity of ET 2020 processes and called for greater transparency and guidance to help all involved better understand their roles (Ecorys, 2014). Non-government actors also call EU institutions to account. For example, the Lifelong Learning Platform, an umbrella group of civil society organizations, has advocated to include social cohesion among the goals of lifelong learning, alongside improved job prospects (EUCIS-LLL, 2014).

SETTING STANDARDS AND INFLUENCING POLICIES

International organizations often play an important role setting standards in formal education processes – a task delegated by countries – and in the non-formal processes through which they may influence policy by virtue of expertise and political clout.

FORMAL STANDARD-SETTING PROCESSES

Preparing the monitoring framework for the global education agenda is a formal process that requires technical standards. The Inter-agency and Expert Group on SDG Indicators, which comprises representatives of 28 national statistical offices, developed global indicators, appointed custodian agencies and proposed a reporting mechanism. The UN Statistics Division, which serves as a secretariat, and international organizations tasked with clarifying the methodology for the indicators account for their work to the group (United Nations, 2015b).

The Technical Cooperation Group on the Indicators for SDG 4 – Education 2030, co-convened by the UNESCO Institute for Statistics (UIS) and the UNESCO Division for Education 2030 Support and Coordination, aims to develop the broader thematic indicators. It reports to the SDG-Education 2030 Steering Committee. Some question the extent to which countries hold organizations to account for their proposals or the extent to which civil society is given space to contribute. However, the role of international actors may be constructive in ensuring coordination, facilitating consensus and advancing issues that national governments often downplay, such as equity.

Another example of standard setting is the Bologna process, a series of formal agreements that establish a European Higher Education Area to facilitate mobility, increase employability and allow equitable student access and progression. Launched in 1999 with coordinating support from the European Commission, it now links 48 countries, stretching to the Caucasus and Central Asia, with a common framework – including qualifications, a credit system and quality assurance standards – and implementation tools. This voluntary process is praised for having introduced an accountability mechanism without coercing national implementation (Adelman, 2008; Heinze and Knill, 2008). It inspired the Association of Southeast Asian Nations to establish a similar system that does not force national systems to become identical but advises on how to enhance connectivity and comparability (SHARE, 2016).

NON-FORMAL STANDARD-SETTING PROCESSES

Globalization has speeded dissemination of education norms and standards among countries. International actors often drive such standards' development and diffusion via 'knowledge networks' whose authority relies on expertise (Stone, 2013). A common criticism is that standards reflect institutional agendas, which exert undue influence on national education systems.

> “Top-down and bottom-up approaches by civil society and donors should be taken to improve the enforcement of global commitments and accountability”

Spain: 'Guía para entender PISA, el examen de la educación que muchos citan y pocos comprenden'

~ 'A guide to understanding PISA, the education exam that many people cite, but few understand.'
El Diario, April 2016

Learning outcome indicators are an example. The OECD has a highly structured decision process for education indicators. The core body is the intergovernmental Education Policy Committee. Through its subsidiaries, such as the Indicators of Education Systems Working Party and its three networks, countries provide strategic direction and oversee the elaboration of indicator standards and methodologies. The Programme for International Student Assessment (PISA), for instance, has established education system performance standards (OECD, 2012a).

> "The OECD PISA assessment is criticised for a tendency to standardize and to subject education to administrative control"

Groups beyond OECD member countries are invested in holding the organization to account for this standard setting. The research community has praised PISA for shifting education policy towards outcomes and for enabling in-depth analyses with rich data (Jerrim, 2013). However, it has criticized an increasing tendency to standardize and subject education to administrative control (Meyer, 2017). By developing and using performance evaluation indicators as a basis for policy recommendations, the OECD is 'simultaneously acting as diagnostician, judge and policy advisor to the world's school systems' (Meyer and Benavot, 2013). These include systems in non-OECD member countries with less ability to influence standard setting or hold the organization to account for standards set.

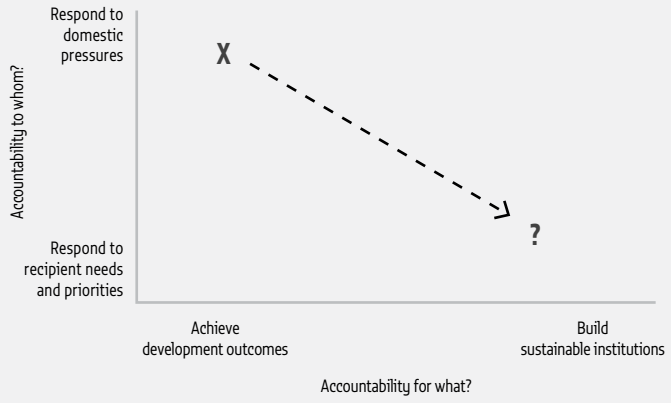
The World Bank Systems Approach for Better Educational Results provides another example of norm setting outside direct country involvement. Its benchmarks are based on expert assessment in diverse areas, such as teacher management, decentralization and private provision of services (Mundy and Verger, 2015). The accountability challenge is that the standards risk reflecting the organization's agenda rather than broader consensus (Steiner-Khamsi, 2012).

SUPPORTING COUNTRIES THROUGH DEVELOPMENT ASSISTANCE

While responsibility for financing of development and humanitarian aid rests with individual governments, since the 1960s 30 donor members[3] have organized under the OECD Development Assistance Committee (DAC) to exchange information and experience on aid. Their responsibility can be considered collective. In addition, while countries are represented on the boards of international organizations and development banks, these entities have distinct approaches to delivering assistance and are accountable to a wider range of actors than countries alone.

A useful framework to examine the challenges in making international actors accountable considers two dimensions: the needs of host countries and the interests of donors (de Renzio, 2016b). Donors – primarily, though by no means only, bilateral aid agencies – face pressure to prove to citizens that external assistance is well spent. Regardless of whether voters believe well-spent aid is used to support poverty reduction or extend a country's influence, evidence of value for money is associated with an increasing focus on proof of results. In the case of education, this has been traditionally associated with more children in schools. The counterargument is that aid should primarily respond to the national priorities of recipient countries and should focus on institution building, which is a long-term process (**Figure 7.1**).

FIGURE 7.1:
Donor organizations need to respond to recipient needs for institution building
Accountability dilemmas in aid, by type of principal and result



Source: de Renzio (2016b).

MUTUAL ACCOUNTABILITY FOR SUFFICIENT, EFFECTIVE AND EQUITABLE AID TO EDUCATION

The 1969 Pearson Commission proposed that DAC donors allocate 0.7% of gross national income to aid, a target endorsed a year later in a United Nations resolution and most recently in the 2015 Addis Ababa Action Agenda (OECD, 2017c; United Nations, 2015c). While DAC countries have generally and formally, in some cases, including several EU countries, accepted the target, others, such as the United States, have not (OECD, 2017c). In 2015, only six DAC countries met the 0.7% target. Collectively, DAC countries spent 0.3% of national income on aid in 2015, a figure that has remained constant for decades (OECD, 2016f).

Multiple channels are intended to hold international donor organizations to account for the volume of aid.

Pakistan: 'Do donor agencies need to be accountable?'

~ The Express Tribune, May 2016

The OECD has a long-established peer review mechanism, which voices concern if aid volumes are too low (e.g. OECD, 2015d). A High-Level Panel recently recommended updating the peer review methodology to widen the range of development actors beyond donor governments (OECD, 2017d). The media can also have a powerful influence on aid levels (Van Belle et al., 2004), either for or, depending on politics, against aid commitments. NGOs often pressure governments to meet aid commitments via the media (Taylor, 2017).

> "In 2015, only 6 out of 28 countries met their commitment to allocate 0.7% of national income to aid"

Where and how aid is allocated introduce additional accountability issues. A 2005 High-Level Forum put forward five principles of aid effectiveness: national ownership of development policies, donor alignment with these policies, harmonization of donor efforts, management of decision-making for results, and mutual accountability in using resources to achieve these results (OECD, 2008). Six years later in Busan, the last principle was slightly reformulated to refer to shared responsibility: 'Development co-operation must be transparent and accountable to all citizens' (OECD, 2012b).

A global monitoring framework stressing mutual monitoring of commitments among donor organizations was established to foster international accountability in the context of the Global Partnership for Effective Development Cooperation. Ten indicators focus on how partners engage in development cooperation. Three are particularly relevant to donor responsibilities.

First, the partnership's 2016 monitoring report showed improved transparency in aid reporting, for example with donors' adoption of the International Aid Transparency Initiative, an open-data standard that provides detailed, timely information. However, according to the Aid Transparency Index, improvement is modest: approximately one in five donors fully meets the Busan target (Publish What You Fund, 2016). Second, aid predictability, at least in the short term, slightly decreased between 2010 and 2015 (OECD and UNDP, 2016). Third, mutual accountability conditions of inclusiveness are often not met because non-executive stakeholders are not actively involved or because results are not made public.[4]

> Donors and international organisations need to commit to clearer roles and responsibilities for achieving regional and international goals

The existence of strong monitoring processes has neither increased aid volumes nor improved effectiveness. Power imbalances, overlapping roles and lack of enforceability among donors prevent progress (Jones, 2017). The same issues underlie continued poor targeting, with many countries in need receiving disproportionately low per capita allocations of education aid relative to needs, and with early childhood programmes receiving little attention at all (UNESCO, 2016c). Despite the issue's prominence in public debate, supported by tools such as the *Global Education Monitoring Report* (**Box 7.1**), the requisite political action to address shortcomings is rarely forthcoming.

> Only one in five donors fully meets the Busan target on transparency and accountability to citizens

HOLDING MULTILATERAL DONORS TO ACCOUNT

Multilateral donors disburse about one-third of total aid. A frequently expressed view is that, in order to address some of the accountability issues in aid, multilateral organizations should disburse a higher share of the total because they have established rules for allocation and are less subject to domestic political influence than bilateral donors (de Renzio, 2016b).

The governance mechanisms of the world's largest education lender, the World Bank, are naturally of interest (Verger et al., 2014). The board of governors, usually consisting of finance ministers, meets annually. Day-to-day management is delegated to an executive board of 25 directors: 7 country representatives and 18 members appointed by a broader constituency to represent a group of countries. Developing countries are the main target of World Bank decisions and account for a growing share of the world economy. To counter criticism that developing countries were not adequately represented, the World Bank initiated reforms in 2008, including a review of shareholding arrangements every

BOX 6.1

The GEM Report as an accountability tool

Begun as the *EFA Global Monitoring Report* in 2002, the Global Education Monitoring (GEM) Report received a fresh mandate at the 2015 World Education Forum as the mechanism for monitoring and reporting on education in the SDGs. Its mission is to serve as an evidence-based advocacy tool for holding the international community and governments to account for their commitments to education. It was established in the belief that external voices are indispensable for greater transparency in global education governance, including the role played by international organizations.

The report is prepared by an independent team and hosted and published by UNESCO. The GEM Report team is itself directly accountable to its internationally representative advisory board, which consists of a diverse set of stakeholders from governments to civil society organizations and education experts. It is also accountable to its donors, to whom it reports twice a year on its activities and expenditure. In response to donor demand, the GEM Report has recently started to also track whether its monitoring and advocacy activities help influence education policies. Despite the fact that it is very difficult to attribute policy changes to report recommendations and policy change per se is outside the report's mandate, the team is committed to empowering stakeholders to bring about such changes.

There have been three independent evaluations of the report, most recently in 2014. These have recognized its role as a reference tool that helps shape public debate on education. Those who scrutinize the contribution of international organizations to global education goals regularly make use of the GEM Report's analyses.

In the case of finance, for example, the Report has consistently drawn attention to the costs of achieving education targets (and the associated financing gap), international bodies' responsibilities in mobilizing domestic resources, weaknesses in coordinated action on joint commitments and lack of progress in meeting aid volume and aid effectiveness targets.

But the report has also raised attention to a wide range of issues related to equity, quality and learning outcomes, which have influenced the direction of monitoring education at the global, regional and national levels. Finally, it serves as a knowledge-sharing mechanism enabling countries to see what others are doing to achieve the common targets, an indirect but no less important role of accountability through peer learning.

Sources: Education for Change (2014); Edwards Jr. et al. (2015); UNESCO (2015a).

> NGOs voice concern about World Bank decisions that affect people but are taken outside the democratic political process

five years according to a new, evolving formula. In 2015, the World Bank estimated the voting share of developing countries at over 50% (Bretton Woods Project, 2016).

The World Bank's expansion into policy areas outside finance ministries' expertise has given rise to accountability concerns about the potential exclusion of other actors (Ebrahim and Herz, 2007). Sector ministries should be part of decisions. International organizations with mandates in policy development and provision of advice, including in education, should be consulted. NGOs voice concern about policy decisions that affect people but are taken outside the democratic political process.

Such concerns are not unique to the World Bank. The Asian Development Bank created an accountability mechanism in 1995 to provide recourse to people who might be 'directly materially and adversely affected' by its projects. This brought some improvement through mediation, compliance investigation and monitoring, but its effectiveness is hampered by issues of ease of access, transparency, developing country resistance, staff obstruction and the limited independence of the mechanism itself (Park, 2015).

The World Bank is also accountable internally for its decisions. While strong mechanisms have been developed to address issues such as corruption (World Bank, 2006), other areas, such as policy formulation, are more contested. For example, such methodologies as labour forecasting and rates of return had excessive influence in past selection of education projects, despite their weaknesses (Heyneman, 2003). There remains a risk of policy direction being co-opted by vested interests.[5]

The Global Partnership for Education (GPE) has also experienced external and internal accountability issues in its collaboration with countries and institutions. An evaluation found that the GPE board had 'insufficiently defined what it means to operate as a global partnership, and ... not fully translated the principle of mutual accountability into practice.' The criticism echoed concerns that, despite the drafting of a mutual accountability matrix, too many expectations fell to partnering countries and that methods to best promote coordination among partner institutions were unclear. There was also a notable lack of consequences for donors that did not honour their financial commitments (R4D and Universalia, 2015).

A new GPE strategy addresses some of these issues with a more balanced monitoring framework, more inclusive policy dialogue, participation by civil society organizations and teachers' unions in local education groups, and a regular review of partners' perceptions of clarity of roles and responsibilities in GPE country processes (GPE, 2016b).

CONCLUSION

The considerable influence and role international actors have in the development of global education is subject to significant scrutiny. Arguably, mechanisms exist to hold organizations accountable for their responsibilities in setting shared education goals, especially at the regional level, and education standards. Concerns arise when the development of standards and norms goes beyond the mandate delegated by countries. However, the greatest concerns have to do with donor accountability for ensuring that adequate, effective, predictable and well-targeted aid for education reaches countries in need.

To improve accountability, countries need to build their capacity for stronger representation in the management bodies of international organizations, which in turn must present clear roles for both national and transnational

> Researchers and civil society should question the accountability rules and models that international organizations bring into the education field to ensure that they serve SDG 4

institutions. While there is an abundance of accountability and reporting mechanisms, their remits are defined by the organizations themselves. As accountability in the international arena is political and power laden, the value of these mechanisms in education and their desirability in various contexts need to be questioned. Defined, applied and evaluated unilaterally, they risk straitjacketing public debate. This challenge extends beyond education. There is a risk of there being little accountability at the level 'where problems are framed, priorities identified and solutions devised' (Kramarz and Park, 2016). Independent voices in research and civil society should question the accountability rules and models that international organizations bring into the education field to ensure that they serve SDG 4.

ENDNOTES

1. See Chapter 7 on private-sector involvement in education services.
2. See Chapter 2 on government reporting to the High-Level Political Forum and mandatory reporting on legally binding right-to-education treaties.
3. 30 DAC members include 29 countries and the EU. Hungary was invited to join DAC as the thirtieth member in December 2016. Their information is not included in 2015 data.
4. See Chapter 3 on sustainability challenges in community monitoring and Chapter 20 on results-based financing.

Students on the island of Ometepe, Nicaragua, hold up new laptops provided by One Laptop Per Child.

CREDIT: GEM Report/Fundacion Zamora Teran & OLPC, Inc.

CHAPTER

7

Private sector

KEY FINDINGS

Private sector spending and investment in education is increasing. Spending on both private tutoring and education technology is expected to exceed US$200 billion in the next five years. Investment by the International Finance Corporation, grew by over US$450 million between 2009 and 2014.

Far stricter regulation of private sector involvement is needed to ensure that profitability does not trump equity and quality.

One in five children eats daily school meals, most contracted in part or in whole to private companies. Mechanisms to hold private providers of school meals accountable depend on country context. In Brazil, electronic auctions have greatly improved transparency and lowered administrative costs.

Private tutoring, paid out of pocket, widens the education advantage gap between haves and have-nots. When teachers serve as private tutors, conflicts of interest arise. In Nepal, teachers covered less material in school to increase demand for tutoring.

Governments need to enforce educational technology contracts better to ensure equal access and utility. In Thailand, a private provider of laptops could not deliver 800,000 tablets, refused to pay late fees, filed for bankruptcy and terminated the contract.

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Alongside governments and civil society actors, the private sector is viewed as an increasingly important partner in achieving development objectives. The role of companies, especially as funders and innovators, is recognized and embedded in the implementation vision of the sustainable development agenda (PwC, 2015; UN Global Compact, 2017).

The private sector not only delivers core education but also provides ancillary education services (Patrinos et al., 2009). A global education industry has emerged. Private school chains, consultancy firms, philanthropic organizations, education corporations and advocacy networks increasingly influence education outcomes and processes (Rizvi, 2016; Verger et al., 2016b). Investment by the International Finance Corporation (IFC), a World Bank affiliate that is the largest multilateral investor in private education in low and middle income countries, grew from US$133 million to US$609 million between 2009 and 2014 (IFC, 2016). Critics argue increased private sector involvement will lead to prioritization of profitability over learning, well-being and education as a public good (Verger et al., 2016b). There is also concern whether the public sector has the capacity and ability to implement and regulate growing, diversifying private involvement (Fredriksen, 2016). This chapter examines accountability in three ancillary services frequently provided by the private sector: feeding programmes, tutoring and instructional materials.

TO BE EFFECTIVE, SCHOOL FEEDING PROGRAMMES REQUIRE GOVERNMENT OVERSIGHT

School meals are the world's most widely provided form of social protection (UNESCO, 2015a). Some 368 million students in pre-primary, primary and secondary education – about one in five globally – receive a school meal every day (Drake et al., 2016). The goal is twofold: ensuring nutrition conducive to learning and future well-being, and integrating education, health, environment and agriculture policies to facilitate greater socio-economic development and agricultural productivity. Brazil and Peru adopted school feeding legislation and a regional framework law as part of their commitment to the right to food (Vidar et al., 2014). The 2013 National Food Security Act in India legally guarantees universal feeding programmes for pre-school and school children aged 6 months to 14 years (Government of India, 2013; Mander, 2015).

> "One in five students eats daily school meals, most of which are partly or entirely contracted to private companies"

Private sector involvement varies by country. A review of 18 school feeding policies found that Australia, Chile, Hong Kong (China), Spain, Sweden and the United States provided school meals primarily through private

> Governments need to emphasize equity in public-private partnership contracts for services, which should be available for public consultation and oversight

contractors. Brazil, England, Finland and France had public-private arrangements (Harper et al., 2008). In Chile and Ghana, the entire school feeding supply chain is outsourced (Drake et al., 2016). Mechanisms to hold private providers accountable vary substantially, depending on country context.

GOVERNMENT MONITORING ENSURES EFFECTIVE TARGETING

All food providers should target those most in need. Chile's nutrition programme, based on household vulnerability, is well targeted to poor students: An evaluation found that 80% of total programme funding to primary schools was concentrated in the lowest two income quintiles (Kain et al., 2002). Providers bid online, specifying information on meals, pricing and adherence to strict nutrition and hygiene regulations (McEwan, 2013). An autonomous public corporation, reporting to the Ministry of Education, manages providers and monitors targeting, supported in part by twice-yearly household surveys. At the school level, teachers allocate meals and, with a private contractor, record daily participation to monitor targeting (Drake et al., 2016). By contrast, in Ghana, only 21% of feeding programme benefits accrued to the poor, prompting retargeting to the poorest communities (Wodon, 2012). Reports also suggested widespread political interference (Addy and Banahene, 2015) and a lack of government funding for regular monitoring. In addition, poor community participation limited school-level implementation efforts (Afrane, 2015).

Programmes designed to procure locally produced food can benefit the community. Municipal governments in Brazil contract with private companies or wholesalers and local farmers to provide food to schools. A law requires cities to spend at least 30% of their school meal budgets on produce from local producers. School feeding councils monitor programmes at the state and municipal levels. An analysis of programme implementation in the Cajuru municipality argued that outsourcing to several companies made food quality supervision difficult; however, electronic auctions have greatly improved transparency and lowered administrative costs (Draibe, 2014).

Regulating food provision is politicized in the United States, where a handful of influential multinationals dominate the food industry. A key regulation is eligibility for refunds for meeting nutritional standards. In 2010, the Healthy, Hunger-Free Kids Act set nutritional standards for all school food. The School Nutrition Association has resisted the standards, arguably because of the food industry's strong influence in both the association and Congress (Confessore, 2014). The Government Accountability Office investigated abuses by food service companies and found that the National School Lunch Program had significant contracting issues, e.g. companies not fulfilling their responsibilities or not abiding by contract terms. A major agri-business firm, Sodexo, paid a US$20 million settlement for failure to pass on rebates to several New York school districts in 2004–2009 (Ziperstein, 2012).

> School food provision requires transparency and clear lines of responsibility between government and private contractors

While school food provision is a vital part of government strategies for multisector development, private sector engagement in the process varies greatly. Private contracting works best with clear lines of responsibility for government and contractors, an emphasis on transparency and adequate funding to provide the service.

MARKET-BASED PRIVATE TUTORING MAY AFFECT EDUCATION EQUITY

Private supplementary tutoring, sometimes called shadow education, includes activities that mirror the content of regular schooling, as well as activities that supplement schooling, such as in-depth subject coverage, training in other languages and extracurricular activities.

PRIVATE TUTORING IS A GLOBAL PHENOMENON

Private tutoring is increasing worldwide. Studies suggested that at least half of surveyed high school students used private tutoring in countries as diverse as Azerbaijan, Bangladesh, Bosnia and Herzegovina, China, Cyprus, Egypt, Georgia, Greece, Hungary, Portugal, Spain and Ukraine (Bray and Kwo, 2014; Dang and Rogers, 2008; Silova and Bray, 2006). An estimated 81% of elementary students and 56% of high school students in the Republic of Korea received supplementary tutoring in 2014 (Bray, 2015). In England and Wales (United Kingdom), the proportion of 11- to 16-year-olds receiving extra tutoring rose from 18% in 2005 to 25% in 2016 (Kirby, 2016).

> “Spending on private tutoring is expected to exceed US$227 billion by 2022”

Expansion of the industry is expected to continue. In 2016, it was estimated that the private tutoring market would surpass US$227 billion by 2022 (Global Industry Analytics, 2016). Another estimate predicted a 7% annual growth in 2016–2020 (Wood, 2016). Online tutoring has become big business due to the potential for individualized support and consumer choice in a competitive global marketplace. In many countries, private tutoring is no longer viewed as supplemental but as the expected norm and the only way children can compete for positions in higher education (Bray, 2017).

TUTORING CAN EXACERBATE INEQUALITY IN EDUCATION

While remedial or individualized help may benefit students, the time and money allocated to tutoring can undermine student well-being and strain household budgets. Private tutoring can increase students’ academic burden and stress (Bray, 2013). In Taiwan Province of China, students who spent additional hours in private cram schools were more likely to have symptoms of depression (Chen and Lu, 2009).

Private tutoring is especially prevalent among wealthier urban households. In India, in 2007/8 about 40% of urban secondary students received private tutoring, compared with about 26% of rural students. Better-educated households in urban areas with children attending private schools were more likely to pay for private tutoring (Azam, 2016). Viet Nam’s richest spent almost 14 times more on private tutoring than the country’s poorest (Dang, 2013). In 2015, 35% of United Kingdom parents who did not pay for private tutoring cited cost (Kirby, 2016).

Egypt: ‘Public education and private tuitions: A system of inadequacy’

~ The Daily News Egypt, December 2015

Understanding how tutoring influences existing socio-economic, gender, regional and other types of inequality requires greater monitoring. Safeguarding against unhealthy or exploitative practices and adequately taxing the businesses concerned requires greater regulation.

GOVERNMENT REGULATION IN TUTORING IS RARE

Government regulation of formal and informal tutoring ranges from ignoring the sector (Canada, Nigeria) to failed attempts at banning private tutoring (Cambodia, the Republic of Korea) (Silova and Bray, 2006). Hong Kong (China) requires tutorial centres to teach at least 8 students at a time and up to 20 students per day to obtain a licence and supply information to clients about the institution, facilities, refund policies, qualifications, and health and safety standards. There are, however, no restrictions on fee levels or required textbooks. The Hong Kong Education Bureau promotes transparency with an online list of registered centres and successful prosecutions of unregistered centres. Most countries typically have no regulations or lack the will or capacity to monitor or penalize tutorial centres. Lack of capacity to monitor centres in Bangladesh, for example, has undermined government attempts to cap tutoring fees (Bray and Kwo, 2014).

Other government means of holding tutoring agencies to account typically include arming consumers with information, partnering with schools and working with teachers’ unions to develop standards and disseminate information to members. Officially regulating the growing sector of online tutoring is difficult. Instead, current discussions promote consumer education and self-regulation (Bray and Kwo, 2014).

In the context of limited government regulation, codes of conduct developed by the industry increase accountability while maintaining autonomy. The Australian Tutoring Association's code of conduct provides guidelines on advertising standards, required qualifications, consumer information, refund policies and business ethics. The Japan Juku Association publishes voluntary standards and child and data protection guidelines for use by tutoring companies (Bray and Kwo, 2014). In the United Kingdom, the Tutors' Association was established in 2013 to professionalize the burgeoning industry with a code of ethics for tutors and a code of practice for companies (The Tutors' Association, 2016).

TEACHER ACTIVITY IN PRIVATE TUTORING IS COMPLICATED TO REGULATE

When teachers also serve as private tutors, it can create conflicts of interest that adversely affect learning. In Nepal, teachers who offered tutoring covered less material in school to increase demand for tutoring. Poorer students who did not enrol did worse on exit exams (Jayachandran, 2014). Some countries have regulations governing teacher involvement in private tutoring. Georgia's 2010 Teachers' Code of Ethics discourages teachers from tutoring their own students.[1] In Japan, full-time teachers are prohibited from private tutoring (Bray and Kwo, 2014). By contrast, government does not monitor teacher tutoring in the Philippines, and teachers are permitted to tutor their own students in Uzbekistan (de Castro and de Guzman, 2013; Bray and Kwo, 2014).

Regulating teacher involvement in private tutoring needs to take teachers' situations into account. Studies of private tutoring in Cambodia, Georgia and Kyrgyzstan discussed private tutoring by teachers not as opportunistic but as a strategy to cope with low salaries and inadequate instruction time (Bray et al., 2016; Johnson, 2008; Kobakhidze, 2014).

"Kuwait to sack expat teachers giving private tuition"

~ Zawya, January 2017

Attempts to hold companies and tutors accountable may ignore conditions that have increased the demand for and supply of private tutoring. Most governments opt for market-based checks (Bray and Kwo, 2014), in which case existing accountability mechanisms have likely allowed the tutoring industry to expand without restraint, with adverse consequences for equity, especially for poorer households.

GOVERNMENT AND CIVIL SOCIETY CAN HOLD INSTRUCTIONAL MATERIAL COMPANIES TO ACCOUNT

Instructional materials that can be easily produced and sold to governments and schools make them popular private sector products. Moreover, government textbook monopolies often find it difficult to provide consistently high-quality materials, which opens the door for private entities to partner with those responsible for textbook procurement (DFID, 2011). Textbooks, teacher guides and other curriculum materials are increasingly digitized. Combining software and hardware products, education technology companies are jumping into the growing market. A recent report valued the global education expenditure market at over US$5 trillion in 2015, of which only 2% was digitized. Education technology expenditure is expected to grow by 17% annually to US$252 billion by 2020 (EdTechXGlobal/IBIS Capital, 2016). Given this market potential, companies are routinely negotiating with countries to partner in large-scale teaching and learning initiatives. This section outlines accountability relationships in two types of commonly privatized instructional materials: textbooks and computers.

> "Spending on education technology is expected to exceed US$250 billion by 2020"

PROVIDING 'A TEXTBOOK FOR EVERY CHILD' REMAINS AN ELUSIVE GOAL

Despite calls for universal provision, textbook scarcity persists in many low income countries. National and regional publishing in Cameroon, Kenya, Malawi, Mali, Rwanda, the United Republic of Tanzania and Zambia have grown rapidly since the 1990s through public-private partnerships. Government monopolies in textbook development remain in some francophone African

> Textbook costs in Uganda fell by two-thirds after private publication began

countries but are increasingly rare in anglophone Africa (Read, 2015). Countries are encouraging private sector involvement to reduce textbook costs by streamlining publishing and distribution. To take advantage of economies of scale, some countries outsource printing to regional and international printers. Research suggested that some private partnerships have been cost-effective; textbook costs in Uganda fell by two-thirds after private publication began (Fredriksen and Brar, 2015) (see **Box 7.1** for combined approach in the Philippines).

BOTTOM-UP CIVIL ACTION CAN HOLD TEXTBOOK PUBLISHERS TO ACCOUNT

Aligning textbook content with curriculum objectives needs to be monitored, as it is critical for ensuring relevant learning. In some contexts, grass-roots activity has helped remedy issues with content developed by publishers at the behest of officially sanctioned bodies. In the United States, for example, where debate on climate change is intense, conservative media outlets and policy-makers pushed for textbook content supporting climate change denial. Following curriculum changes in Texas, an analysis found that several proposed textbooks developed for approval in 2015 by the publishers, including Pearson and McGraw-Hill, strongly distorted climate change facts and presented them as a competing opinion (NCSE, 2014). After advocacy efforts by institutions such as the Texas Freedom Network, along with a groundswell of petitions, both publishers revised some of the questionable text (Quinn, 2014).

In South Africa, social media prompted awareness and revision of a Pearson textbook, in circulation for five years, which included a sexual assault scenario that seemed to promote blaming the victim. A parent's question posted on Facebook in July 2016 inspired a petition on a South African website. In response to demands for an apology, Pearson announced that it would amend the language immediately and print a new edition (Davies, 2016). Pearson is the world's largest education company, operating in over 70 countries. Its near global monopoly raises questions about who has the authority and capacity to hold it accountable (**Box 7.2**).

BOX 7.1

A combined approach reforms textbook supply chains in the Philippines

Reporting, government commitment and societal action can be pivotal to improving textbook development and delivery. Reform of the Philippines' government textbook delivery system is an exemplary case. In 1995, reports of widespread payoffs to officials from the textbook budget prompted the government to institute private sector procurement. However, with no change in the political culture, the open market increased corruption, as journalist Yvonne Chua reported in 1999 in *Robbed: An Investigation of Corruption in Philippine Education*. The book increased public pressure for reform. In 2001–2002, the group Government Watch found that 40% of textbooks were not accounted for, due to missing guidelines for publishers and a lack of penalties for late delivery.

In 2002, a new government set firm delivery schedules, and a nationwide network of hundreds of civil society participants and volunteers helped with tracking. Between 2002 and 2005, transparency in bidding improved, halving average prices and development and delivery time. In 2007, the Department of Education approved an order to institutionalize participation of civil society organizations in procurement monitoring. While the priority in lower income countries appears to be the cost savings associated with private involvement, the successful effort in the Philippines demonstrates how the combination of government action and civil society involvement can be vital to reform the textbook supply chain.

Sources: Arugay, 2012; UNESCO, 2016b.

BOX 7.2

Pearson PLC: Too big to hold accountable?

Until recently, Pearson was known for textbook publishing. In the early 2000s, recognizing the growth industry in digital education, Pearson's Chief Executive Officer devised a transition strategy, acquiring several technology-related businesses. In 2015, Pearson reported sales of GBP 4.5 billion and adjusted operating profit of GBP 723 million.

Pearson's increased market share coincided with a growing wave of assessment-linked accountability reforms.[2] Its growing reach into multiple aspects of education, such as testing and online materials, increased concern over unethical practices and conflicts of interest. Small-scale court actions and several antitrust lawsuits were filed out of concern Pearson would achieve monopoly status as it continued to acquire associated businesses. In 2012, 33 US states sued Pearson, accusing it of colluding with Apple and four other publishing companies to fix e-book prices. In 2013 in the Los Angeles Unified School District, after Apple and Pearson won a US$1.3 billion bid to incorporate technology into education, the programme faced multiple problems, including less than 5% of students having access to content and materials being unsuitable for low English proficiency. Within a year, all schools had stopped using tablets with the Pearson curriculum.

Despite such accountability checks, Pearson's clout is unabated. In a move to rebrand and arguably to respond to public opposition, a major accountability initiative came from within Pearson and it divested in sectors other than education. It also aims to mainstream corporate social responsibility in its business practices and has launched an efficacy framework to measure the education impact of its investment activities, with a focus on answerability to consumers. How these measures translate to improved transparency and accountability remains to be seen; formal reporting begins in 2018. Critics argue that the efficacy framework focuses too narrowly on some learning outcomes. More importantly, they warn that the expansion of such large businesses may threaten national education policy practices and exclude educators, since private companies like Pearson are truly only answerable to their shareholders.

Sources: Alami (2016); Hogan (2016); Hogan et al. (2016); Layton (2013); Pearson PLC (2016); Reingold (2015); Robinson (2015); US DOJ (2008, 2013); Williams (2015).

UNIVERSALIZING LAPTOPS AND TABLETS IN SCHOOLS THROUGH PRIVATE ENGAGEMENT REQUIRES STRONG GOVERNMENT ENFORCEMENT

The early 2000s saw attempts to overcome the 'digital divide' whereby better-resourced students and schools are more likely to have full access to new technology and resources. Several countries rushed to put technology in the hands of each student, dismissing criticisms about the limits of technology in overcoming systemic challenges and the costs of maintaining and updating computers and training teachers to use them effectively (Toyama, 2011).

Peru and Uruguay were among countries that launched popular 'one laptop per child' initiatives with variable results (Trucano, 2014). Analysis of Peru's programme found that increased computer access had limited impact on learning outcomes (Cristia et al., 2012). The Uruguay initiative, launched in 2007 by presidential decree, succeeded in expanding access to technology and reducing the digital divide. By 2009, all primary school students had received laptops. Uruguay owed its expansion to sustained political will, an emphasis on inclusive adoption of the technology, and a government-led coordination and implementation strategy. Rather than outsource distribution, the government bought laptops directly from the non-profit One Laptop per Child project. The Technological Laboratory of Uruguay coordinated distribution, and the Primary Education Council was responsible for pedagogical incorporation (Hinostroza et al., 2011). To address the digital divide, the programme first rolled out in rural and poor communities, with the capital receiving laptops towards the end. Notwithstanding the broader computer access, there was no initial impact on mathematics and reading scores because teachers had not fully adopted the programme and the devices were mainly used to find information on the internet (de Melo et al., 2014).

India's Aakash tablet project was a public-private partnership that, due to inadequate government enforcement, ended up primarily benefiting the vendor. The 2010 project aimed to provide cheap tablets to students at all levels. DataWind, the winner of the project bid, provided a fraction of the promised tablets and had multiple technical issues (Dutz et al., 2014). An audit found failures in the initial procurement process, including delays and lack of transparency, and assigned primary responsibility to the public institution managing the project (Comptroller and Auditor General of India, 2013). In 2013, despite a threat of sanctions for not meeting the terms of the supply order after a delivery delay, DataWind could not meet the deadline and, again, was not penalized (News 18, 2013). A right to information request revealed that the programme eventually met an initial target of 100,000 tablets and was wound down quietly in March 2015. While only some Indian students received subsidized tablets, DataWind ended up a big winner. By marketing itself as a company seeking to bridge the digital divide through low-cost internet and computing access, it introduced new low-cost models in India and has been hailed as a highly innovative technology company (Mukunth, 2015).

> Cost-benefit analyses should be carried out before committing to rapid scaling-up of private tutoring, digitization of learning, or the involvement in global corporations in education

Thailand relied on a similar private procurement strategy with similarly disappointing results. In 2012, Thailand launched the One Tablet per Child project. The relatively low winning bid came from Shenzhen Corp. The *Bangkok Post* reported major issues, with 30% of the initial products broken, although the government claimed less than 1% were in disrepair (Muncaster, 2013). Ultimately, Shenzhen could not deliver the promised 800,000 tablets on time. It refused to pay late fees, filed for bankruptcy and terminated the contract (Chiangrai Times, 2014; Sakawee, 2014). In 2014, a new government scrapped the programme and ordered schools to turn over the tablets (Chiangrai Times, 2015).

To integrate technology successfully into education requires significant government commitment to thinking beyond procurement. Learners' needs must be incorporated into curriculum design, teachers must be adequately trained and equity issues must be prioritized. To achieve these objectives, public-private partnerships in technology integration need to consider the realities of the end users: schools and teachers. The most disadvantaged schools and students should be prioritized so as not to widen the digital divide.

CONCLUSION

Accountability in private sector ancillary education services seems focused on product delivery as an accountability objective. Many governments are inclined to let the market regulate private industry, encourage consumer awareness and view public-private partnerships as an overall positive in terms of cost savings. Fruitful engagement with the private sector requires clear roles, transparent processes, and government commitment and capacity for monitoring.

If these conditions are not met, the rise of profit-motivated companies providing private tutoring and technology can have serious equity implications, depending on who gets access to the services and who profits from their development and provision. From a global equity and learning perspective, the public funds these industries receive should perhaps be incrementally taxed and collected funds redistributed to meet essential learning environment challenges, such as providing textbooks, electricity, water and sanitation in under-resourced schools.

Private sector involvement on the scale of companies like Pearson or Sodexo systematically affects policy, advocacy and ability to regulate. Government, civil society, the media and other actors can play a role in holding private sector giants responsible for their actions in education but should not be expected to counteract major collusion and stakeholders working to encourage profiting from education. Yet governments must be cognizant of their responsibility to create an environment in which private sector actors prioritize equity in education. This may be easier said than done, as governments with sufficient capacity to manage private sector actors are better placed to improve the public education system.

ENDNOTES

1. See Chapter 4 for analysis of teacher codes of ethics.
2. See Chapter 3 on assessment-linked accountability of schools.

Six-year-old Sridhar with his slate showing the maths he learned in school in Andhra Pradesh, India.

CREDIT: Poulomi Basu/UNESCO

CHAPTER

8

Monitoring education in the Sustainable Development Goals

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The 2030 Agenda for Sustainable Development ushered in a new education monitoring framework, which aims to match the ambition of the targets and casts its net wider than the framework it replaced by using a much richer set of information sources. Even if it barely scratches the surface of core education and lifelong learning questions, especially those linked to sustainable development, the new framework demands a major mobilization of resources for setting standards and deploying tools to capture equity, quality and learning. This introduction to the monitoring part of this report reviews the status of the monitoring and reporting framework for Sustainable Development Goal 4 (SDG 4) on education, and the steps taken to refine and implement it since 2016.

THE SDG MONITORING FRAMEWORK

The UN Statistical Commission established the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs) in March 2015 to develop global indicators for monitoring the new goals and targets. The commission agreed a list of 232 indicators in March 2016. It was refined a year later, endorsed by the Economic and Social Council in June 2017 and adopted by the General Assembly in September 2017. The IAEG-SDGs can propose refinements to the global framework every year but has only agreed to carry out major reviews in 2019 and 2024 for approval at the commission sessions in 2020 and 2025.

For SDG 4, there are 11 global indicators – one per target with the exception of target 4.2, for which there are two. The UNESCO Institute for Statistics (UIS) is the sole custodian agency for eight indicators and in collaboration with the International Telecommunications Union (ITU) for the target 4.4 indicator on information and communications technology. UNICEF and the Organisation for Economic Co-operation and Development (OECD) are the custodian agencies for one indicator each: target 4.2 on early childhood development and target 4.b on aid for scholarships, respectively.

In addition to the 11 global indicators, the education community proposed 32 thematic indicators to cover the broader scope of the education agenda. These were included in an annex to the Education 2030 Framework for Action, adopted in November 2015. Thus, 43 indicators in all constitute the SDG 4 monitoring framework.

Recognizing that further methodological work is needed, the IAEG-SDGs adopted a three-tier classification based on established methodology and data coverage. For the education goal, three indicators are identified as tier I indicators ('established methodology ... and data regularly produced by countries'), four as tier II ('established methodology ... but data are not regularly produced by countries') and two as tier III ('no ... established methodology'), while two have multiple classification. Work plans are being prepared and implemented for all tier III indicators (IAEG-SDGs, 2017) (**Table 8.1**). The classification is not necessarily an assessment of the quality of the indicator. As this report explains, even tier I indicators may satisfy the established methodology criterion but be only partially informative, if not misleading.

The custodian agencies are responsible for refining the indicators. The UIS, which the Education 2030 Framework for Action designates as the official source of cross-national education data, convenes with UNESCO the Technical Cooperation Group on the Indicators for SDG 4 – Education 2030 (TCG). It consists of the IAEG-SDGs member states plus selected international agencies and institutions. Its aim is to further develop the framework, focusing on the thematic indicators but also advising UIS on refinements it can propose to the IAEG-SDGs on global indicators. The TCG also aims to promote country-level data production and enable cross-nationally comparable reporting. Its three working groups focus, respectively, on indicator development, capacity development and reporting.

In 2016, the TCG agreed that 29 of the 43 indicators would be reported in 2017 (see the introduction to the statistical tables in the annex). In all, 22 indicators require further development; of these, 15 are being developed by the TCG and 7, related to learning outcomes, by a separate structure, the Global Alliance to Monitor Learning (GAML), also convened by the UIS.

GAML can be considered as a fourth working group of the TCG. Due to the technical sophistication of learning outcome related indicators, GAML was originally

conceived as a forum bringing together organizations involved in learning assessments to promote consensus. It has five task forces: one each for the targets with learning outcome indicators, plus a cross-cutting task force on implementation. Gradually, however, GAML is incorporating countries as members.

In short, the international community has developed an architecture to support the monitoring framework. The task is complex and more resources need to be invested, especially to improve coordination and country participation. While steps have been taken to facilitate the latter, two challenges remain: streamlining the representation structures and communication channels between countries at the regional level, and strengthening country engagement in these consultative mechanisms.

THE SDG REPORTING FRAMEWORK

At the apex of the SDG follow-up and review framework is the annual High-level Political Forum on Sustainable Development (HLPF). It is held every four years under the auspices of the General Assembly and in the intervening years under the auspices of the Economic and Social Council. Its mandate is to provide political leadership, guidance and recommendations on implementation and follow-up; keep track of progress; encourage elaboration of coherent policies informed by evidence, science and country experiences; and address new and emerging issues.

A framework for the HLPF global follow-up and review is provided by the annual SDG Report, prepared by the Secretary-General in cooperation with the UN system and based on the global indicator framework. A glossy variant for the wider public is also produced. UNESCO is the reporting agency for the SDG 4 component of the SDG Report. But the main contributions to the HLPF are of three types: voluntary national reviews; submissions from intergovernmental bodies; and submissions from other 'major groups and stakeholders'.

Every year, the HLPF also carries out thematic progress reviews focusing on a set of SDGs, aiming to ensure that all are reviewed over a four-year cycle. Education is scheduled for review in 2019. Thematic reviews are supported by intergovernmental bodies. For education, the Secretary-General identified the World Education Forum as the intergovernmental mechanism. It in turn named the SDG–Education 2030 Steering Committee as the main global coordination body supporting member states and partners in achieving Education 2030. The committee is to 'provide strategic guidance, review progress drawing on the GEMR, and make recommendations to the education community on key priorities and catalytic actions to achieve the new agenda; monitor and advocate for adequate financing; and encourage harmonization and coordination of partner activities' (UNESCO, 2015a, §94).

In its Incheon Declaration, the forum requested production of 'an independent Global Education Monitoring Report (GEMR), hosted and published by UNESCO, as the mechanism for monitoring and reporting on the proposed SDG 4 and on education in the other proposed SDGs, within the mechanism to be established to monitor and review the implementation of the proposed SDGs' (UNESCO, 2015a, §18). In line with this mandate, Chapters 9 to 18 review progress towards the seven targets (4.1 to 4.7) and three means of implementation (4.a to 4.c), Chapter 19 discusses issues related to education in three other SDGs and Chapter 20 reviews education financing, which is a major issue identified in the Education 2030 Framework for Action. Each chapter includes the corresponding indicators, for reference.

TABLE 8.1:
SDG 4 global indicators by custodian agency and classification tier

Stage	Custodian agency	Tier
4.1.1 Proportion of children and young people:	UIS	
(a) in grades 2/3;		III
(b) at the end of primary; and (c) at the end of lower secondary		II
achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex		
4.2.1 Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex	UNICEF	III
4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex	UIS	I
4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	UIS	II
4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	UIS / ITU	II
4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated	UIS	I / II / III depending on indicator
4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex	UIS	II
4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment	UIS	
4.a.1 Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)	UIS	II
4.b.1 Volume of official development assistance flows for scholarships by sector and type of study	OECD	I
4.c.1 Proportion of teachers in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country	UIS	I

Notes: The following definitions apply to the tier classification.
Tier 1: Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50% of countries and of the population in every region where the indicator is relevant.
Tier 2: Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.
Tier 3: No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.
Source: IAEG-SDGs (2017).

Pupils study at a school near Manaus, in the state of Amazonas, Brazil.

CREDIT: GEM Report/Andres Pascoe

KEY MESSAGES

In 2015, there were 264 million primary and secondary age children and youth out of school: 61 million children of primary school age (9% of the age group), 62 million adolescents of lower secondary school age (16%), and 141 million youth of upper secondary school age (37%).

Household survey data from 2010–2015 indicate completion rates were 83% for primary, 69% for lower secondary and 45% for upper secondary education.

There is no globally agreed standard for measuring reading and mathematics proficiency yet, but substantial efforts have been made since 2016 through the Global Alliance to Monitor Learning.

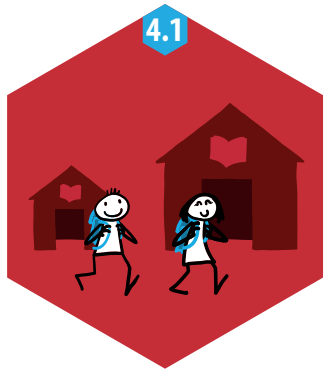
Using an interim approach, the UNESCO Institute for Statistics has estimated that 387 million children of primary school age, or 56%, did not reach the minimum proficiency level in reading; in sub-Saharan Africa 87% of children did not reach this level.

Less than one in five countries guarantee 12 years of free and compulsory education; this guarantee is most common in Latin America and the Caribbean (47% of countries).

There is a growing tendency to collect test and examination data to monitor schools and assess student learning outcomes.

Data on student learning outcomes should be adjusted for socio-economic background and follow students over time. But doing this well is hard even for high income countries and extremely challenging for low and middle income countries, where capacity is low and setup costs are high.

CHAPTER 9



TARGET 4.1

Primary and secondary education

GLOBAL INDICATOR

4.1.1 *Proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex*

THEMATIC INDICATORS

4.1.2 *Administration of a nationally-representative learning assessment (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education*

4.1.3 *Gross intake ratio to the last grade (primary education, lower secondary education)*

4.1.4 *Completion rate (primary education, lower secondary education, upper secondary education)*

4.1.5 *Out-of-school rate (primary education, lower secondary education, upper secondary education)*

4.1.6 *Percentage of children over-age for grade (primary education, lower secondary education)*

4.1.7 *Number of years of (a) free and (b) compulsory primary and secondary education guaranteed in legal frameworks*

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OVERVIEW

The main innovation the Education 2030 agenda brought to the monitoring of international education targets is placing learning outcome indicators at its core. In no target is that change from the earlier Millennium Development Goal agenda more evident than in target 4.1, where the global indicator is a measure of proficiency in reading and mathematics at three levels of education. To a large extent, this reflects a change that had been ongoing in many national education systems, which are collecting detailed data on learning outcomes at the school and student levels (**Policy focus 9.1**).

> “The Education 2030 agenda places learning outcome indicators at its core”

Inevitably, when it comes to cross-country comparisons, this change generates considerable debate on the new measures and will require major adjustments in the collection and compilation of relevant data. Despite progress, there is no global standard for proficiency yet, although steps have been taken in that direction during the past year by the UNESCO Institute for Statistics (UIS) (**Data focus 9.1**). As a result, there is currently no global estimate of the percentage of children who met a particular proficiency level in early primary grades, at the end of primary and at the end of lower secondary education.

Globally, roughly half of countries administer a national learning assessment in reading and mathematics at the end of primary and lower secondary education. Two-thirds of low income countries (and 79% of sub-Saharan African countries, compared to none in Caucasus and Central Asia) administer a reading assessment during primary (grades 2 or 3), which reflects the wide use of the Early Grade Reading Assessment tool through donor-funded projects. By contrast, 6% of low income countries (compared to 69% of high income countries and 87% of countries in Europe and Northern America) administer a reading and mathematics assessment at the end of lower secondary. Moreover, not all such assessments allow comparisons among countries. The percentage of countries, which took part in a cross-national assessment used to report on global indicator 4.1.1 at the end of primary and end of lower secondary school, ranges from 25% to 38% (**Table 9.1**).

Currently, the Sustainable Development Goal (SDG) database includes minimum proficiency achievement data from regional or international learning assessments whose benchmarks may not be comparable. Results from national assessments are not currently reflected in the global indicator, which poses a significant challenge to monitoring efforts (**Data focus 9.2**).

This temporary dataset solution allows further ambiguities. The SDG database reports data on achievement at

TABLE 9.1:
Percentage of countries administering a national learning assessment and an assessment used to report on the global indicator, 2015 or most recent year

	All national assessments						Assessments used to report on global indicator 4.1.1b/c			
	Reading			Mathematics			Reading		Mathematics	
	During primary	End of primary	End of lower secondary	During primary	End of primary	End of lower secondary	End of primary	End of lower secondary	End of primary	End of lower secondary
World	**47**	**56**	**46**	**44**	**56**	**46**	**25**	**27**	**29**	**38**
Caucasus and Central Asia	0	75	25	0	63	25	13	38	25	38
Eastern and South-eastern Asia	39	56	56	33	56	56	0	0	44	50
Europe and Northern America	43	57	87	43	57	87	26	28	74	80
Latin America and the Caribbean	60	51	49	60	51	49	35	35	16	21
Northern Africa and Western Asia	35	45	55	30	45	55	10	15	35	75
Pacific	18	82	12	12	82	12	0	0	12	12
Southern Asia	56	56	33	56	56	33	0	0	0	11
Sub-Saharan Africa	79	68	13	74	68	13	48	48	0	6
Low income	66	50	6	63	50	6	38	38	0	0
Lower middle income	53	67	29	47	65	29	20	22	8	22
Upper middle income	38	51	55	36	51	55	29	35	33	40
High income	41	57	69	41	57	69	21	21	54	65

Source: UIS database.

the end of lower secondary education from both the Trends in International Mathematics and Science Study (TIMSS), administered at grade 8, and the Programme for International Student Assessment (PISA), administered at age 15 (grade 10 in participating countries). The TIMSS and the PISA were both administered in 2015, for example, raising questions as to which results represent the country and what determines the decision.

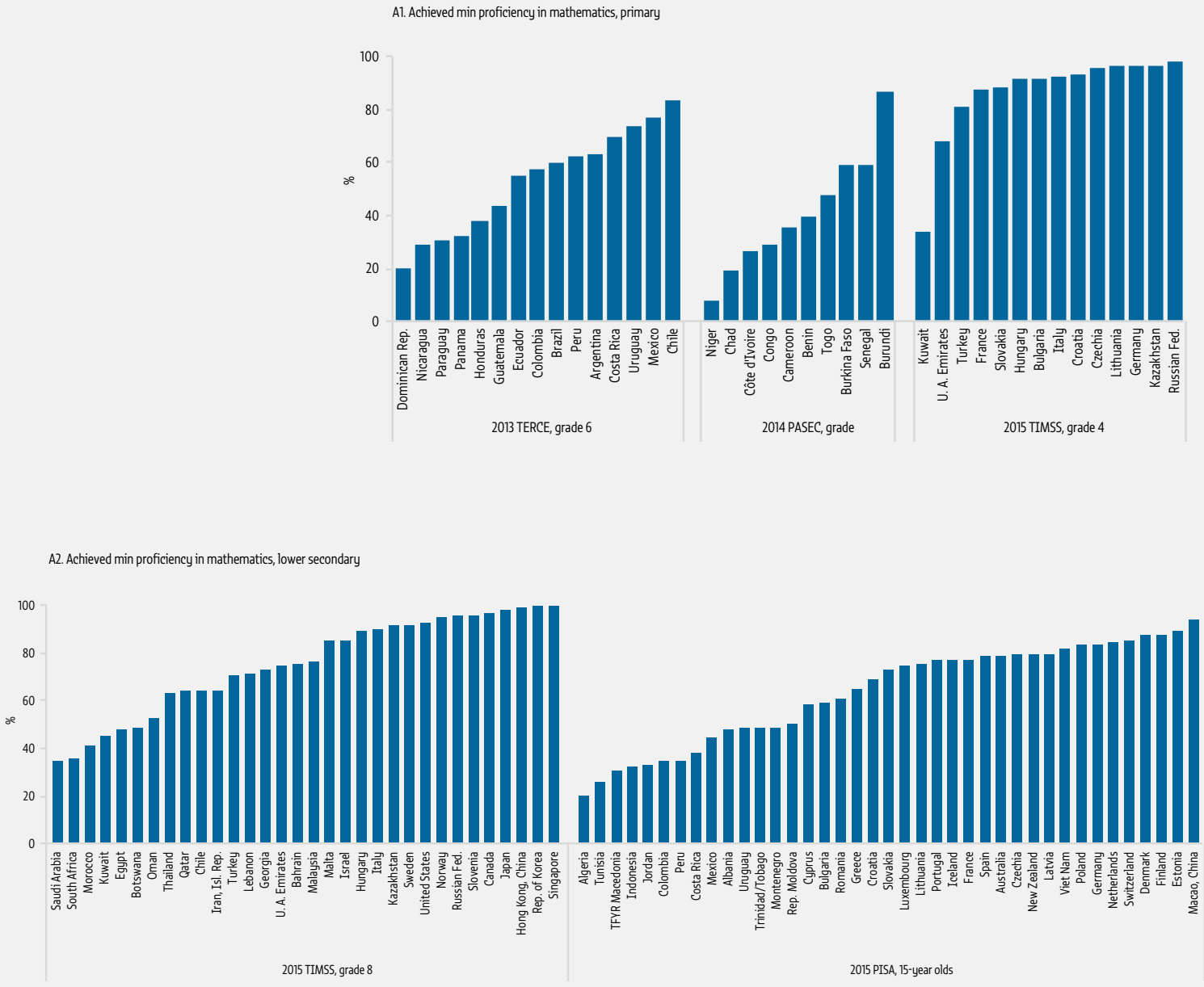
Regardless of these challenges, available data from cross-national learning assessments, which also include the Analysis Programme of the CONFEMEN Education Systems (PASEC; francophone Africa) and the Third Regional Comparative and Explanatory Study (TERCE; Latin America) suggest that, in many countries, students do not reach the minimum proficiency level set by the surveys. This is particularly the case in low and middle income countries, which are already under-represented in the SDG dataset. In mathematics, one-third or less of students met the minimum benchmark in Chad, Kuwait and Nicaragua at the end of primary education and at the end of lower secondary education in Algeria, Indonesia and the former Yugoslav Republic of Macedonia, according to the respective surveys (**Figure 9.1 A1** and **9.1 A2**). In reading, less than half of students met the minimum benchmark in Cameroon, Congo and Togo at the end of primary and at the end of lower secondary in Albania, Georgia and Lebanon, according to the respective surveys (**Figure 9.1 B1** and **9.1 B2**).

It is important to highlight again two points. First, the benchmarks are not comparable between surveys, a fact not sufficiently highlighted in the SDG database. For example, 46% of Thai students reached the minimum standard in mathematics at the end of lower secondary school according to the 2015 PISA, but 62% did so according to the 2015 TIMSS. Such gaps are also observed in high income countries, as in the Republic of Korea, where achievement levels in mathematics were 85% (PISA) and 99% (TIMSS). Latin American countries that took part in cross-national surveys at the end of primary (TERCE) and the end of lower secondary (PISA) showed an apparent decline in reading performance. For example, the percentage of students who achieved the minimum proficiency level in reading in Uruguay falls from 89% in grade 6 (TERCE) to 61% among 15-year-olds (PISA). But

FIGURE 9.1:

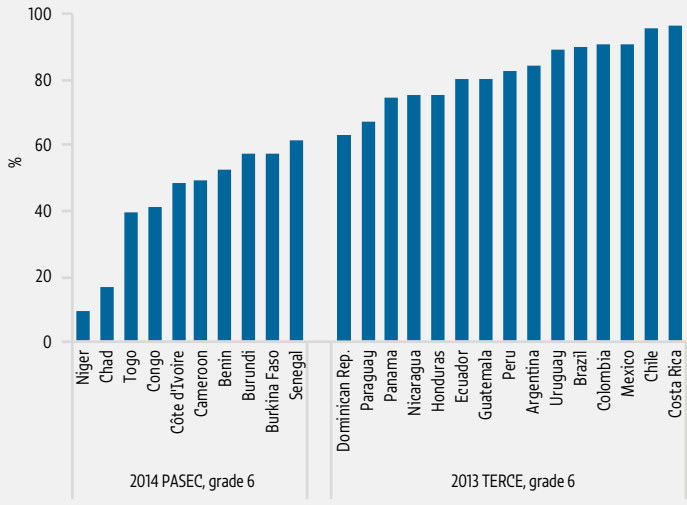
Many students do not achieve basic learning outcomes

Percentage of students meeting minimum proficiency level, selected countries, 2013-2015

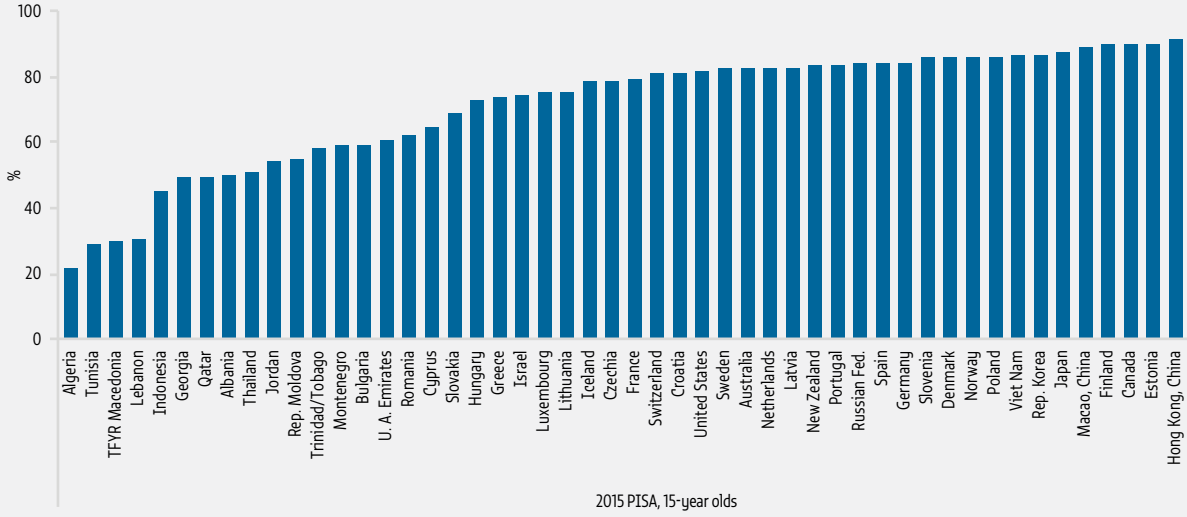


Source: UIS database.

B1. Achieved min proficiency in reading, primary



B2. Achieved min proficiency in reading, lower secondary



this suggests that the bar was set at different level in the two surveys.

Second, these estimates measure achievement among those who took the assessment. However, many students do not reach the end of primary or lower secondary school. Assuming, at the extreme, that no dropouts would meet the minimum level, estimates for overall school-age population would have to be adjusted downwards, giving a more accurate picture of countries' education systems. For example, in Burkina Faso, 57% of grade 6 students reached the minimum reading level, but the figure would be 17% for the total cohort who should have graduated from primary school. In Egypt, 47% of grade 8 students reached the minimum mathematics level, but only 38% did among the total cohort who should have graduated from lower secondary school.

The world is still a long way from ensuring that all children, adolescents and youth are enrolled in school in the first place. In 2015, there were 264 million primary and secondary age children and youth out of school (**Table 9.2**). Some 61 million children of primary school age (about 6 to 11 years; 9% of the age group), 62 million adolescents of lower secondary school age (about 12 to 14 years; 16% of the age group), and 141 million youth of upper secondary school age (about 15 to 17 years; 37% of the age group) are out of school. After a decline in the early 2000s, out-of-school rates have stagnated – since 2008 for primary education, 2012 for lower secondary and 2013 for upper secondary.

> "In 2015, there were 264 million primary and secondary age children and youth out of school"

Regionally, out-of-school rates are highest in sub-Saharan Africa: 21% of primary school age children, 36% of lower secondary school age adolescents and 57% of upper secondary school age youth are not enrolled. Southern Asia and Northern Africa and Western Asia follow, with 49% and 33% of upper secondary school age youth out of school.

Not all out-of-school children are permanently excluded from education. Some children enrol late in primary school. In 36 out of 117 countries with data, at least 1 in 5 students were two or more years older than appropriate for their grade. More than 50% of students were over-age in Burkina Faso, Burundi, the Solomon Islands and South Sudan.

TABLE 9.2:
Selected indicators related to participation and completion, 2015 or most recent year

	Out of school, 2015 (%)			Out of school, 2015 (million)			Gross intake ratio to last grade, 2015 (%)		Completion rate, 2010–2015 (%)		
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Primary	Lower secondary	Upper secondary
World	**9**	**16**	**37**	**61**	**62**	**141**	**90**	**77**	**83**	**69**	**45**
Caucasus and Central Asia	3	6	19	0.2	0.4	0.6	104	96	...	...	...
Eastern and South-eastern Asia	4	10	22	7	8	18	96	93	95	79	57
Europe and Northern America	3	2	8	2	1	3	98	92	...	98	87
Latin America and the Caribbean	5	8	24	3	3	7	100	77	90	79	59
Northern Africa and Western Asia	11	15	33	5	4	9	88	73	80	60	33
Pacific	7	2	34	0.3	0.0	0.5	...	...	...	99	85
Southern Asia	6	19	49	11	20	68	93	79	83	69	31
Sub-Saharan Africa	21	36	57	33	26	34	70	43	59	38	25
Low income	19	38	62	20	19	25	66	37	50	27	13
Lower middle income	10	19	47	31	34	91	92	76	83	68	37
Upper middle income	4	8	22	8	8	22	95	88	95	82	60
High income	3	1	7	2	0.6	3	99	93	...	96	84

Sources: UIS database for out-of-school indicators and gross intake ratio at the last grade based on administrative data; GEM Report team calculations for completion rates based on household survey data.

However, there remains 17 million children (i.e. 3% of the global population of primary school age children) who will probably never enrol if current trends continue.

Gender disparities in out-of-school rates have narrowed substantially over the last 15 years. Globally, only primary education shows a gap: 9.7% of girls and 8.1% of boys are out of school, or 5 million more girls than boys. Gender disparities do emerge at the country and regional levels. For example, in Northern Africa and Western Asia, 12% of boys and 18% of girls were out of lower secondary school. In Eastern and South-eastern Asia, 25% of young men and 19% of young women were out of upper secondary school.

Enrolment does not guarantee completion. Two measures of successful attainment of primary, lower secondary and upper secondary education are available. Based on administrative data, the gross intake ratio to the last grade suggests that 90% of children reached the end of primary education and 77% reached the end of lower secondary education in 2015. By contrast, based on household survey data in 2010–2015, completion rates were 83% for primary, 69% for lower secondary and 45% for upper secondary education (**Data focus 9.3**). The household survey-based completion rate estimate is lower because the data collection lags in time behind the school census-based intake ratio estimate. It may also reflect differences in the underlying population estimate. In any case, a household survey-based estimate is necessary to estimate disparities by population groups (see **Chapter 13**).

Enforcing free and compulsory education is one of the factors that can prevent school dropout. Many countries have enacted relevant laws, but there is still some way to go before all countries achieve the commitment in the *Education 2030 Framework for Action* to 'ensure the provision of 12 years of free, publicly funded, equitable quality primary and secondary education, of which at least nine years are compulsory' (UNESCO, 2015a). While 70% of countries have at least 9 years of compulsory education, in sub-Saharan Africa, only 40% of countries do, and only one country (Kenya) guarantees 12 years.

> "Globally, less than 20% of countries guarantee both free and compulsory education for at least 12 years in legal frameworks"

Globally, less than 20% of countries guarantee both free and compulsory education for at least 12 years in legal frameworks. It is most common in Latin America and the Caribbean (47% of countries) and in Caucasus and Central Asia (38% of countries). No low income country makes that provision (**Table 9.3**).

TABLE 9.3:
Percentage of countries that guarantee free and compulsory education in legal frameworks, by number of years, 2015 or most recent year

	Free		Compulsory		Free and compulsory	
	At least 9 years	At least 12 years	At least 9 years	At least 12 years	At least 9 years	At least 12 years
World	**71**	**41**	**70**	**18**	**64**	**16**
Caucasus and Central Asia	100	50	100	38	100	38
Eastern and South-eastern Asia	72	28	72	6	61	6
Europe and Northern America	87	51	91	11	82	9
Latin America and the Caribbean	88	55	83	45	83	45
Northern Africa and Western Asia	90	55	80	15	75	10
Pacific	50	44	59	24	50	19
Southern Asia	56	44	33	11	33	11
Sub-Saharan Africa	38	16	40	2	33	2
Low income	30	10	34	0	27	0
Lower middle income	65	27	63	16	57	14
Upper middle income	79	49	73	25	72	25
High income	88	60	90	21	82	19

Source: UIS database.

DATA FOCUS 9.1: EDGING TOWARDS INDICATORS OF RELEVANT AND EFFECTIVE LEARNING OUTCOMES IN BASIC EDUCATION

Global indicator 4.1.1 of the SDG 4 monitoring framework on relevant and effective learning outcomes is pivotal for the new international education agenda. Its importance explains, to a large extent, why the Inter-agency and Expert Group on SDG Indicators leniently classifies two of its three components (end of primary and end of lower secondary education) as tier II, meaning each 'is conceptually clear, has an internationally established methodology and standards are available', despite none of these conditions strictly being met.

The UIS, as custodian agency for the SDG 4 indicators, established the Global Alliance to Monitor Learning (GAML), whose first objective is to develop the methodological tools and standards that ensure global comparability among indicators related to learning outcomes. A special task force focuses on indicator

4.1.1. Within this overall framework, the UIS has pursued two distinct approaches to achieve comparability.

First, an aspirational, bottom-up approach aims to produce a new framework to facilitate use of information from any learning assessment. With the support of external partners, the UIS is in the process of producing the essential building blocks. These include mapping assessment frameworks, which describe what areas of reading and mathematics countries test; developing a global content framework that summarizes assessment areas countries have in common; verifying the alignment of assessment frameworks with the content framework; developing a theory of how these areas are linked in increasing steps to improved learning; and developing a scale to report this progression. Results from any national or cross-national assessment that meets implementation quality criteria, also defined by UIS, can be mapped on this scale. The final step is specifying a cutoff point on the scale, representing the minimum level of proficiency to report on the global indicator (**Table 9.4**).

Second, a practical, top-down approach recognizes that much of this work has already been carried out for cross-national assessments. Whether they rely on national assessment frameworks or not, regional and international assessments have developed and validated their assessment framework, implementation standards, reporting scales and proficiency levels. The UIS is exploring whether cross-national assessments are willing to share test items to align their reporting scales, which could allow the bypassing of several stages in developing the global indicator.

This approach is an obvious shortcut, even if relatively few countries currently participate in cross-national assessments. However, the approach relies on potentially unrealistic assumptions about agencies' willingness to take part. They may argue their regulations prevent sharing methodologies by way of maintaining the assessment's credibility. Moreover, assessments arguably have powerful brand names that lend agencies and their partners a strong market position they would be reluctant to give up through cooperation.

TABLE 9.4:
Building blocks for global reporting of basic education learning outcome indicators

	Building blocks for national and cross-national assessments	Building blocks for global reporting
Relevance		
What is being assessed? (definition of domains)	• **Curriculum** defines subject areas (recognizing differences between intended/actual curriculum) • **Assessment framework** defines what is tested • **Standards** specify what students should know • **Test blueprint/table of specifications** describes the proportion of test items that address various parts of the curriculum, especially the dimensions of content (e.g. algebra, geometry and statistics in mathematics) and processes/skills (e.g. knowing, applying and reasoning) In federal countries, there may also be an evaluation of curriculum alignment among states of the federation. In cross-national assessments, the assessment framework may or may not be linked to national curricula.	Has a learning assessment taken place? ▶ *Catalogue of learning assessments* Does it have an assessment framework? ▶ *Map of assessment frameworks* What is the least common denominator of different assessments? ▶ *Global content framework* How do different assessment frameworks map against the global content framework? ▶ *Alignment of content*
Relevance		
How is it being assessed? (task characteristics)	A description of other dimensions of test items, such as: • *context* (e.g. the situation in which test item is placed) • *form* (e.g. how the test item is presented), which affects the reliability and validity of the assessment and provides a basis for interpreting results In cross-national assessments, analysis of translation or cultural relevance would be required.	Are assessments technically robust enough to be considered suitable for reporting? ▶ *Data and process quality control*
Who is being assessed and how?	A description of technical implementation standards, such as: • sample size, response rates, coverage • test administration, security and data entry	
Interpretation		
What do results mean? (scaling and reporting)	A numeric scale of achievement informed by (a) how test items are ordered by difficulty and (b) a theory of how learning is supposed to progress Descriptors of each performance level Benchmark levels learners should achieve	How does learning improve? ▶ *Learning progression* What score is attached to each learning level? ▶ *Reporting scale* What level should learners achieve on that scale? ▶ *Minimum proficiency level*

Note: Existing and planned outputs of UIS and GAML are marked in italics on the last column.
Sources: GEM Report team, drawing on Anderson and Morgan (2008); CMEC (2013); Kirsch (2001).

Even were these obstacles overcome, the number of items needed to make robust links between assessments might be too high to make the option realistic. As a result, other alternatives will be needed the next few years. One possibility is an interim reporting arrangement, whereby UIS reports data as provided by countries, as long as their assessments follow some quality criteria. While the results may not be comparable, getting countries to improve their assessment systems so as to be in a position to report would undoubtedly be a positive step.

A second possibility is to build on the approach of the *2012 and 2013/4 Education for All Global Monitoring Report* and anchor results of different assessments. In September 2017, the UIS released an updated estimate, which adding results from more assessments and revised that methodology in two respects: the method of estimation of the number of children not reaching the grade of the assessment; and the method of anchoring results from different assessments. According to this estimate, 387 million or 56% of children of primary school age did not reach the minimum proficiency level in reading. This was the case with 81% of children in Central and Southern Asia and 87% of children in Sub-Saharan Africa but only 7% of children in Europe and Northern America. In addition, 230 million or 61% of adolescents of lower secondary school age did not reach the minimum proficiency level in reading (UIS, 2017d).

DATA FOCUS 9.2: ROBUST NATIONAL ASSESSMENTS IN THE E-9 COUNTRIES ARE KEY TO THE GLOBAL MONITORING OF LEARNING OUTCOMES

The E-9 group of countries, formed as part of the Education for All architecture in 1993, has been given a new lease of life in 2017. The forum of nine low and middle income countries committed to achieving SDG 4 accounts for more than half the world's population. Yet, Bangladesh, China, India, Nigeria and Pakistan do not report on global indicator 4.1.1 at any education level yet (early primary, end of primary or end of lower secondary). Egypt contributes data on the global indicator at one level, Indonesia at two levels, while Brazil and Mexico are the only countries that contribute data at all three levels. It is critical for monitoring that they either participate in a cross-national survey or that results from their national assessments are anchored into the new reporting scale and used for reporting. Seven of nine countries have a national assessment survey programme (**Table 9.5**).

> "Five of the E-9 countries do not report on global indicator 4.1.1 at any education level yet"

Egypt and Indonesia are unusual in having participated in international learning assessments without having fully developed a national assessment. Egypt, under the supervision of its National Centre for Examinations and Educational Evaluation, conducts assessments in each governorate in grades 4 and 8. However, since test items are developed locally by each administration, results cannot provide an accurate picture of national student performance (OECD, 2015b). The Indonesian National Assessment Programme (INAP) exists for a number of years but is still in process of development (OECD and ADB, 2015).

Of the countries that do not currently report on global indicator 4.1.1, Bangladesh has national learning assessments in primary and lower secondary education. Since 2006, there have been six rounds of the National Student Assessment in grades 3 and 5 in Bangla and mathematics, although only the three rounds since 2011 are considered comparable over time (Bangladesh DPE, 2016b). The Learning Assessment of Secondary Institutions was administered in grades 6 and 8 in Bangla, English and mathematics in 2015. It was the first time the survey drew a nationally representative sample from all types of schools, following two rounds that had focused only on schools supported by an external assistance project (Bangladesh DSHE, 2016).

China is well known for the outstanding performance of some of its wealthiest regions, such as Shanghai, in the PISA survey. In addition, a consortium of Chinese universities and research institutes, with the support of overseas universities and a private company, is responsible for developing and administering the National Assessment of Education Quality (NAEQ). Eight years after the first regional trial test, and following the training of more than 90,000 educational personnel, the survey rolled out nationally in 2015, with results expected to be released in 2017. It samples about 6,500 schools and almost 200,000 students, assessing, among other domains, arts, moral education and physical education (Wu, 2017).

Since 2001, the National Council of Educational Research and Training (NCERT) in India has administered the National Achievement Survey, in grades 3, 5, 8 and 10 (India NCERT, 2016). Non-government organizations,

TABLE 9.5:
National and cross-national learning assessments in primary and secondary education, E-9 countries, 2017

Country	Name of assessment	Organization responsible	Target population	Subject assessed	Year(s)	Coverage
Bangladesh	National Student Assessment	Directorate of Primary Education	Grades 3 and 5	Language, mathematics	2006, 2008, 2011, 2013, 2015, 2017	National/sample
	Learning Assessment in Secondary Institutions	Directorate of Secondary and Higher Education	Grades 6 and 8	Language, English, mathematics	2015	National/sample
Brazil	Avaliação Nacional do Rendimento Escolar (Prova Brasil)	National Institute for Educational Studies and Research	Grades 4/5, 8/9	Language, mathematics, science	Biannually, 2005–2013	National/census
	Provinha Brasil	National Institute for Educational Studies and Research	Grade 2	Reading, mathematics	2012, 2014	National/census
	LLECE/TERCE		Grades 3 and 6	Reading, writing mathematics, science	2013	National/ sample
	PISA		15-year-olds	Language, mathematics, science	Every three years since 2000	National/sample
China	National Basic Education Quality Assessment	National Assessment Centre of Education Quality, Ministry of Education	Grades 4 and 8	Mathematics, physical education (2015); language, arts (2016); sciences, moral education (2017)	2007–2013 (pre-test), 2015–	National/sample
	PISA		15-year-olds	Language, mathematics, science	2009, 2012, 2015	Selective (Beijing, Guangdong, Jiangsu, Shanghai)/sample
Egypt	No national assessment					
	TIMSS		Grade 8	Mathematics, science	2003, 2007, 2015	National/sample
India	National Achievement Survey	National Council of Educational Research and Training	Grade 3 Grade 5 Grade 8 Grade 10	Language, mathematics + environmental science + science, social science + science, social science, English	2004, 2007, 2013 2002, 2006, 2011, 2015 2003, 2008, 2012 2015	Selective (government funded schools)/sample
Indonesia	Indonesian National Assessment Programme / Indonesia Student Competency Assessment	Assessment Centre	Grade 4	Language, mathematics, science	2007-	National/sample
	PIRLS		Grade 4	Reading	2006, 2011	National/sample
	TIMSS		Grades 4 and 8	Mathematics, science	2015 (Grade 4) 1999, 2003, 2007, 2011 (Grade 8)	National/sample
	PISA		15-year-olds	Language, mathematics, science	Every three years since 2000	National/sample
Mexico	Examen de la Calidad y el Logro Educativo (EXCALE)	National Institute of Education Evaluation	Grades 3, 6 and 9 (variable)	Language, mathematics, science, social studies	Annually, 2004–	National/sample
	Evaluacion Nacional del Logro Académico en Centros Escolares (ENLACE Básica)	Ministry of Public Education	Grades 3 to 9	Language, mathematics, science, civic education and ethics, history, geography (not in all years)	Annually, 2006–	National/census
	Evaluacion Nacional del Logro Académico en Centros Escolares (ENLACE Media Superior)	Ministry of Public Education	Grade 12	Reading, mathematics, science	Annually, 2006–	National/census
	LLECE/TERCE		Grades 3 and 6	Reading, writing mathematics, science	2013	National/sample
	PISA		15-year-olds	Language, mathematics, science	Every three years since 2000	National/sample
Nigeria	National Assessment of Learning Achievement in Basic Education	Universal Basic Education Commission	Grades 4 to 6	English, mathematics, sciences, social studies, life skills	2001, 2003, 2006, 2011, 2016	National/sample
Pakistan	National Education Assessment System / National Achievement Test	Ministry of Education	Grades 4 and 8	Language/mathematics and science/English (in alternate years)	2004–2008 (pilot) Annual, 2013–	National/sample

Note: Grey rows represent cross-national assessments. White rows represent national assessments.
Sources: ACER (2016); OECD (2015b); OECD and ADB (2015); UNESCO (2015b).

which run nationwide citizen-led assessments, had raised questions about its quality (ASER, 2013). In response, NCERT has cooperated closely with external partners to improve the validity and scope of the assessment (ACER, 2014). In 2017, the government announced plans to expand the scope of the survey to an annual sample of 50 schools from each district, which will translate to an increase from at most 200,000 to 3 million the number of tested students. Their results will be linked to their national identification number (Makkar, 2017).

The government also communicated its intention to participate in PISA in 2021 (Chopra, 2017).

Nigeria administered its fifth and most recent National Assessment of Learning Achievement in Basic Education in 2016. However, an analysis of the survey report from the fourth round raises questions as to whether the survey meets minimum quality standards, as well as whether results can be used to feed into improvements to the system and to teaching and learning (UBEC, 2013).

Pakistan's federal National Education Assessment System (NEAS) and provincial/area assessment centres (PEACs) were established in 2003. For the sixth round of the National Achievement Test in 2016, NEAS and PEAC experts developed a sample design covering non-profit and private sector schools, as well as background questionnaires for teachers, head teachers, students and parents. At the national level, 3,000 test administrators were trained and deployed to 1,500 schools. Pakistan is scheduled to participate in the 2019 TIMSS (UNESCO, 2017a).

To increase validity, some evaluation agencies enjoy a degree of independence from education ministries. In Brazil, the National Institute of Educational Studies and Research is recognized for its considerable discretional power (Ferrer and Fiszbein, 2015). It is responsible for the Prova and Provinha Brasil assessments, which are administered to almost all public schools and play an important role in the management of the education system. In Mexico, the National Institute of Education Evaluation, created as a public body in 2002 and established as an autonomous body in 2012, administers the Examination of Quality and Educational Achievement.

Since many E-9 countries do not participate in international assessments, a potential route for reporting is through the development of their national assessments. Countries should be prepared to report not simply an average test score for their national assessment but precisely the percentage of those who achieve a minimum level of proficiency. They would also need to have quality assurance processes to ensure that they provide relevant information for the global indicator. One approach is for countries to carry out such a process directly. As part of developing the China NAEQ, experts have tried to link it to the PISA (Xin, 2017). In addition, E-9 members could play a pivotal role in the development of both the global indicator and the quality assurance guidelines for national assessments.

DATA FOCUS 9.3: COUNTRIES DIFFER IN THE WAY WITH WHICH THEY HAVE EXPANDED THEIR EDUCATION SYSTEMS

The first step to achieving target 4.1 is universal completion of primary and secondary education. While administrative data can estimate a proxy measure of completion, the gross intake rate to the last grade of primary and lower secondary education, no such measure is currently available for upper secondary education. The main challenge is the variety of upper secondary education programmes, not all of which are easily captured through the school census.

> "Household survey data can help estimate completion rates of upper secondary education"

Household survey data can bypass this problem by asking respondents to provide direct information on whether they have completed secondary education. This does not resolve the uncertainty over the type of secondary education they have completed – or indeed even whether they acquired a secondary education certificate. Many household survey questionnaires, and especially the main cross-national survey programmes of DHS and MICS, only include one type of secondary school. Nevertheless, they provide an altogether very rich picture of the distance that the world needs to cover to achieve the first part of target 4.1.

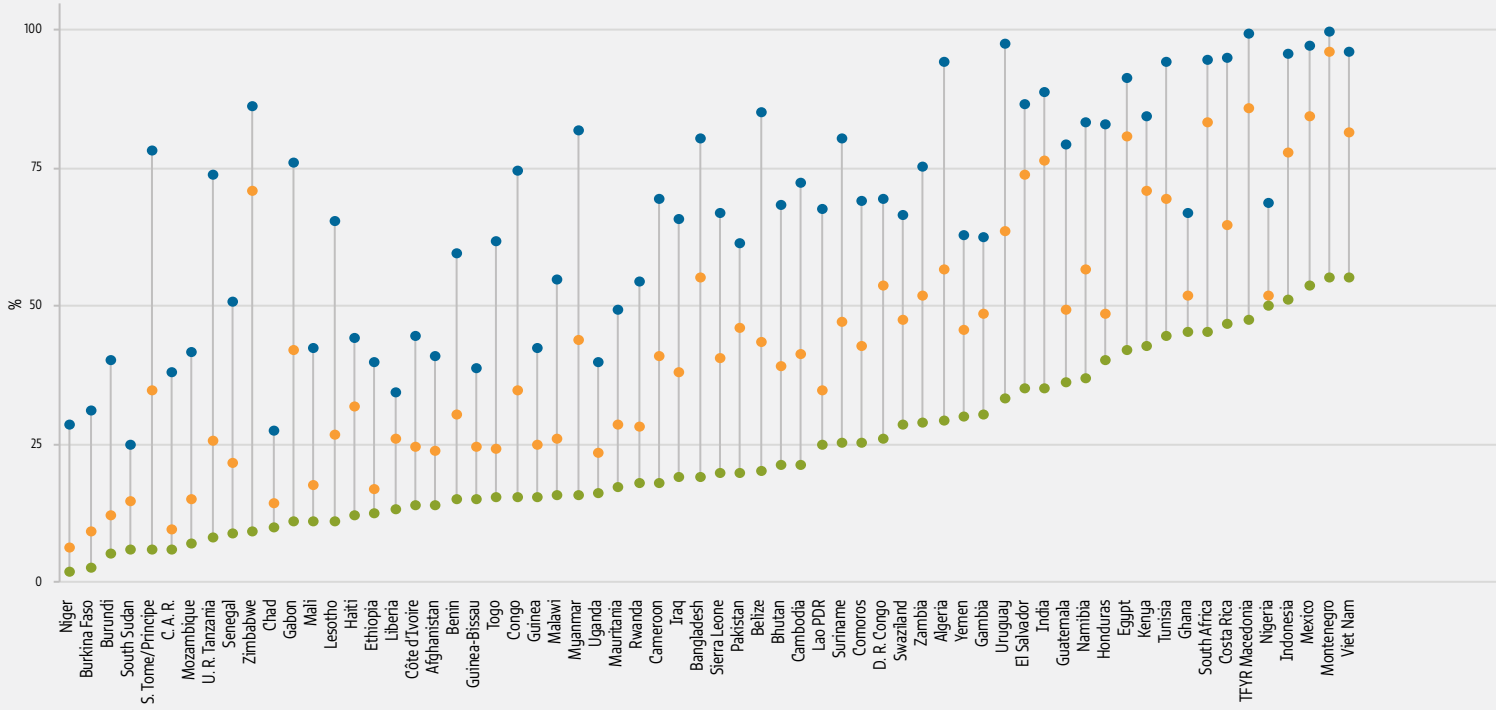
Based on data from 128 countries over the period 2010-2015, which represent 90% of the global population of upper secondary school age, less than one in four young people had completed upper secondary school in 40 countries and less than one in two in 60 countries. There were only 14 countries with a completion rate of at least 90% (**Figure 9.2**).

What stands out are the large differences in the way countries have expanded access to education. Overall, the average difference between primary and lower secondary completion rates is 19 percentage points. But it exceeded 35 percentage points in eight countries, including Algeria, Congo and Belize where in 2011 the primary completion rate was 85% compared to a lower secondary completion rate of just 43%.

The average difference between lower and upper secondary completion rates is 17 percentage points. But it exceeded 35 percentage points in eight countries, including El Salvador, India, and South Africa, where in 2013 the lower secondary completion rate was 83% compared to an upper secondary completion rate of just 45%.

Finally, the average gap between primary and upper secondary completion rates is 37 percentage points but it exceeded 60 percentage points in nine countries. For example, in Bangladesh the primary completion rate is 80% while the upper secondary completion rate was 19% in 2014. It was 81% and 15%, respectively in Myanmar in 2015. And it was highest in Zimbabwe where the primary

FIGURE 9.2:
In almost half of countries, less than one in two youths completes secondary school
Completion rate, by level of education, selected countries, 2010–2015



Source: GEM Report team analysis using household surveys.

completion rate was 86% compared with an upper secondary completion rate of 9%.

POLICY FOCUS 9.1: THE PROMISE AND PERILS OF LEARNING DATA ON SCHOOLS AND STUDENTS

Target 4.1 calls on countries to 'ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes'. The 2016 *Global Education Monitoring Report* made use of a broad framework of education quality, which covered four sets of factors at the level of learner, system, school/classroom and outcomes, respectively (**Table 9.6**). For example, good quality at the system level requires governments to establish standards for schools and a monitoring mechanism to assure these standards are respected.

Governments routinely collect information on different aspects of school and classroom quality, for example on infrastructure conditions or teacher characteristics. However, there is increasing interest in using test and examination data to monitor schools and assess student learning outcomes. Such quantitative data can be compared among schools, districts, regions and, in some cases, over time.

Fine-grained learning information should enable education leaders at the national, sub-national and school levels to take decisions that improve the quality of service delivery. However, collecting, reporting, analysing, interpreting and using such information becomes increasingly complex and resource-intensive if precise conclusions are to be drawn about whether schools and students are making progress.

Effective, evidence-based decision-making not only depends on the supply of such data but also on education administrators being data literate and capable of understanding and processing the information they receive. They also need to be able to make decisions that respond to the diverse needs of each school and to be free

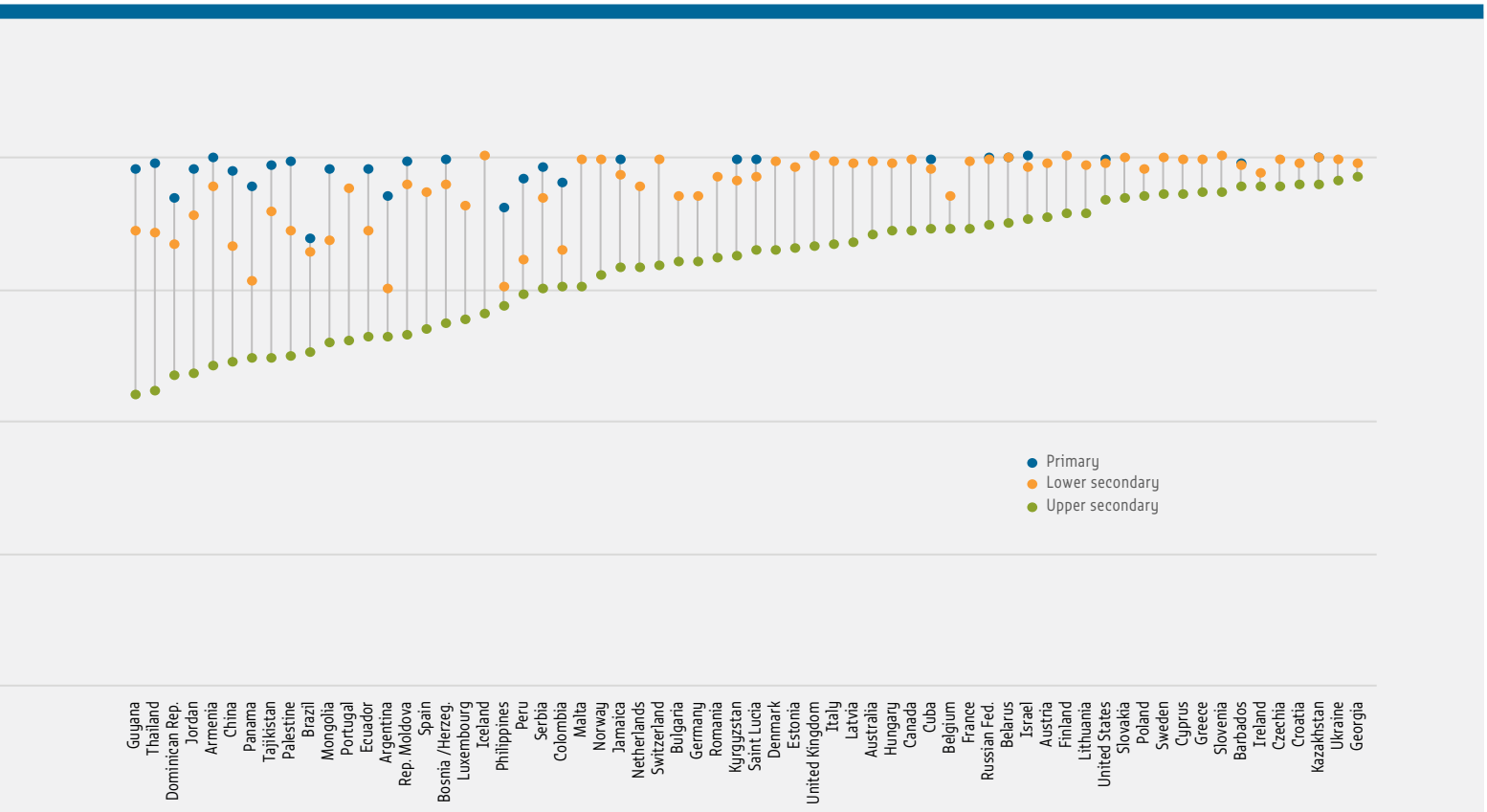


TABLE 9.6:
A framework for education quality

LEARNERS
e.g. health and nutrition, parental engagement, stimulating home environments, emotionally supportive relationships, abilities, traits, barriers to learning, poverty, and language at home.

SYSTEMS
e.g. finance, planning and monitoring, curriculum and language, standards and accountability, recruitment and incentives, professional development, links with other sectors, links across tiers of government, and inclusive policy development

SCHOOL AND CLASSROOM SETTINGS

Teachers and teaching process
e.g. motivated, well-prepared, attention to diversity, interactions, language, pedagogy, time on task, assessment for learning, and various teaching strategies.

School leadership and governance
e.g. setting expectations, focusing on learning, and fostering collaboration.

Structures and material inputs
e.g. teaching and learning materials, technology, facilities, and water and hygiene.

OUTCOMES

For learners

In pre-primary education
e.g. school readiness, executive function, social-emotional and motor development, and pre-academic skills.

In primary, secondary and tertiary education
e.g. learning achievement, critical thinking skills, collaborative skills, values and attitudes (including a better understanding of the world).

For society
e.g. behaviours linked with sustainable economic, social and environmental development; culture of peace and non-violence; global citizenship; and cultural diversity.

CONTEXT
Economic, political and social conditions

Source: UNESCO (2016c).

> Effective, evidence-based decision-making not only depends on the supply of data but also on education administrators being data literate and able to make decisions

from entrenched political interests that undermine understanding gleaned from evidence (Kingdon et al., 2014).

This section focuses on the interplay of these factors in the provision, analysis and use of learning outcomes data at the school and student levels. The growing sophistication and increasing availability of information on student achievement and of school performance data lend themselves to novel analyses of learning disparities in some domains. However, critical questions remain about whether such data can accurately inform targeted interventions at the school level. Small differences between schools or from year to year can easily lead to misleading conclusions on whether schools are improving or not. If expectations about what conclusions can be reached even from the most advanced systems need to be tempered, then far more caution is needed when arguing for rolling out such systems in countries with much lower capacity.

INFORMATION ON INSTITUTION AND INDIVIDUAL LEARNING OUTCOMES HAS MULTIPLE USES

Teachers routinely collect information on student learning through classroom assessment. This may be formative and ongoing, to help teachers monitor and provide students with feedback on day-to-day, incremental learning tasks. It could also be summative and administered at particular time points to evaluate change in student performance. While the boundaries between the two types can be blurred, formative assessment of learning almost always involves teacher judgement, while summative tends to be organized externally, ranging from sample-based learning assessments to high-stakes, end-of-cycle or university entrance examinations.

The results of summative assessments have multiple purposes. At the individual level, they are used to make student admission or progression decisions and award certificates or qualifications. In some cases, they help identify underachieving students in need of supplemental support. In Spain, the 2013 Organic Act on the Improvement of the Quality of Education introduced individualized assessments at grades 3, 6, 10 and 12. In grades 3 and 6, the purpose is diagnostic and formative, helping detect learning difficulties to develop support measures for students and improvement plans for schools (European Commission/EACEA/Eurydice, 2015).

At the institution level, summative assessments can be used to compare schools and identify areas for improvement. The information is sometimes used as direct input into accountability mechanisms (see Chapter 3). More commonly, it is used as indirect input into external evaluations, giving inspectors an initial understanding of the school context before visiting to advise on improvement. The extent to which such data influences the final evaluation recommendations varies among countries. In Ireland, test results are examined as part of a body of evidence prior to inspections but are not included in external evaluation reports. In Lithuania, the results of standardized tests administered by the National Examination Centre are taken into account in the external evaluation (European Commission/EACEA/Eurydice, 2015).

At the system level, summative assessments that allow comparison of learning outcomes among schools and over time are used to monitor whether expected standards are met and how local education authorities are performing (Harlen, 2007). In Brazil, Prova Brasil has been administered at the end of grades 4 and 8 in all but the very smallest public schools since 2005. Results are used to monitor system performance and to estimate the Index of Basic Education Development, which allows planners to set improvement targets. They are also reported to schools but not to students. The Ministry of Education and the National Institute of Education Studies and Research do not assign student identification numbers; therefore, performance of individual student cannot be tracked and assessed over time (Paget et al., 2016).

By contrast, all students in the Philippines have unique identification numbers that allow authorities to track their progress through a Learner Information System.

> All students in the Philippines have unique identification numbers that allow authorities to track their progress

The National Achievement Test (NAT) is administered in public schools at grade 3 (in English, Tagalog, mathematics and science) and to all public and private schools at grades 6, 10 and 12 (where a fifth subject is assessed). NAT results are later integrated with school, infrastructure

and personnel information, but use of such integrated databases is limited by the length of time needed to compile the data, the difficulties in providing meaningful disaggregated information and the lack of validity of year-to-year comparisons. Moreover, only 30% of schools in the country had access to the internet in 2012 (Read and Atinc, 2017).

SYSTEMATIC COLLECTION OF INFORMATION ON INDIVIDUAL LEARNING OUTCOMES HAS BECOME MORE COMMON

The extent to which countries use individual learning data to track progress over time at the system level against defined standards varies. For example, some systems focus on national examinations, which determine progression between levels in a given year but are not valid for comparisons of learning over time.

Japan has historically prioritized university entrance examinations. The country only introduced a national large-scale assessment in 2007, which was administered to all students in grades 6 and 9 in 2007–2009 and after 2013. However, this does not allow monitoring of progress over time. The items used are too few relative to similar national or international assessments and they are released into the public domain after their administration (Kuramoto and Koizumi, 2016).

In Bangladesh, the government introduced a grade 5 Primary Education Completion Examination covering all six subjects in 2009. The main purpose is to award a certificate to progress to lower secondary education. In theory, it also serves education planning, as the pass rate is one of the indicators that feeds into an education performance profile and a composite performance indicator at the upazila (i.e. sub-district) level. Both are shared with the relevant local authorities (Bangladesh DPE, 2016a). However, there are no incentives to allocate resources in response to sub-districts lagging behind. In addition, the examination is not competence-based: while there is a modest positive correlation between student scores and competences, it is not systematic, and weaknesses in the examination's administration mean that it cannot serve to benchmark the achievement of standards (Campaign for Popular Education, 2015).

Other systems define standards about what students are expected to have learned and organize their assessments to report against them. In Uruguay, working groups formed by the National Public Education Administration developed expected learning outcomes ('perfiles de egreso') for grades 3 and 6 in four subjects (language, mathematics, natural sciences and social sciences) in 2015, which are the basis for assessments (Uruguay ANEP, 2016). England has an elaborate if complex and continuously changing assessment framework for multiple uses that tracks individual students and is available to a range of education system stakeholders (**Box 9.1**).

Countries also vary in the breadth of the assessed learning outcomes, with some focusing exclusively on language and mathematics and others assessing a broader range. For example, among countries that had carried out a national assessment in 2007–2013, 53% assessed science, and 34% assessed social sciences (UNESCO, 2016b). In Uruguay, the National Institute for Educational Evaluation began developing a national system to monitor student achievement in grades 3 to 9 focused on assessing not only cognitive skills related to reading comprehension and problem solving but also socio-emotional skills and citizenship knowledge (Santiago et al., 2016).

> "Uruguay monitors student achievement in cognitive skills as well as socio-emotional skills and citizenship knowledge"

Countries also vary in the kind of school and student background information they collect to facilitate comparisons that take context into account. The Australian Curriculum, Assessment and Reporting Authority, established in 2008, sets a national curriculum, coordinates the National Assessment Program, Literacy and Numeracy (NAPLAN) in years 3, 5, 7 and 9, and reports school-level results and context information, including finance, demographic structure and socio-educational advantage, through the My School website. Apart from the national average for individual literacy and numeracy domains (e.g. spelling) for a particular year, average outcomes are also made available for each school in relation to other comparable schools based on an index of community socio-educational advantage. This captures the educational levels and occupations of students' parents, the percentage of students at the school identifying themselves as indigenous, and the geographical remoteness of the school (Pugh and Foster, 2014).

Other countries collect further background data. For example, the Agency for Education and Quality in Denmark introduced a measure of student well-being

BOX 9.1

Exhaustive or exhausting? Learning outcome data on schools and students in England

One of the most comprehensive sets of information on learning outcomes linked to rich individual background data has been assembled over two decades in England. It comprises national standards, an elaborate student assessment mechanism and an external evaluation system.

There are three main institutions. The Standards and Testing Agency is responsible for developing and delivering all statutory assessments up to age 11. The Office of Qualifications and Examinations Regulation (Ofqual) aims to ensure examinations and qualifications created by independent examination boards are valid, fit-for-purpose, fair and manageable; results are used appropriately; and standards are properly set and maintained. The Office for Standards in Education, Children's Services and Skills (Ofsted) is responsible for inspection and regulation of education, including at the primary and secondary levels.

There are four 'key stages' in the English education system and statutory national assessments targeting the end of each stage (**Table 9.7**). The current format of the assessments dates from school year 2015/16, following various reviews, including an independent review of Key Stage 2 (ages 10/11) assessment (2011), an in-depth consultation on primary assessment reform (2014), and a review of reporting performance levels. A further parliamentary inquiry of primary assessment was launched in July 2016, which suggests that the system is still in flux.

Test outcomes are reported as scaled scores relative to the expected standard and entered into the National Pupil Database. The government has since developed increasingly elaborate ways of packaging this data with information from the school census to make them available to schools, governing bodies, parents, inspectors and local education authorities.

The main aggregation and analysis tool has been the web-based Reporting and Analysis for Improvement through School Self-Evaluation (RAISEonline), which the Department for Education and Ofsted maintained with the support of a private company between 2006 and 2017 (to be replaced by the Analyse School Performance platform). It provided schools and inspectors with comprehensive information at cohort, group and student levels, including attainment at the end of key stages, progress between key stages 1 and 2, and school context information to allow comparisons with other schools and national trends. It flagged statistically significant differences that merited attention. The background information included the proportion of students eligible for free school meals, as well as measures of disadvantage related to ethnicity, language and special education needs. The information was available to inspectors prior to an inspection and to school governors but was not in the public domain.

By contrast, the Department for Education 'Compare school and college performance' website, more commonly known as school performance or school league tables, has been in the public domain since 2013. This not only provides access to more than 500 background and performance variables for each primary and secondary school but also facilitates comparisons between schools. School governing boards use the data routinely, although there are criticisms that they are presented in a way that does not recognize year-to-year statistical fluctuations and therefore can lead to misleading conclusions.

In addition, non-government services for school performance comparisons are available. For example, the Education Endowment Fund (EEF), a government co-funded charity, has developed the Families of Schools Database, which allows schools to compare their performance to other schools with similar characteristics. In 2004, the Department for Education contracted the non-profit Fischer Family Trust (FFT) to process the National Pupil Database and offer an analysis service ('Aspire') to schools and local education authorities. FFT has developed value-added models and runs a research centre, Education Datalab, which has an active presence in the public debate on assessment. Last, for-profit companies also sell commercial packages to schools.

The data serve multiple purposes. They prepare inspectors prior to school visits and between inspections, inform parents, help school leaders set targets and identify students in need of additional support, and support local and national authorities in monitoring performance for accountability purposes. However, these purposes are primarily managerial rather than formative. Moreover, with the wide variety of complex data made available through diverse sources, which may contradict each other, questions arise about the capacity of decision-makers, especially at the school level, to manage the amount of information. School leaders are concerned that these data do not just support but drive school evaluation results, reducing the influence of other important sources of information.

While continuing changes have been a burden for schools and teachers, the quest for more precision means further refinements are expected. For example, new measures were introduced at Key Stage 4 in 2017 aimed at recognizing progress made by all students and encouraging secondary schools to offer broad and balanced curricula. Measures include a value-added score, which evaluates average student progress in eight subjects ('Progress 8') and the percentage of students achieving good grades in a range of academic subjects (including history or geography, computer science and a foreign language).

Sources: Cunningham and Raymont (2008); EEF (2017); European Commission/EACEA/Eurydice (2017); FFT (2017); UK Department for Education (2015, 2016); UK House of Commons Education Committee (2013, 2017); Wood (2013).

TABLE 9.7:
National curriculum tests by key stage in England

Stage	National curriculum tests	Comments
Reception class (ages 4/5)	No national test (but teacher assessments of student standards are centrally collected)	Plans to introduce an assessment were dropped in April 2016 because the three options from which schools could choose were not deemed sufficiently comparable
End of first grade (ages 5/6)	Reading	Introduced in 2012 (known as 'phonics screening check')
End of Key Stage 1 (ages 6/7)	Reading Mathematics (arithmetic and reasoning)	Baseline to measure progress by end of Key Stage 2; assessed by teachers but externally moderated
End of Key Stage 2 (ages 10/11)	Reading Spelling, punctuation and grammar Mathematics (arithmetic and reasoning)	A science test was dropped in 2010 and is now administered every two years on a random sample of students
End of Key Stage 3 (ages 13/14)	No national test	National curriculum tests in English, mathematics and science were administered for the last time in 2008
End of Key Stage 4 (ages 15/16)	General Certificate of Secondary Education (GSCE) (typically at least 8 subjects)	GSCE is being reformed (grading scale, assessment formats etc.); a sample-based National Reference Test is also being introduced in 2017

Source: European Commission/EACEA/Eurydice (2017).

in 2014, which is now among the 35 indicators stored in the data warehouse of the National Agency for IT and Learning of the Ministry for Children, Education and Gender Equality (Nusche et al., 2016).

MANAGING THIS INFORMATION CAN BE A BURDEN FOR EDUCATION SYSTEMS

While this rich information appears to hold considerable promise for education decision-makers, the challenges of using it should not be underestimated.

There are unresolved issues in high income countries

Even in high income countries, it is critical to avoid simplistic interpretations in reading test result reports. Often, the media is responsible for drawing attention to the lowest common denominator in the information that assessments provide, such as league tables in those countries that make them available. To avoid drawing erroneous conclusions, two key adjustments are needed. First, results need to be adjusted for school and student socio-economic background information. Otherwise, assessment data are more likely to reflect the level of poverty in a community than the quality of teaching and learning.

> "Test results need to be adjusted for school and student socio-economic background information"

Second, it is important to adjust for whether students and schools improve between two or more points in time and to assess the contribution schools make to this progress. Increasingly many countries have introduced or are considering introducing such value-added measures. For example, the National Assessment of Knowledge (nacionalno preverjanje znanja [NPZ]) in Slovenia is optional at grade 6 and compulsory at grade 9, where it is administered in language, mathematics and a third subject. Head teachers and council members receive information that compares their school with the national level, but no league tables are published. At the system level, NPZ informs decision-makers whether curriculum standards are met and provides insights for teacher training and curriculum development (Brejc et al., 2011). The National Examination Centre publishes a detailed annual report. It is now trying to develop a value-added measure combining NPZ results with those of the Matura examination at the end of upper secondary education (Slovenia National Examination Centre, 2016).

However, value-added measures are not sufficiently precise (OECD, 2008a). Many schools (and grades within schools) are too small – and the characteristics of their student populations too variable from year to year – to allow education decision-makers to infer with sufficient reliability whether a school is meeting targets or not (Braun et al., 2010; Foley and Goldstein, 2012).

Estimates of the margin of error should be published but these, as well as adjustments for socio-economic background, often represent more information than most users can absorb. Such margins of error are much higher when the performance of population sub-groups is assessed. In any case, no single assessment is an unbiased measure of student learning; different

assessments are proxies of student learning and may even come up with inconsistent results.

Expectations about what conclusions can be gleaned from even the most advanced systems need to be tempered. In England, complications from the use of contextual factors in earlier value-added measures in secondary education led the government to select new measures that disregard these background variables but at the cost of bias against schools in disadvantaged areas (Perry, 2016). An analysis of the experience from the use of value-added measures in the Netherlands concluded that further empirical work was required before a statistical model could be chosen. Selecting a baseline was a major challenge in primary education (Nusche et al., 2013).

Much of the progress in student learning outcome data generation originates in the United States, where the sheer volume of information provides exceptional opportunities for analysis but also lends itself to grave risk of misuse when access to these databases is granted to marketing or other companies. For example, inBloom, a non-profit initiative, which aimed to share data among schools, districts and nine states to provide personalized learning in partnership with education technology companies, was forced to close within a year of its establishment in 2013. It came under criticism for the for-profit motivations of potential partners (Ho, 2017). There are calls to review privacy legislation towards only allowing use of the data for research aimed at improving instruction (National Academy of Education, 2017).

Data challenges are only exacerbated in middle and low income countries

Refined information on student and school learning outcomes, which would allow reliable comparisons between schools to trigger support interventions, are costly, even in high income countries. Setting up systems, maintaining data flows, ensuring good quality, and training staff and users all cost (Rosenkvist, 2010), but such investment in the capacity needed for a robust system can be prohibitive in low and middle income countries. In these countries, data tend to focus less on comparisons against fixed standards and more on grade promotion examination results.

> “The cost of setting up data systems, maintaining data flows, and training staff and users can be prohibitive in poorer countries”

In Thailand, the National Institute of Educational Testing Service (NIETS) has administered the Ordinary National Educational Test (O-NET) at primary grade 6 (P6) and secondary grades 9 (M3) and 12 (M6) since 2005. The number of subjects was reduced from eight to five in 2016. The data is used by local education authorities to compare individual schools against district or national averages. They are also used by the inspection service. However, there are no common student performance standards, and the main role of O-NET is to certify education level completion. O-NET scores fluctuate between years, which means they cannot be used to assess whether the system meets curricular expectations. A review indicated capacity gaps in test development and analysis at NIETS. Similar concerns were also raised about central and local education administrators’ capacity to interpret results (OECD and UNESCO, 2016).

Malaysia emphasized the digitization of student and school information early on. Information on student performance in the three public examinations at the end of primary, lower secondary and upper secondary is collected, among several school quality assurance criteria (Malaysia Ministry of Education, 2010). In 2009, an updated school management system, Sistem Pengurusan Sekolah, was introduced (Said, 2010). During 2013–2015, it was made more efficient to reduce duplication, improve quality, facilitate access and increase use levels, which were previously of concern. As of January 2015, all public secondary schools are obliged to use the new database. In addition, district education officers are being trained to analyse school data, diagnose underlying problems and design differentiated support for schools (Malaysia Ministry of Education, 2013, 2016).

In Jordan, the National Test, managed by the Ministry of Education Department of Examinations and Tests, assesses all grade 4, 8 and 10 students in all schools in Arabic, mathematics, science and English. Each grade is assessed every three years. However, results are not comparable over time, as test items have often changed. Published reports at the national, district and school levels consist mostly of descriptive tables with no policy-related analysis (Ababneh et al., 2014). Despite the test’s stated objective of providing pedagogical support, teachers do not receive any support to address the issues identified by the test (Obeidat and Dawani, 2014).

South Africa carried out standardized Annual National Assessments (ANA) between 2011 and 2014 during the Curriculum and Assessment Policy Statement's implementation period. They tested reading and mathematics in grades 1 to 6 and grade 9. However, the tests were not comparable over time or between grades (van der Berg, 2015). As new items were developed each time, the results cannot be compared over time. The government began a review of assessment design to develop one instrument for system-wide purposes and one for diagnostic purposes (South Africa Department of Basic Education, 2014), but lack of capacity was a concern (Spaull, 2013).

In low income countries, challenges are only exacerbated by very low capacity. Learning assessments are not sufficiently robust to measure progress against learning standards. There are no resources to build institutions or disseminate results. In some cases, donors have invested in these systems, such as in the United Republic of Tanzania, which publicly posted data from primary and secondary school examinations online (Elks, 2016). But little thought is given to sustainability.

CONCLUSION

There is increasing interest among central education authorities in collecting, reporting, analysing and using data on learning outcomes at the school and student levels. However, countries vary in their purposes for data collection and the extent to which they share it with local education and school leaders. Experiences worldwide demonstrate cost and capacity considerations need to be addressed before data can be considered valid for comparisons and can be used for decisions, even in the richest countries.

Governments in poorer countries wishing to monitor school and system quality through student learning data need to keep their collection and reporting procedures simple, taking into account resource and capacity constraints. They need to design their information systems with clear goals for how data will be used and avoid the temptation of amassing excess information.

A young Peruvian boy completes his schoolwork.

CREDIT: Lucero del Castillo Ames/ GEM Report

KEY MESSAGES

In 2015, 69% of children participated in organized learning at the pre-primary or primary level one year before official primary entry age; regional figures ranged from highs of 95% in Latin America and the Caribbean and in Europe and Northern America to a low of 42% in sub-Saharan Africa.

In 52 low and middle income countries between 2010 and 2015, just over 2 children aged 3 or 4 from the poorest fifth of households attended organized learning for every 10 children from the richest fifth, and 5 children in rural areas attended for every 10 children in urban areas.

Just 33% of countries legally stipulate at least one year of free early childhood education, 21% one year of compulsory early childhood education and 17% one year free and compulsory.

Stimulating home environments are important for child development. In countries including Benin, Honduras and Swaziland, less than half of children had adults engaging with them in activities to promote learning, such as telling stories, singing, playing or drawing.

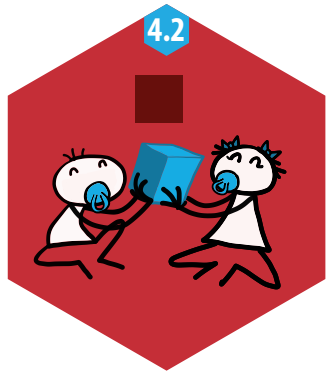
National approaches to ensuring quality standards in early childhood education vary. A review of 34 low and middle income countries found only 14 had an 'established' set of standards; of those, only 5, including Mauritius and Samoa, had compliance monitoring mechanisms.

Globally, 41% of young children are enrolled in private pre-schools, making quality assurance of private education critical. In Indonesia, 97% of children attend private pre-schools, only 8% of which are accredited.

Richer countries invest considerable resources in assessing pupil–teacher interaction and the extent to which it enables children's autonomy and stimulation. In Chile, educators in public municipal schools have their classes video-recorded.

The community and parents can play a crucial monitoring role by taking part in surveys, school inspections and meetings with local authorities.

CHAPTER 10



TARGET 4.2

Early childhood

GLOBAL INDICATORS

4.2.1 *Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex*

4.2.2 *Participation rate in organized learning (one year before the official primary entry age), by sex*

THEMATIC INDICATORS

4.2.3 *Percentage of children under 5 years of age experiencing positive and stimulating home learning environments*

4.2.4 *Number of years of (i) free and (ii) compulsory pre-primary education guaranteed in legal frameworks*

4.2.5 *Gross pre-primary enrolment ratio*

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OVERVIEW

Good-quality care and education during the pivotal early years provide the foundation for cognitive and emotional development. This is duly recognized in SDG 4 target 4.2, which aims to ensure early childhood development through universal participation in pre-primary education.

> "In 2015, 69% of children participated in organized learning at the pre-primary or primary level one year before official primary entry age"

In 2015, 69% of children participated in organized learning at the pre-primary or primary level one year before official primary entry age, ranging from highs of 95% in Latin America and the Caribbean and in Europe and Northern America to a low of 42% in sub-Saharan Africa (**Table 10.1**). This measure is based on administrative data, which does not permit disaggregation by individual characteristics to demonstrate disparities. The same indicator can be estimated with household survey data, although there are differences in how early childhood education attendance is captured in various instruments (**Data focus 10.1**).

Some countries have made great progress since 2000. Albania and Qatar almost doubled enrolment to reach near-universal participation in 2015. Countries including Belize, Egypt, Latvia and Maldives made substantial progress, in the range of 25 to 40 percentage points (**Figure 10.1**).

These increases have occurred even though just 33% of countries legally stipulate at least one year of free early childhood education, 21% one year of compulsory early childhood education and 17% one year of free and compulsory. Only 10% of countries – none of them in Asia – guarantee two years of free and compulsory early childhood education.

The pre-primary gross enrolment ratio was 49% in 2015. It lags behind the global indicator by 20 percentage points for two reasons. First, it refers to a wider age range, which also varies by country. Second, it refers to enrolment in pre-primary education only, excluding primary enrolment before the appropriate age. The lowest enrolment rate among all regions, 21%, is that of Southern Asia, which lacks an estimate for the global indicator. None of these indicators captures the quality of provision. Countries are grappling with defining service delivery standards and establishing ways to assure good-quality provision (**Policy focus 10.1**).

Target 4.2 is the only SDG 4 target with two global indicators, aimed at capturing the means (early childhood participation) and the ends (early childhood development). Views on measurement of the latter vary: Different tools capture the three dimensions (health, psychosocial well-being and learning) to different degrees in different ways (**Table 10.2**).

Primarily because of its wider country coverage, the UNICEF Early Child Development Index (ECDI), which is derived from the Multiple Indicator Cluster Surveys (MICS), is currently the main tool for reporting on global indicator 4.2.1. It draws on 10 questions addressed to parents, grouped in four dimensions. Children who meet the conditions of at least three dimensions are considered 'on track'. Less than two-thirds of children aged 36 to 59 months were considered developmentally on track in countries including the Democratic Republic of the Congo, Mauritania and Nepal. While the indicator correlates strongly with income per capita, there are some exceptions. For example, Algeria, Jordan and Iraq score lower than Ghana, despite being significantly richer. In Mexico, almost 20% of children are not developmentally on track (**Figure 10.2**).

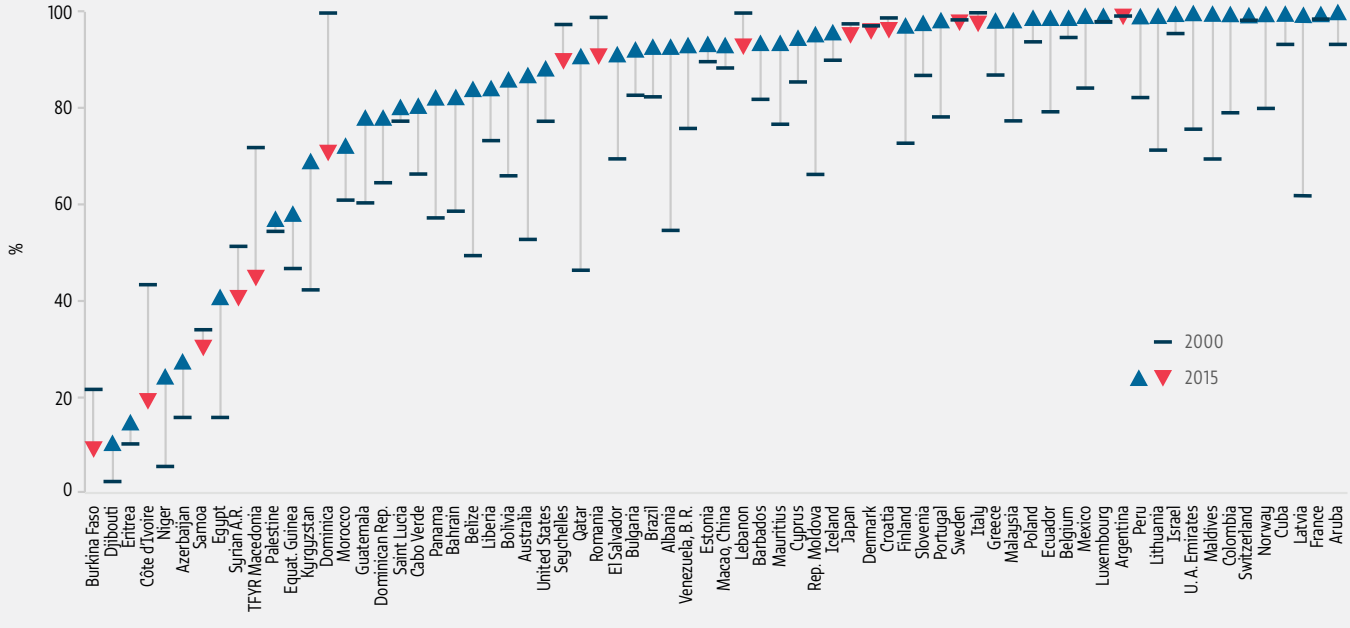
TABLE 10.1:
Selected early childhood education indicators, 2015 or most recent year

	Participation rate in organized learning (one year before official primary entry age), 2015 (%)	Pre-primary education gross enrolment ratio, 2015 (%)	Countries guaranteeing free and compulsory education in legal frameworks (%)					
			Free		Compulsory		Free and compulsory	
			At least 1 year	At least 2 years	At least 1 year	At least 2 years	At least 1 year	At least 2 years
World	**69**	**49**	**33**	**27**	**21**	**11**	**17**	**10**
Caucasus and Central Asia	49	35	38	38	25	0	13	0
Eastern and South-eastern Asia	83	77	17	11	22	0	17	0
Europe and Northern America	94	84	46	33	17	9	15	9
Latin America and the Caribbean	95	75	63	58	53	37	47	33
Northern Africa and Western Asia	52	30	20	10	5	0	5	0
Pacific	82	101	29	12	18	12	12	6
Southern Asia	...	21	11	11	0	0	0	0
Sub-Saharan Africa	42	32	13	13	4	2	2	2
Low income	43	21	16	16	6	0	3	0
Lower middle income	...	32	22	20	20	8	14	6
Upper middle income	81	76	40	36	24	16	22	16
High income	92	82	45	30	25	14	21	11

Source: UIS database.

FIGURE 10.1:
Early childhood education participation has increased rapidly in many countries

Participation rate in organized learning one year before official primary entry age, selected countries, 2000–2015



Source: UIS database.

TABLE 10.2:
Early childhood development measurement tools

Tool	Type of assessment	Dimension			Tested (country income group)
		Health	Psychosocial well-being	Learning	
East Asia-Pacific Child Development Scales	Direct	Motor development Health, hygiene and safety	Socio-emotional development	Language and emergent literacy Cognitive development Cultural knowledge and participation Approaches to learning	Middle
Early Development Instrument	Indirect: teacher	Physical health and well-being (includes gross and fine motor skills)	Social competence Emotional maturity	Language and cognitive development Communication skills and general knowledge	Middle High
Early Human Capability Index	Direct	Physical health and well-being	Social competence Cultural identity/spirituality Emotional maturity	Approaches to learning Language and cognitive development Communication skills Perseverance	Middle
International Development and Early Learning Assessment	Direct Indirect: caregiver	Gross and fine motor development	Socio-emotional development	Emergent literacy Emergent numeracy Approaches to learning Executive functioning	Low Middle
Early Child Development Index	Indirect: parent	Health status and fine motor skills	Social/emotional	Approaches to learning Literacy–numeracy	Low Middle
Measure of Development and Early Learning	Direct Indirect: parent/caregiver	Health status	Social/emotional	Language/literacy Numeracy/mathematics Executive function	Low Middle
Regional Project on Child Development Indicators	Direct	Motor skills	Social/emotional development	Cognition Language and communication	Middle
Early Learning Assessment of Primary Education Entrants	Direct Group assessment		Socialization	Cognitive development Language	Low Middle
Strengths and Difficulties Questionnaire	Indirect: parent		Social/emotional and behaviour problems		Low Middle High

Source: Anderson and Raikes (2017).

Of the four ECDI dimensions, children are least likely to meet literacy and numeracy conditions: Less than one-third do so in most countries. This is strongly influenced by participation in organized learning. In Palestine, 58% of 3- to 4-year-olds attending organized learning in 2014 met the literacy and numeracy conditions, compared to 9% of those who were not. Basic socio-emotional skills (good behaviour and ability to pay attention) strongly correlate with the overall ECDI score, while physical health (basic motor skills and lack of chronic sickness) and approaches to learning (ability to follow simple directions and do things independently, not captured in Figure 10.2) have low variance between countries.

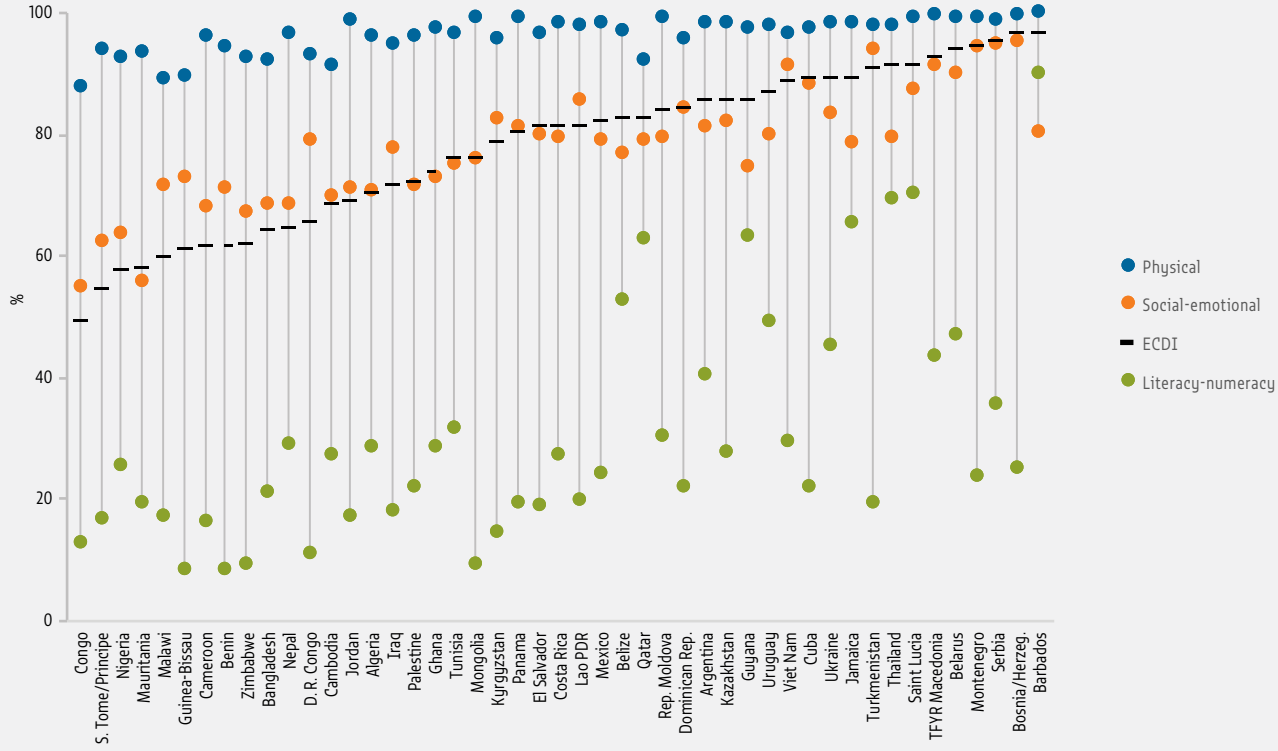
As an indirect measure and composite index, the ECDI has come under criticism, and the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs) has classified it as a tier III indicator, in need of further methodological development. In response, UNICEF has set up an expert group on early childhood development measurement under the auspices of the IAEG-SDGs. UNICEF has also embarked on a process to overhaul the MICS questions. It has reviewed various tools and carried out initial cognitive testing of items in countries including India and Jamaica, with the aim of creating a new bank of items that will undergo further testing for validation in Bulgaria, Mexico, Uganda and the United States (UNICEF, 2017a).

Stimulating home environments can exert a strong influence on child development, especially when children do not participate in organized learning. Information from the MICS showed that, in countries including Benin, Honduras and Swaziland, less than half of children had adults engaging with them in activities to promote learning, such as telling stories, singing, playing or drawing. Children from the poorest households tend to have less exposure to such activities. In Tunisia, children from only 44% of the poorest households but from 90% of the richest engaged in such activities with adults. Fathers are far less likely to engage in such activities. In Turkmenistan, while 94% of 3- to 4-year-olds experienced engagement in learning-oriented activities with an adult, only 15% did so with their fathers (**Figure 10.3**).

FIGURE 10.2:

Many children in low and middle income countries are not ready for school

Percentage of children aged 36 to 59 months who are developmentally on track, by dimension, selected countries, 2011–2015

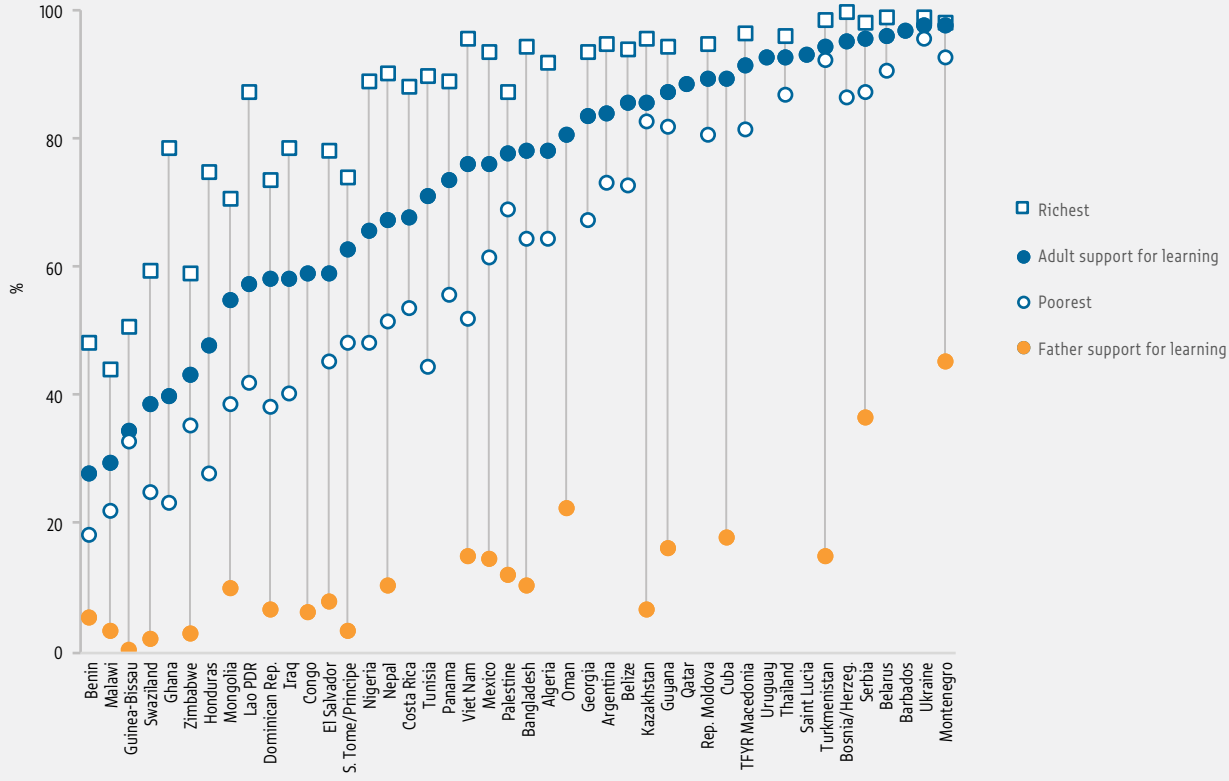


Source: MICS final and key findings reports.

FIGURE 10.3:

Children from the poorest households are less likely to experience home activities that promote learning

Percentage of children aged 36 to 59 months who engaged with adults, and with fathers, in four or more selected activities to promote learning and school readiness in the previous three days, selected countries, 2011–2015



Source: MICS final and key findings reports.

DATA FOCUS 10.1: USING HOUSEHOLD SURVEYS TO ESTIMATE PARTICIPATION AND DISPARITIES IN EARLY CHILDHOOD EDUCATION

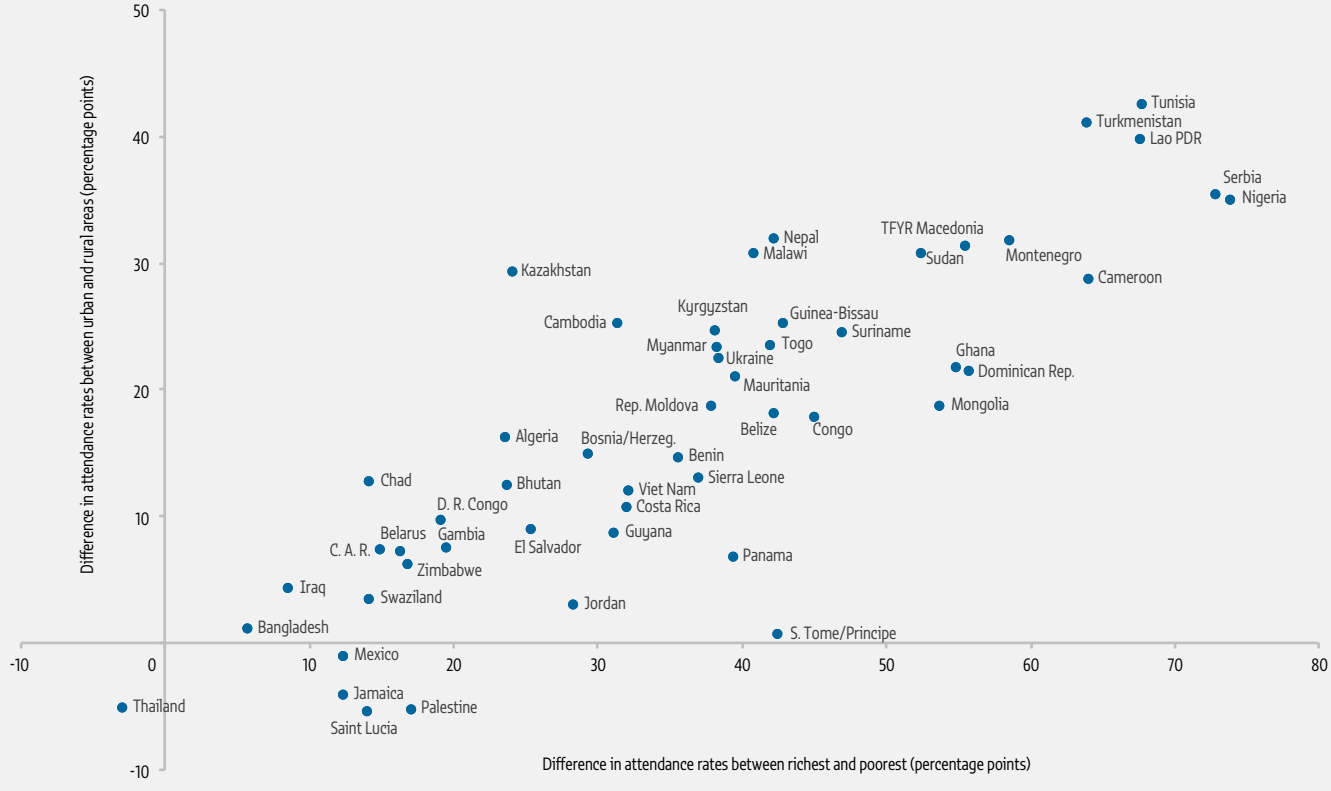
The global indicator on early childhood education participation draws on administrative data. As the 2016 *Global Education Monitoring Report* noted, this presents two challenges. First, in some countries, a considerable part of provision, especially at younger ages, is unregistered and may therefore be missed by administrative sources. Second, these sources cannot capture disparity, which is an essential aspect of every SDG 4 indicator.

Household surveys can address both challenges. In their first six rounds, the MICS consistently provided important evidence for a diverse set of countries. They highlighted how, in many parts of the world, early childhood education opportunities are quite unequally distributed, favouring children from urban areas and richer households. In a sample of 52 low and middle income countries between 2010 and 2015, just over 2 children aged 3 or 4 from the poorest fifth of households attended organized learning for every 10 children from the richest fifth, and 5 children in rural areas attended for every 10 children in urban areas.

The attendance rate among 3- to 4-year-olds was over 80% in Serbia and Nigeria for the richest children and no more than 10% for the poorest. The urban–rural gap in attendance rates exceeded 40 percentage points in Tunisia and Turkmenistan. By contrast, there was near parity or even a slight advantage for rural children in Bangladesh, Jamaica, Mexico, Palestine, Saint Lucia and Sao Tome and Principe. Thailand was the only country where attendance patterns favoured both poorer and rural children in 2015–2016, a finding also observed four years earlier (**Figure 10.4**).

The MICS also allow estimates of pre-primary education attendance at age 5 and above, allowing finer-grained observation of attendance patterns by age. In Zimbabwe,

FIGURE 10.4:
There is considerable disparity in early childhood education attendance
Difference in attendance rates in organized learning among children aged 36 to 59 months by wealth and location, selected countries, 2010–2016



Source: GEM Report team analysis based on household surveys.

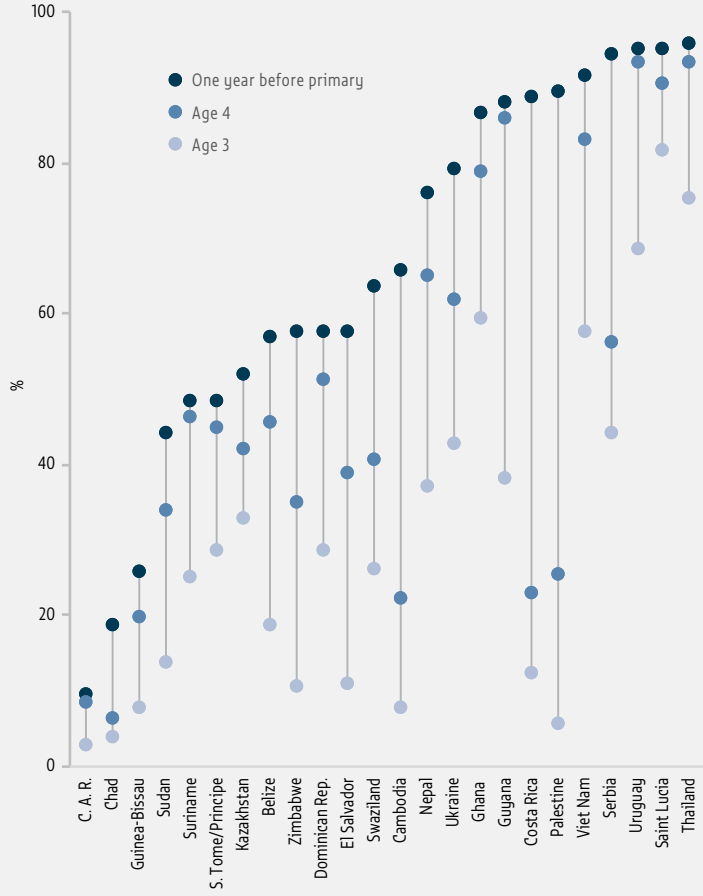
> In 52 low and middle income countries between 2010 and 2015, just over 2 children aged 3 or 4 from the poorest fifth of households attended organized learning for every 10 children from the richest fifth

10% of 3-year-olds, 35% of 4-year-olds and 57% of 5-year-olds attended an organized learning programme in 2014 (**Figure 10.5**). This contrasts with the officially reported estimate that 37% of 5-year-olds attended pre-primary or primary school in 2013. The discrepancy may help provide an estimate of the size of unregistered pre-school attendance, a fact documented in the press but not in official data (Kandemiiri and Mhlanga, 2011; Tshuma, 2017).

Household surveys are not without their challenges as information sources for global monitoring. Questions used for calculating pre-school attendance are usually split between children above and below age 5, risking inconsistency in how the relevant questions are asked. For example, the MICS ask whether a child under 5 attends an 'early childhood programme', while it refers to 'school' attendance for children over 5. The other major international household survey programme, the Demographic and Health Surveys, has only recently begun to include pre-primary education as a standard option for children over 5 and continues not to ask the question for younger children, except in a very few countries, which reduces coverage.

Moreover, given the diversity of programmes, these simple survey questions may not capture important nuances about the education received. For example, the European Union Statistics on Income and Living Conditions survey asks the number of hours the child attends pre-school in a typical week. The need for a standardized approach to calculating pre-school attendance has become an urgent priority.

FIGURE 10.5:
Age patterns of early childhood education attendance differ among countries
Attendance rates in early childhood learning programmes among 3- and 4-year-olds and children one year before official primary entry age, selected countries, 2010–2014



Source: GEM Report team analysis based on household surveys.

POLICY FOCUS 10.1: ASSURING QUALITY IN EARLY CHILDHOOD EDUCATION

Good-quality early childhood education (ECE) systems should support holistic development, particularly of the most vulnerable children. Defining good-quality pre-primary education is no easy task. Notions of quality vary significantly, given diverse contexts, provision types and quality dimensions, ranging from physical setting to pupil–educator interaction. Good-quality ECE should have a positive impact on children's overall development, but identifying and measuring the contributing factors is challenging. Countries' approaches to setting quality standards and monitoring compliance vary. This section reviews ECE quality assurance mechanisms across the world.

COUNTRIES TEND TO FOCUS QUALITY ASSURANCE PROCESSES ON EASILY OBSERVABLE ASPECTS

ECE quality standards and monitoring tend to focus on observable components, such as infrastructure, instructional materials and pupil/teacher ratios, since they are easily measured and verified. Even so, many countries are only beginning to establish standards and monitoring mechanisms. Only 14 of 34 low and middle income

countries reviewed as part of the World Bank Systems Approach for Better Education Results module on early childhood development in 2010–2015 had an 'established' set of ECE standards (on educators, learning and curricula, infrastructure, service delivery and accreditation). Of those, only five, including Mauritius and Samoa, had compliance monitoring mechanisms (World Bank, 2017c).

> "Only 14 of 34 low and middle income countries in 2010–2015 had an 'established' set of ECE standards"

Belize ECE policy established learning standards, required pre-school teachers to complete a six-week basic ECE certificate programme and defined maximum pupil/teacher ratios, regular contact hours and infrastructure guidelines. Yet only pupil/teacher ratio was monitored regularly (World Bank, 2014a). Nepal expanded provision dramatically, increasing the gross enrolment ratio from 12% in 2000 to 84% in 2016 by establishing early childhood development centres. It defined standards for literacy and linguistic development, pre-school teacher qualifications and building soundness (World Bank, 2014c). However, an evaluation found no systematic monitoring procedure, standard monitoring tools or formal mechanism to report findings to district education officers (UNICEF, 2011). Tunisia established ECE curricula, pedagogical guides, professional development requirements and infrastructure standards, e.g. on safety and outdoor play spaces. However, detailed data on service delivery are not available, making it difficult to verify compliance (World Bank, 2016e).

One approach to establishing compliance mechanisms for ECE standards is to adopt the primary school model. In 2015, Peru's Ministry of Education implemented Semáforo Escuela (School Traffic Light), a programme to monitor public primary schools and associated pre-primary classes that represented 16% of all public pre-primary enrolment. In 2016, 338 trained monitors conducted unannounced school visits, using internet-connected tablets to collect information on indicators, e.g. student and teacher attendance, hours of operation, availability of learning materials, and water and sanitation. Aggregated local and regional reports were posted online and updated monthly. Results were sent to regional education offices and local education management units to support planning and management (Peru Ministry of Education, 2017).

Monitoring compliance only in public ECE programmes is increasingly insufficient. Private pre-primary enrolment has risen to 41% globally, underscoring a need to monitor private providers, for which some countries are unprepared. In Gambia, two in three children are enrolled in private pre-schools, which are not subject to registration and accreditation (World Bank, 2014b). In Indonesia, 97% of children attend private pre-schools, only 8% of which are accredited (Denboba et al., 2015). The national accreditation body's 200 staff are not enough to accredit and ensure quality standards in 147,000 ECE institutions (SIREP, 2013).

> "Private pre-primary enrolment has risen to 41% globally, underscoring a need to monitor private providers"

In Swaziland, public and private providers follow identical registration and accreditation procedures. The Ministry of Education and Training sets standards for infrastructure, pupil/teacher ratios, and teacher qualifications and training. A certificate of official registration is issued a year after initial inspection. The ministry uses assorted strategies to ensure compliance: an annual quality assessment by the governing board, centre activity monitoring by regional early childhood care and education inspectors, and internal programme assessment by staff and a steering committee. However, compliance is not tracked, and data on whether compliance strategies are being implemented, let alone fulfilled, are not collected (World Bank, 2017d).

In Norway, municipalities run 46% of kindergartens but are also responsible for approving and monitoring the remainder, which are private (Norway Directorate for Education and Training, 2016). Kindergartens are assessed against legislated minimum standards (e.g. educator qualifications, class size, safety) and a framework plan for content and tasks. A new plan was expected to come into effect in 2017 that would give providers more precise directions (Norway Ministry of Education, 2016). A municipality can give kindergartens a deadline to comply with standards and, failing compliance, order a temporary or permanent closure (OECD, 2015c). A government website shows standards compliance and parental satisfaction data for each kindergarten.

Community input, particularly by parents, who interact closely with educators, is vital in ensuring ECE quality. In France, the Caisse Nationale d'Allocations Familiales (National Family Allocation Fund) complements school inspections with a barometer of community opinion based on parent nursery and child-minder satisfaction surveys (CNAF, 2015). In addition, elected parent representatives voice opinions on service quality at

thrice-yearly school council meetings. They can also call for school inspections and are regularly received by local authorities (OECD, 2015c).

In New Zealand, the Education Review Office is responsible for independently reviewing and reporting on education quality. In 2015/16, it reviewed 28% of all licensed ECE facilities. Because each determines its own curricular priorities in consultation with the community, the quality review process has a flexible framework that is responsive to context. Visit duration, evaluation process, results and reporting vary (Taguma et al., 2012).

SOME QUALITY ASSURANCE SYSTEMS FOCUS ON EDUCATOR PREPAREDNESS

ECE educators should provide learning and development opportunities, identify children needing additional support and respond to pupils' diverse backgrounds and abilities. While some ECE quality assurance systems focus on such easily observed characteristics as educator qualifications, others invest considerable resources in assessing more nuanced aspects of teaching and learning.

The most critical element of teaching and learning quality is pupil–teacher interaction: its nature, its depth and the extent to which it enables children's autonomy and stimulation. Interaction needs to be friendly, respectful and supportive of the development of self and identity in a community that enables all children to reach their potential (ISSA, 2010). Monitoring interaction is costly but has been incorporated into some broader teacher evaluation and support initiatives (**Box 10.1**).

Other countries use standardized instruments, such as the Early Childhood Environment Rating Scale, as part of formal, observation-based quality assurance systems (Harms et al., 2015). Used in much of the United States, including New York City (New York City Department of Education, 2016), the ECERS instrument has been translated and adapted in other countries.

In Germany, providers can choose monitoring tools for regular quality self-assessment. Some opt for standardized tools that provide guidance for follow-up actions, such as the Kindergarten Evaluation Scale, an adaptation of ECERS (OECD, 2015c). The National Study of Early Childhood Education, Care and Upbringing, which adapted ECERS to assess pupil–educator interaction, found over 10% of providers unsatisfactory. A tool focused on aspects such as intercultural learning showed over 50% of nurseries were in the low-quality range (Tietze et al., 2012).

BOX 10.1

Multiple tools evaluate and support early childhood educators in Chile

Chile's national teacher evaluation system is a mandatory process in municipal public schools. Coordinated by the Ministry of Education Teacher Training and Research Centre, it receives technical support from the Catholic University of Chile Measurement Centre. Evaluation has four components: self-evaluation, assessment by the school head, peer assessment based on a structured interview questionnaire, and portfolio, which calls for a full day visit and video recording of a class.

Several tools support this process in the 346 municipalities. A network of audiovisual technicians records classroom observations. Seminars train evaluators as interviewers, raters and members of municipal evaluation committees. Trained staff in assessment centres at universities review and score audiovisual and written components according to a detailed protocol. A management centre processes evaluation materials using specialized software. A call centre supports teachers and participants in the process.

Educators are evaluated every four years against a set of standards called the Good Teaching Framework. A report sent to the school eight months after the visit relates past evaluations and actions taken and provides a qualitative assessment of the educator's strengths and weaknesses. Educators are rated as unsatisfactory, basic, competent or outstanding. Basic-level educators are evaluated two years later. If rated unsatisfactory, teachers are evaluated the following year and, if no progress has been made, can no longer teach. Municipalities receive financial support for professional development for the lowest two levels.

Source: Docentemás (2017); OECD (2015c).

In Italy, Pavia University researchers created the Scala per la Valutazione dell'Asilo Nido (Nursery Evaluation Scale), a variant of ECERS for toddlers. Two additional measures evaluated the transition from home to day care. Following a pilot study in 25 nurseries for under-3-year-olds in five regions, the tool has been used nationwide to improve services and in-service teacher training (OECD, 2015c). It does not include some important context-specific aspects of quality assurance, such as parental participation, giving rise to further variants (Musatti and Picchio, 2010).

CONCLUSION

Monitoring aspects of quality in ECE and assuring compliance with standards is remarkably complex given the several factors that play a critical role in child development. Nevertheless, monitoring facilities, staff and processes are becoming increasingly common and have been used both to hold providers to account for services that meet set standards and to target resources to facilities and educators needing support. Some countries make monitoring results public and invite parents and communities to express their views on quality.

Tertiary students in Melbourne, Australia, protest against proposed cuts to higher education funding.

CREDIT: GEM Report/Corey Oakley

KEY MESSAGES

In 2015, 2% of lower secondary and 20% of upper secondary school students were enrolled in technical and vocational education.

In 2015, 213 million students, or 36% of the age group, were enrolled in tertiary education.

More women than men graduate from tertiary education but fewer women than men obtain science, technology, engineering and mathematics degrees; in Chile, Ghana and Switzerland, women account for less than one-quarter of these degrees.

Very few adults who have not completed primary education go back to school. In Mozambique, just 20% of adults had completed primary but only 0.5% were enrolled in formal education. However, in some upper middle income countries, such as Brazil and Thailand, adult enrolment is above 4%.

Capturing the diverse provision of education and training requires administering direct questions to adults. However, surveys ask the relevant questions in different ways, making it hard to monitor the global indicator.

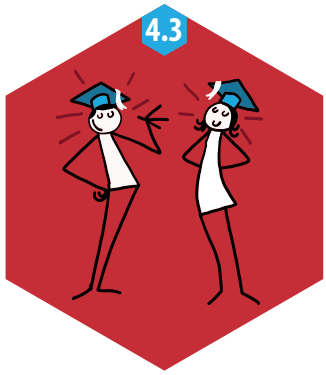
Rapid enrolment increases, diversification of provision and governance structures, and growth of student mobility have increased demand for quality assurance in higher education.

Despite the growing sophistication of quality assurance mechanisms in tertiary education, it is not clear whether they improve teaching and learning.

Many laws encourage access to higher education for minorities and disadvantaged groups but few address affordability.

Fee-free policies alone do not deliver equitable access to tertiary education. A combination of low tuition fees, scholarships and loans based on income is needed.

CHAPTER 11



TARGET 4.3

Technical, vocational, tertiary and adult education

GLOBAL INDICATOR

4.3.1 *Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex*

THEMATIC INDICATORS

4.3.2 *Gross enrolment ratio for tertiary education by sex*

4.3.3 *Participation rate in technical-vocational programmes (15- to 24-year-olds) by sex*

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OVERVIEW

Target 4.3 is a broad objective covering various types of ongoing education. Some, such as technical and vocational secondary education, may be compulsory, but most take place after compulsory education. The three indicators encompass the diversity of this target: technical and vocational, tertiary and adult education.

TECHNICAL AND VOCATIONAL EDUCATION.

In 2015, just over 60 million secondary-level students, or about 10% of all secondary students, were enrolled in vocational education, mainly at the upper secondary level (20% of students, compared to 2% in lower secondary). There have been few changes in enrolment rates since 2000, except in Caucasus and Central Asia (where the share increased by 13 percentage points to 60% of upper secondary enrolment) and the Pacific (where the share decreased by 12 percentage points but remained high compared to the global average at 40% of upper secondary enrolment). Girls accounted for 43% of all technical and vocational enrolment in 2015 (**Table 11.1**).

> “In 2015, about 10% of all secondary students were enrolled in vocational education”

The thematic indicator for technical and vocational education tries to cast the net wider to include work-related training that is designed specifically to lead to a job and is open to all youth (aged 15 to 24), not only those enrolled in secondary school. Youth technical and vocational participation has spiked in southern European countries since 2000. It grew by 15 percentage points in Italy and by 11 in Portugal (**Figure 11.1**). Capturing these data for youth as well as adults among the diverse types of provision remains a challenge (**Data focus 11.1**).

TERTIARY EDUCATION

In 2015, 213 million students were enrolled in tertiary education. Since 2000, the gross enrolment ratio has risen by 29 percentage points in upper middle income countries, from 17% to 46%. Gross enrolment ratios in Eastern and South-eastern Asia and in Latin America and the Caribbean have increased by 25 percentage points to over 40%. By contrast, enrolment growth in Caucasus and Central Asia and in sub-Saharan Africa has almost stagnated, remaining close to 2000 levels (**Table 11.2**).

> “In 2015, 213 million students were enrolled in tertiary education”

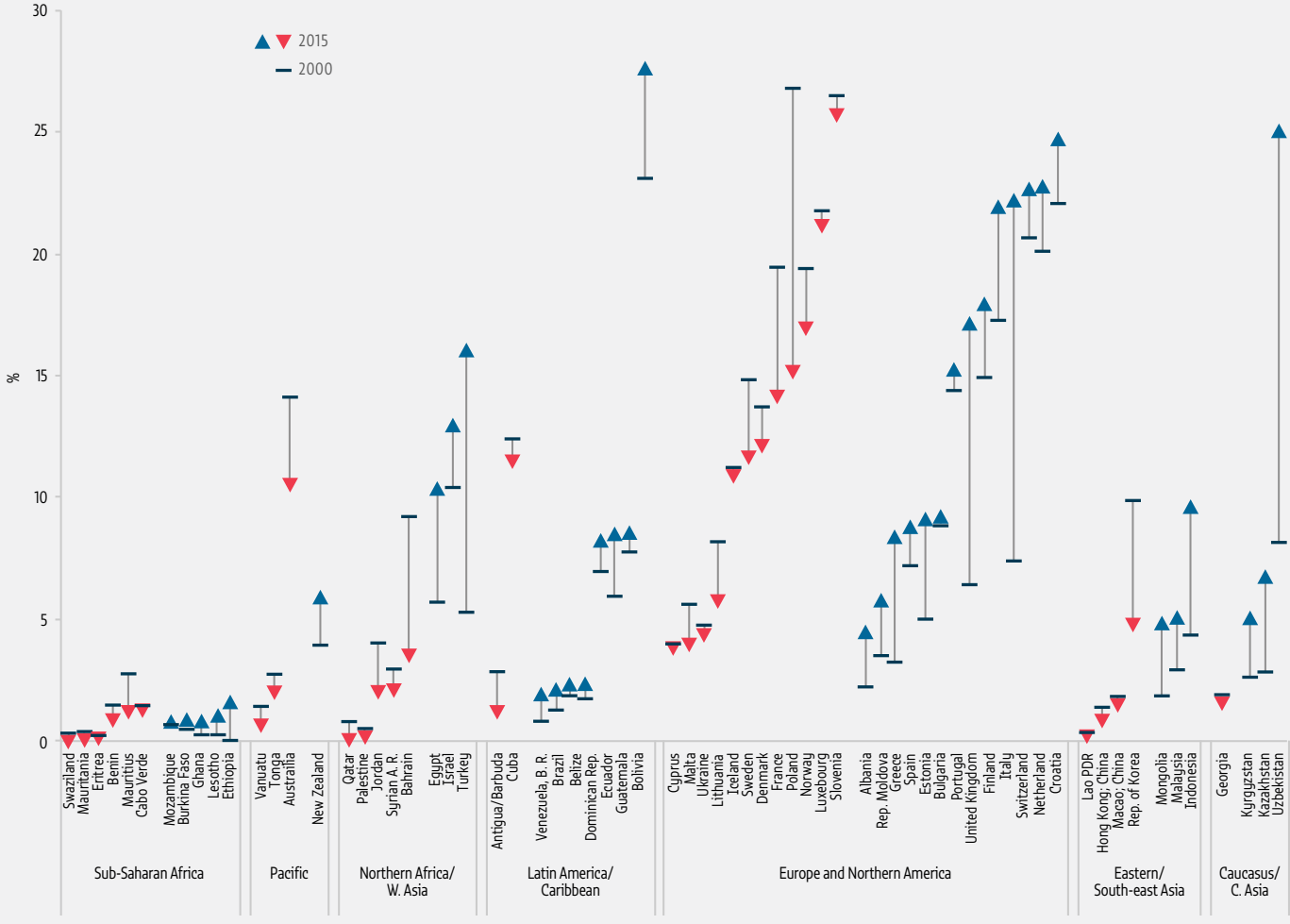
The share of private institutions in tertiary enrolment is growing rapidly in low and middle income countries. In Nepal, it grew by 38 percentage points between 2000 and 2015, followed closely by Burundi and Rwanda, where private institutions now account for two in three students. In Congo, one in three students attended a private university or college in 2015, up from close to zero in 2000. However,

TABLE 11.1:
Technical and vocational education participation indicators, 2000 and 2015

	Enrolment in technical and vocational secondary education				Share of technical and vocational education in total secondary enrolment	
	2000		2015		2000	2015
	Total (000)	Female (%)	Total (000)	Female (%)	Total (%)	Total (%)
World	**45,896**	**45**	**60,422**	**43**	**10.1**	**10.4**
Caucasus and Central Asia	626	43	1,818	48	6.6	19.8
Eastern and South-eastern Asia	17,358	47	24,351	45	13.0	16.1
Europe and Northern America	13,840	43	13,881	43	14.5	16.5
Latin America and the Caribbean	4,890	53	6,160	53	8.6	9.8
Northern Africa and Western Asia	4,552	40	5,873	43	15.5	13.9
Pacific	1,287	48	902	43	38.0	25.8
Southern Asia	1,550	29	3,721	25	1.5	2.2
Sub-Saharan Africa	1,791	35	3,710	40	7.8	6.7
Low income	1,106	34	13,870	41	8.3	6.2
Low middle income	7,885	41	2,199	40	5.0	5.3
Upper middle income	22,657	47	13,388	45	12.0	15.7
High income	14,245	45	30,958	43	15.2	14.7

Source: UIS database.

FIGURE 11.1:
There have been opposite trends in youth participation in technical and vocational education in Europe in the last 15 years
Participation rate of 15- to 24-year-olds in technical and vocational education programmes, 2000 and 2015



Source: UIS database.

TABLE 11.2:
Tertiary education participation indicators

	Enrolment (000)		Gross enrolment ratio (%)	
	2000	2015	2000	2015
World	99,718	212,670	19	36
Caucasus and Central Asia	1,425	1,895	22	25
Eastern and South-eastern Asia	24,213	66,813	15	40
Europe and Northern America	39,940	50,702	56	75
Latin America and the Caribbean	11,315	24,894	22	46
Northern Africa and Western Asia	6,836	17,054	20	42
Pacific	1,044	1,750	46	62
Southern Asia	12,162	41,895	9	25
Sub-Saharan Africa	2,559	7,428	4	8
Low income	1,249	4,447	3	8
Low middle income	25,094	61,648	11	23
Upper middle income	31,686	90,201	17	46
High income	41,466	56,135	56	74

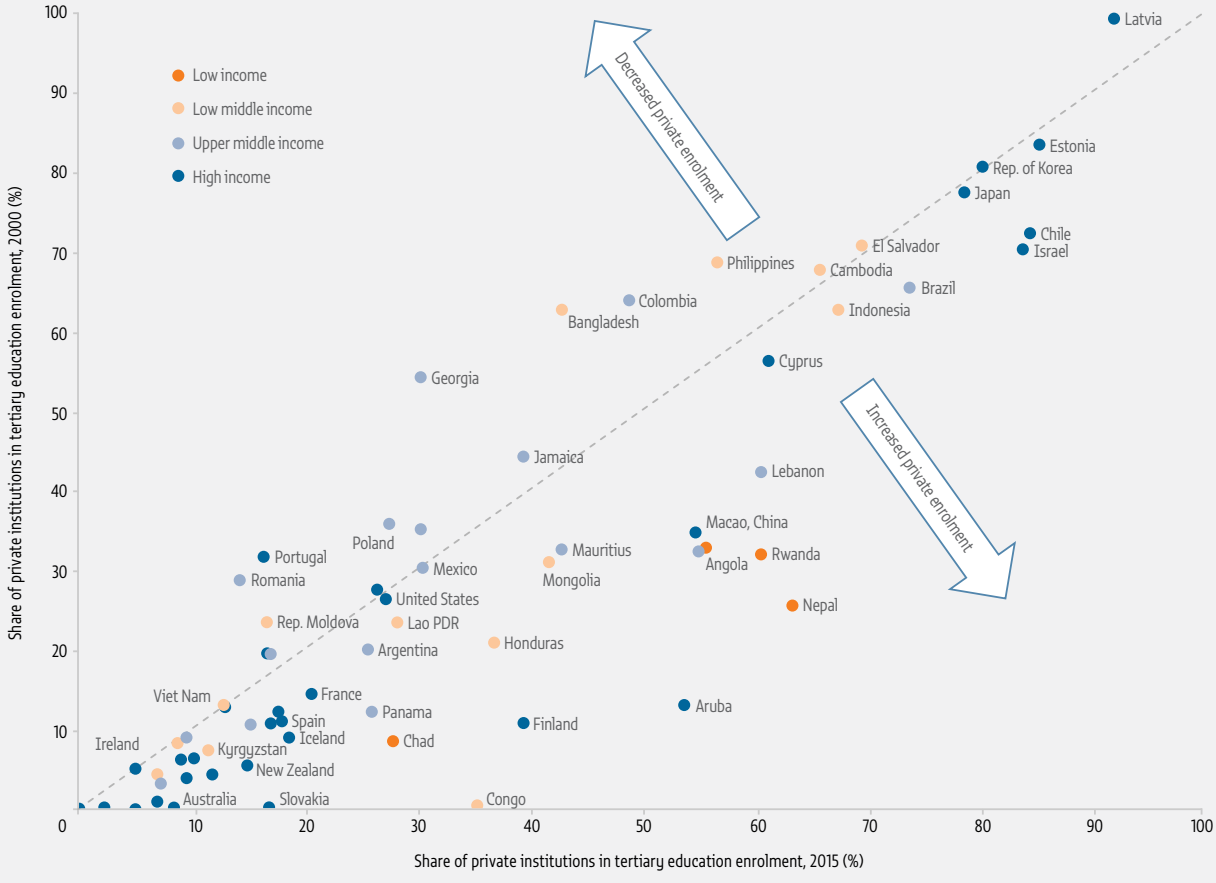
Source: UIS database.

in some countries, including Colombia, Georgia, Portugal and Romania, private enrolment decreased (**Figure 11.2**).

These statistics do not illuminate differences between participation and completion rates. Household surveys can be used, but the differences in their methodologies pose obstacles (**Data focus 11.2**). These statistics are also uninformative of government efforts to ensure quality (**Policy focus 11.1**) and promote affordability of tertiary education (**Policy focus 11.2**).

Overall, women have outpaced men in tertiary enrolment growth, resulting in disparity favouring females in almost all regions. As Southern Asia moves towards closing the gap, sub-Saharan Africa is the only region where women still do not enrol in tertiary education on a par with men. In many countries, women outnumber men as graduates but lag behind men in completing science, technology, engineering and mathematics (STEM) degrees. In Chile, Ghana and Switzerland, women account for less than

FIGURE 11.2:
Private enrolment in tertiary education has grown rapidly in many low and middle income countries
Percentage of enrolment in tertiary education in private institutions, selected countries, 2000 and 2015



Source: UIS database.

one-quarter of all STEM degrees. By contrast, women in Albania, Algeria and Tunisia are more likely than men to earn a STEM degree (**Figure 11.3**).

ADULT EDUCATION

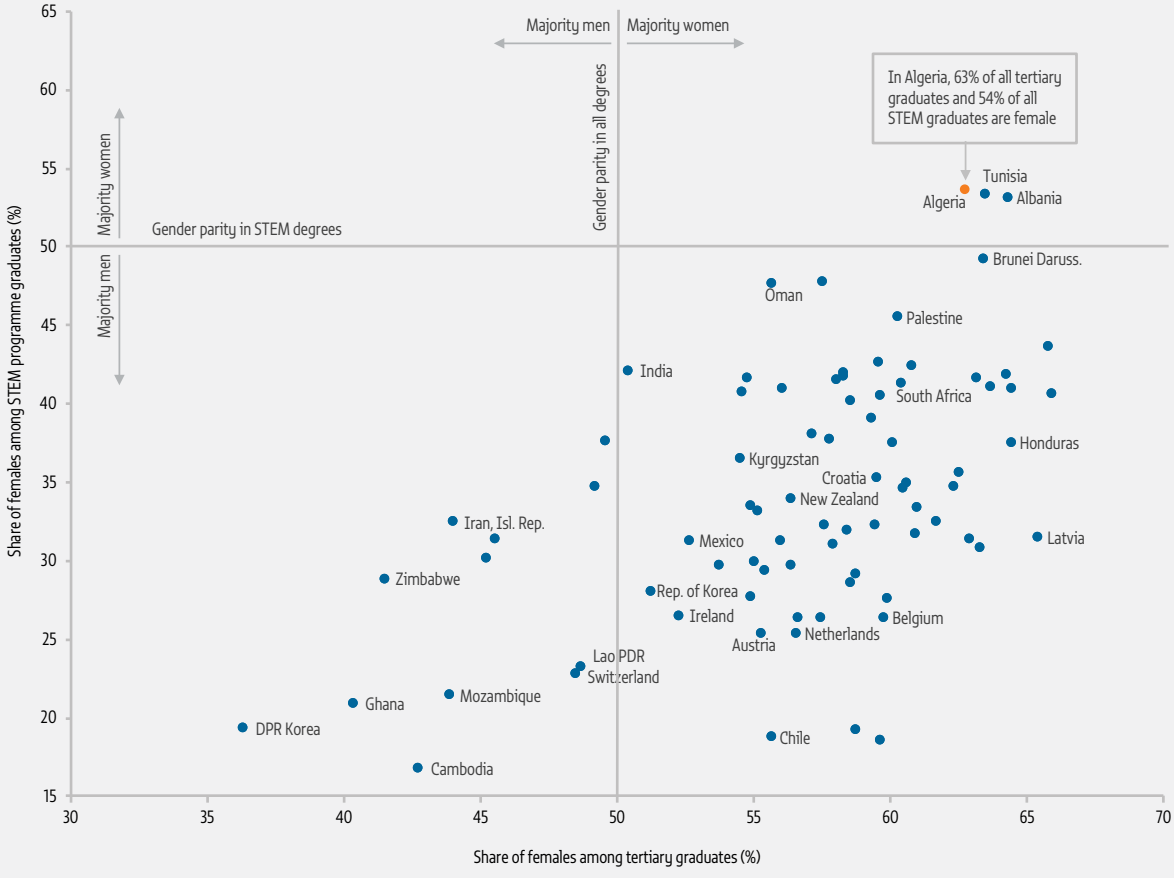
A large share of the adult population in low and middle income countries has not completed primary school and is unlikely to return to complete basic education. In Mozambique, although only 20% of adults had completed primary, only 0.5% were enrolled in formal education. Countries where adult enrolment was higher (above 4%) were mainly upper middle income countries such as Brazil, the Dominican Republic and Thailand (**Figure 11.4**). However, these statistics do not tell how many adults are involved in continuing education outside the formal system. Labour force surveys could be better used to capture not only technical and vocational but also any kind of adult education (**Data focus 11.1**).

DATA FOCUS 11.1: ESTIMATING YOUTH AND ADULT PARTICIPATION RATES IN EDUCATION AND TRAINING

Two target 4.3 indicators are closely related. The global indicator is the youth and adult participation rate in formal and non-formal education and training in the previous 12 months. One of the thematic indicators is the youth participation rate in technical and vocational education.

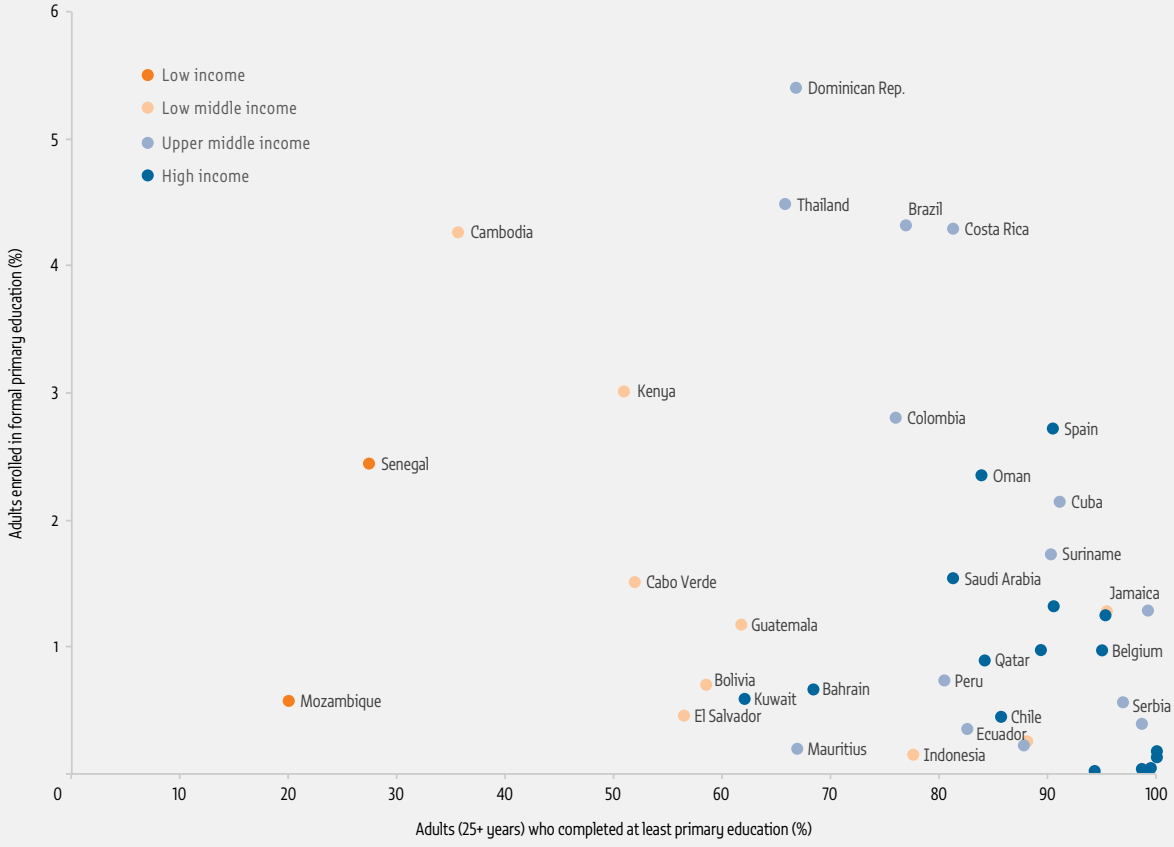
Arguably, the thematic indicator is a subset of the global indicator on three dimensions (**Figure 11.5**). First, the global indicator covers the entire adult age range (15 to 64 years), while the thematic indicator is limited to youth (15 to 24 years). Second, the global indicator covers work and non-work related education, whereas the thematic indicator refers only to the former. Third, the global indicator refers explicitly to formal and non-formal

FIGURE 11.3:
Women are a majority of university graduates but a minority of STEM graduates
Percentage of female graduates from science, technology engineering and mathematics programmes and all tertiary programmes, 2015



Source: UIS database.

FIGURE 11.4:
More adults return to school in upper middle income countries than in poorer ones
Percentage of adults enrolled in formal education and percentage of adults who have completed at least primary school, 2015

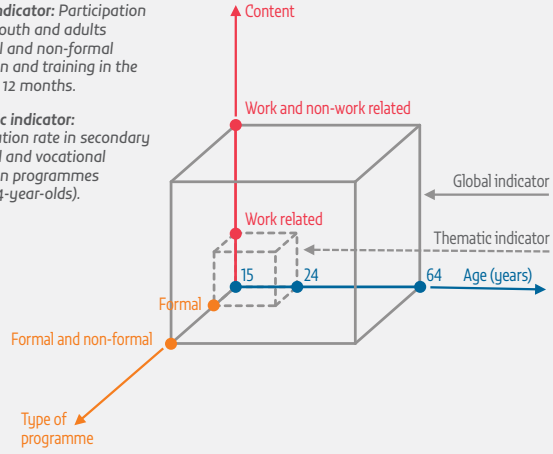


Source: UIS database.

FIGURE 11.5:
The thematic indicator on youth technical and vocational education is a subset of the global indicator on adult education
Relationship between two target 4.3 participation rate indicators by age, programme type and education content

Global indicator: *Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months.*

Thematic indicator: *Participation rate in secondary technical and vocational education programmes (15- to 24-year-olds).*



Source: GEM Report team.

programmes, while the thematic indicator currently only covers formal secondary programmes, thus underestimating the breadth of education and training opportunities.

As the 2016 GEM Report pointed out, these two indicators pose considerable monitoring challenges, despite the Inter-agency and Expert Group on SDG Indicators giving the global indicator tier II classification, meaning it 'is conceptually clear, has an internationally established methodology and standards ... but data are not regularly produced by countries'.

Capturing the considerable amount of education and training that happen outside formal institutions and programmes cannot rely on administrative data from providers. Rather, it requires direct questions to participants. Household surveys can help fill the gap. However, again, relevant questions vary considerably among surveys and do not consistently capture all

education and training types, including apprenticeships, internships, open or distance education courses, organized on-the-job training, seminars and professional development workshops. Surveys also tend not to capture programme duration, content and other characteristics. Two examples demonstrate the challenges: a cross-national survey of youth and employment, and a comparison of labour force survey questionnaires.

SCHOOL-TO-WORK TRANSITION SURVEYS CAPTURE ASPECTS OF YOUTH PARTICIPATION IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

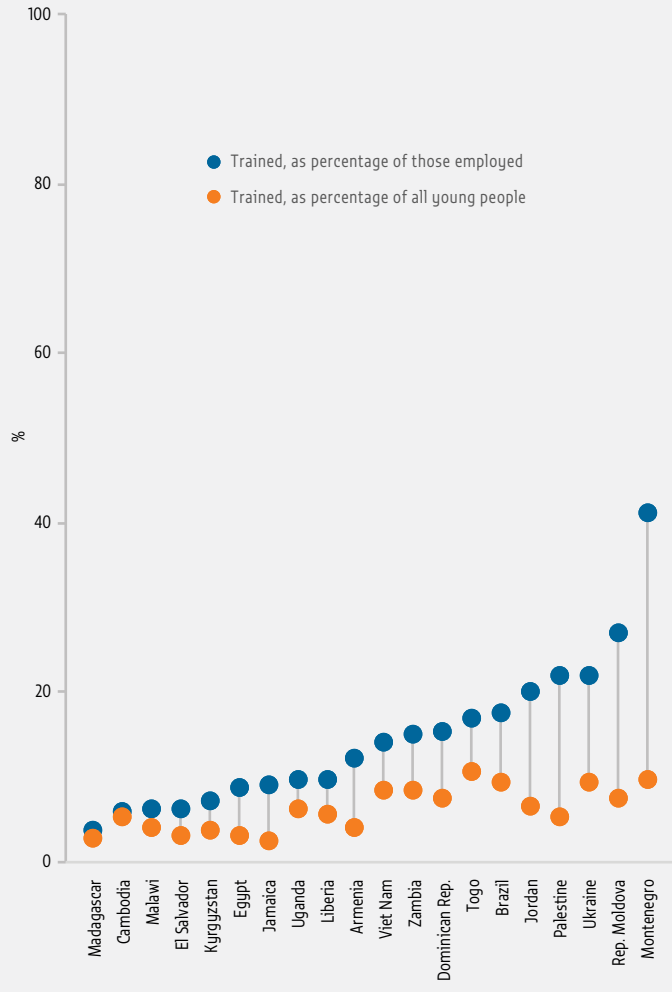
The International Labour Organization (ILO) School-to-Work Transition Surveys are a potentially rich source of information on the labour market experience of people aged 15 to 29 in low and middle income countries, making them a good candidate for thematic indicator data. However, education and training are not central to the surveys, as is particularly evident in two respects. First, current and past education attendance-related questions differ from those established by other cross-national household surveys, such as the Demographic and Health Surveys. As a result, education attendance and attainment are difficult to estimate.

Second, questions that could capture the incidence of education and training in the past 12 months only target those employed (Elder, 2009). The percentage of employed young people varied from 23% in Palestine to 79% in Madagascar. The remaining population may be unemployed, in full-time education or inactive. In practice, this means 77% of Palestinian youth are not asked if they received additional training, leaving a large proportion of unknown responses. Of the youth who responded, those who received training at their current job varied from less than 10% in low and lower middle income countries in sub-Saharan Africa (Madagascar, Malawi and Uganda), Central Asia (Kyrgyzstan) and South-Eastern Asia (Cambodia) to more than 20% in upper middle income countries in Western Asia (Jordan and Palestine) and Eastern Europe (Montenegro, Republic of Moldova and Ukraine) (**Figure 11.6**). Togo, a low income country, had the highest percentage of young people receiving on-the-job training in an apprenticeship (8%).

The School-to-Work Transition Surveys contain interesting information but do not yet offer a suitable basis for monitoring youth participation in technical and vocational education and training. They need to ask all individuals if they have participated in training, regardless of employment status. Moreover, the surveys lack an

> “The School-to-Work Transition Surveys need to ask all individuals if they have participated in training, regardless of employment status”

FIGURE 11.6:
Most young people do not receive on-the-job training
Percentage of people aged 15 to 29 who received training in their current jobs in the previous 12 months, selected countries, 2012–2015



Source: Pastore (2017).

integrated framework for recording past and current institution-based and workplace-based education and training. It is also likely that countries have different understandings of the education and training categories.

THERE ARE LARGE INCONSISTENCIES AND GAPS IN HOW ADULT EDUCATION IS CAPTURED IN LABOUR FORCE SURVEYS

Concerning the global indicator, labour force surveys remain the data source with the highest potential for monitoring adult participation in education and training. In Europe, the EU Labour Force Survey (LFS), carried out quarterly since 1983 in 33 countries, is the official source of information on adult education participation and 'encompasses all learning activities undertaken ... with the aim of improving knowledge, skills and competences, within personal, civic, social or employment-related perspectives' (Eurostat, 2017b). It covers participation in both formal and non-formal education and training during the four weeks prior to the interview.

Analysis of the 2007–2016 data suggests three interesting conclusions. First, it is not enough to look at the education and training experience of the employed: The unemployed and inactive populations also participate, if at lower levels (**Figure 11.7a**). Second, there are notable gender differences: Women are more likely to participate in education and training in population groups except the inactive. Third, there is considerable inequality in participation by age. In 2016, 17% of 25- to 34-year-olds participated in education and training, compared to 6% of 55- to 64-year-olds (**Figure 11.7b**). Among adults participating in formal education, 10% were in primary and lower secondary, 47% in upper secondary and post-secondary non-tertiary, and 43% in tertiary education.

> "In European Union countries, women are more likely to participate in education and training except for those inactive in the labour force"

Outside the European Union, labour force surveys may capture data on adult education, but definitions and methodologies vary too much for the data to be internationally comparable. The ILO maintains links to national labour force survey questionnaires (ILO, 2017). The GEM Report team analysed 49 such questionnaires to understand how they capture adult learning activities.

> "Only 19 out of 49 labour force surveys analysed report on whether adults participate in learning activities"

Only 19 report on whether adults participate in learning activities. They differ in their definitions of training or education and reference periods but at least offer adult education participation information. Ten surveys are comparable, being part of the LFS (**Figure 11.8**).

Surveys in 27 of the 49 countries ask about absence or reduced hours over a reference period due to education or training, which is a very indirect way to extract adult education information. In addition, 28 of the countries ask about current involvement in workplace training through apprenticeships or internships. The Ghana Living Standards Survey recognizes study or training leave as a reason for absence from work and asks about apprenticeship types based on whether trainees pay or are paid. Only 13 mainly high income European countries ask all three questions. Only work-related training information is collected in the vast majority of cases.

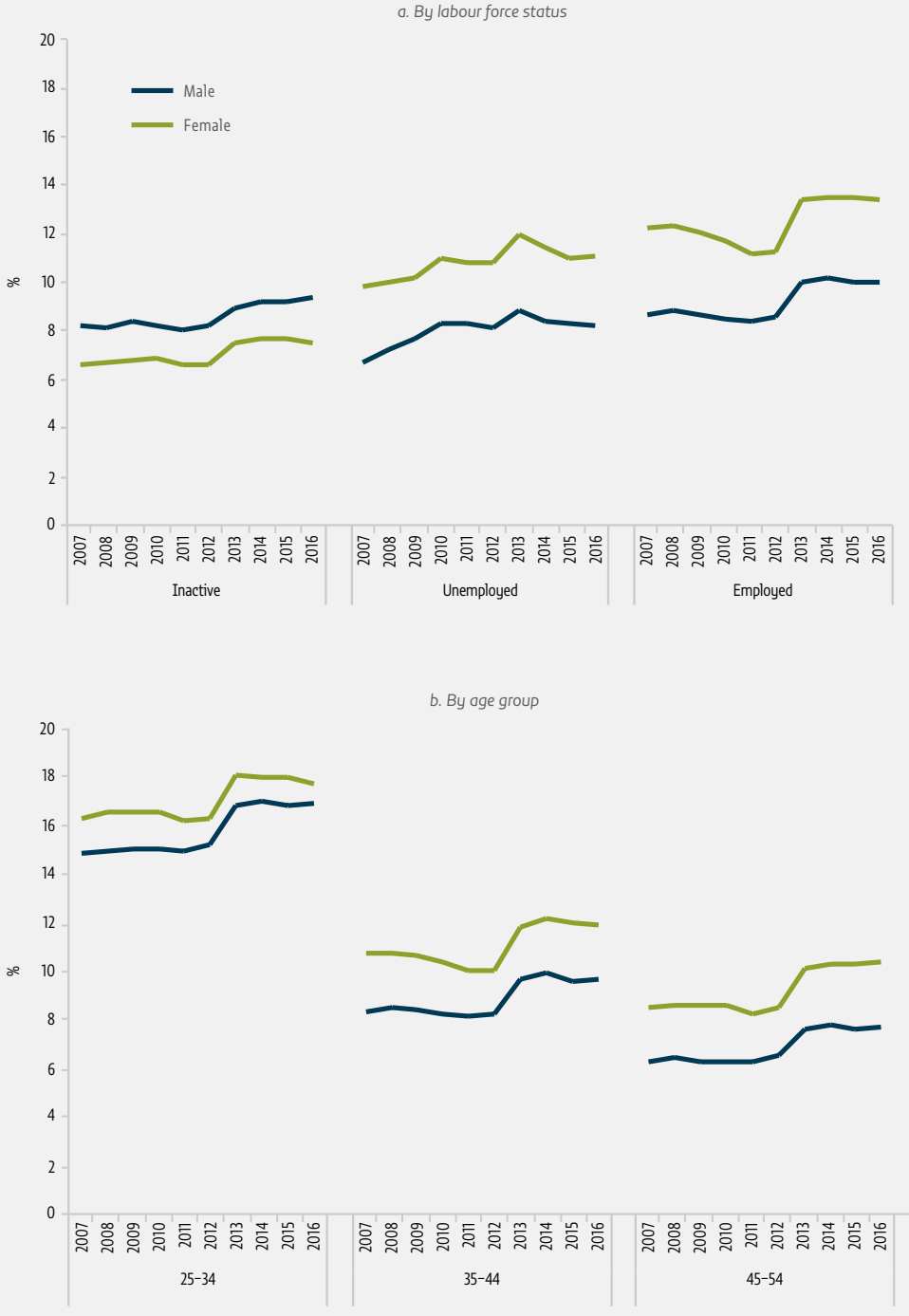
While labour force surveys show potential as data sources for the global indicator, a common education and training module that addresses both formal and non-formal education is needed. The International Congress of Labour Statisticians (ICLS), a coordinating body which adopts resolutions and recommendations on the collection of labour force data, subject to the approval of the ILO Governing Body, could guide survey design updates.

The ICLS has adopted a resolution on the collection of education and training attainment data, but outside the EU LFS approach there is little consistency in capturing non-work related learning activity. Survey questions vary according to national priorities. Reference periods range from the previous week to the previous year to when respondents last participated in training or learning. The ICLS could help inform the global indicator by reviewing modules for cross-country comparability.

FIGURE 11.7:

Adult participation in education and training in Europe is higher among women, younger people and the employed

Adult participation rate in education and training during the previous four weeks, by sex, European Union, 2007–2016



Source: Eurostat (2017a).

FIGURE 11.8:
Few labour force surveys ask useful questions for monitoring adult education
Types of questions on adult education participation in 49 national labour force surveys

Source: GEM Report team analysis of labour force surveys.

DATA FOCUS 11.2: MEASURING TERTIARY PARTICIPATION AND ATTAINMENT THROUGH HOUSEHOLD SURVEYS

Household surveys are essential for calculating disparity in access, participation and completion of tertiary education. Yet they often do not provide a straightforward basis for comparison, owing to insufficiently detailed information on course characteristics or degree attainment. Attendance indicators in cross-national household surveys, such as the Demographic and Health Surveys and Multiple Indicator Cluster Surveys, are estimated from school participation questions aimed at 5- to 24-year-olds, while adult education information derives from the age-indiscriminate household member roster of questions.

It is not possible to estimate attendance and attainment rates in post-secondary non-tertiary (International Standard Classification of Education [ISCED] 4), short-cycle tertiary (ISCED 5) and long-cycle tertiary courses (ISCED 6), as 'higher' is usually the only descriptor of the

level attended. One participation and three attainment rate indicators were calculated for this report. An attendance rate was estimated for the standard age group supposed to be enrolled in post-secondary education, which, for most countries, corresponds to 18- to 22-year-olds. Attainment rates were calculated between those aged 25 to 29 who completed either two or four years, and those aged 30 to 34 who completed at least four years.

Differences between the survey indicators reflect education system characteristics. However, on average, among 96 countries compared, the difference between the attendance rate and the attainment of at least two years of post-secondary education was four percentage points, suggesting some students leave post-secondary education in early years. The gap between those who completed two and four years is a further six percentage points. The gap between those aged 25 to 29 years and 30 to 34 years who complete four years was one percentage point, on average (**Figure 11.9**).

A key contribution of household surveys is that they lay bare vast disparities between different population groups. For example, in low and middle income countries, 18- to 22-year-old attendance takes off among the richest fifth of the population, but remains close to zero for the poorest. In El Salvador, 51% of the richest fifth but less than 2% of the poorest fifth attended any form of post-secondary education. In Mongolia, the respective shares were 67% and 3%. These figures suggest many middle income countries urgently need to introduce policies to make post-secondary education accessible to the poor (**Figure 11.10**).

POLICY FOCUS 11.1: QUALITY ASSURANCE IN HIGHER EDUCATION

Quality in higher education refers to both the achievement of learning goals and the process of achieving them (Sanyal and Martin, 2007). Quality assurance, in turn, entails monitoring and evaluating academic programme design, faculty characteristics, capacity to support learning and research, and student outcomes. While higher education has had considerable autonomy historically, quality issues are increasingly assessed rather than assumed as access expands globally.

Quality assurance processes provide policy-makers with detailed information about system and institutional performance. Results can be used, for example, to justify changes to funding and program creation or consolidation. They should also provide students and parents with data on graduation rates, financial aid and even post-graduate employment to help them choose. Countries typically use a combination of quality assurance agencies that play different roles, including authorizing and licensing, accrediting, auditing or monitoring, reviewing qualifications and awards, and that, in addition, institutions use self-evaluation (Stensaker, 2013).

> “Quality assurance for higher education monitors and evaluates academic programme design, faculty characteristics, capacity to support learning and research, and student outcomes”

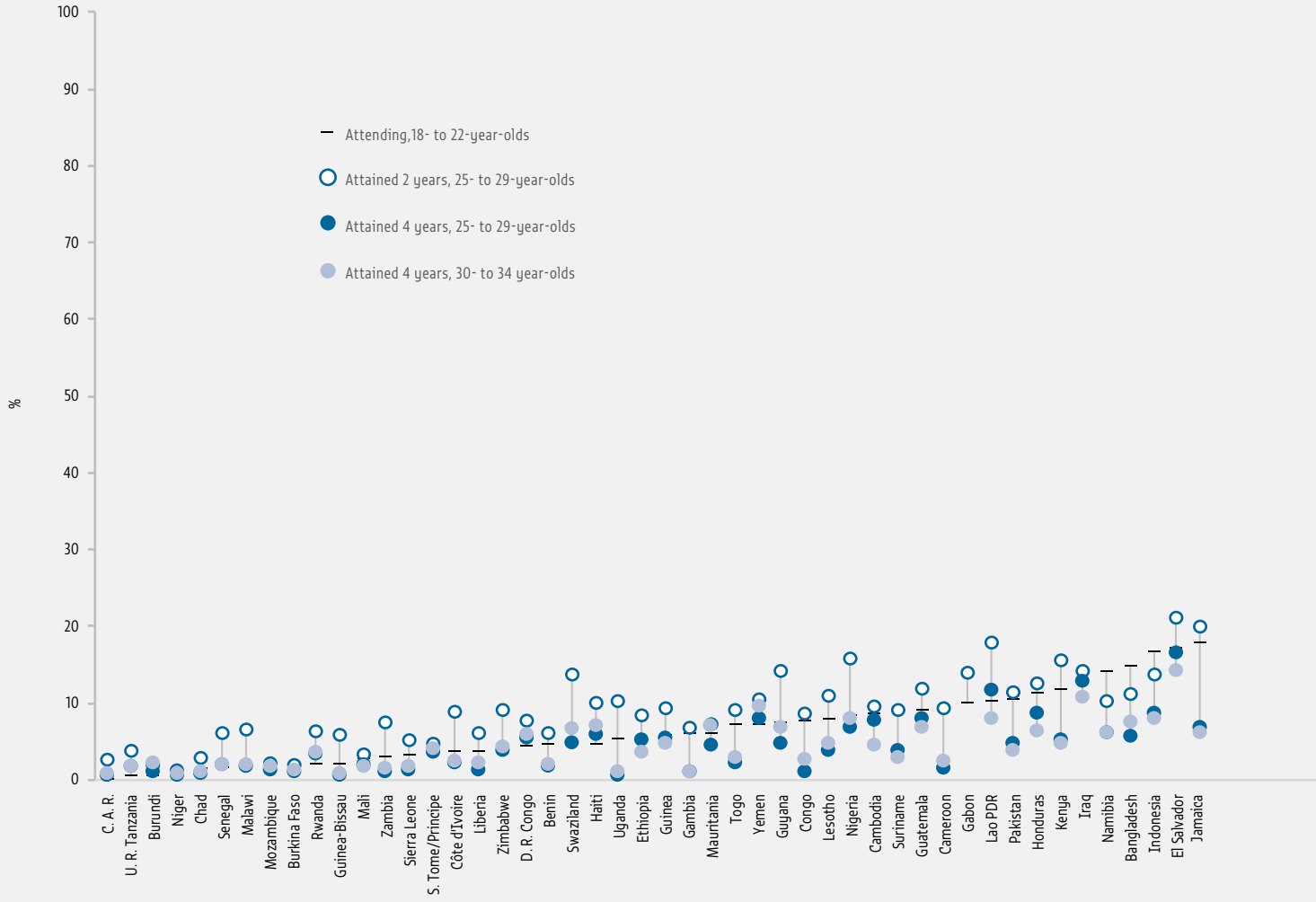
Public institutions receive authorization directly from government through a public charter or legal statute. In many countries, public institutions are under some form of government control, with governing board members or other leadership appointed by government officials, while faculty and staff are treated as government employees. Most countries also provide a route for non-public entities, such as non-profit or religious organizations, foundations and entrepreneurs, to establish a college or university, legally grant an academic degree and, in some cases, become eligible for government funding. This authorization process is often separate from quality assurance but may be parallel to it.

Quality assurance processes can be applied to institutions, academic programmes and, less often, individual courses (Kinser and Lane, 2017). There are several models of system-wide processes. The accreditation model is designed to make an institutional assessment. A positive decision means the institution, department or programme can continue to operate. A negative decision typically leads to probation, restrictions or closure. The assessment model is a formative process, intended to provide feedback for improvement. The goal is to identify weaknesses and ensure they will be promptly corrected. The audit model evaluates the internal quality assurance system within a college or university or may examine an entire national system. This section focuses on selected issues of higher education quality assurance approaches around the world.

FIGURE 11.9:

There is great variation in post-secondary attendance and attainment patterns

Post-secondary education attendance rate and years attained for different age groups, selected countries, 2010–2015

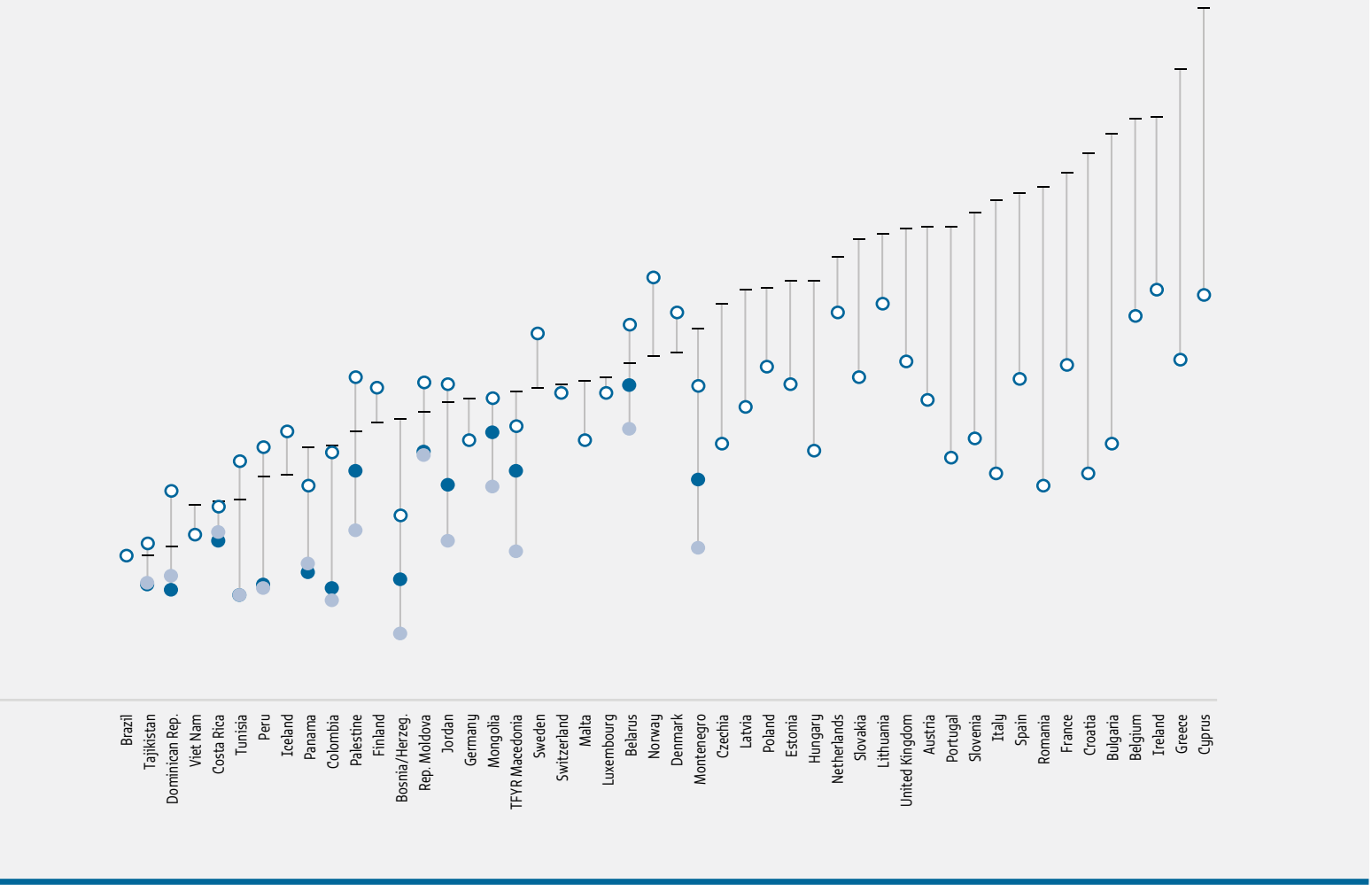


Source: GEM Report team calculations based on household surveys.

LEGAL FRAMEWORKS OF QUALITY ASSURANCE REFLECT NATIONAL CONTEXTS

The purposes of quality assurance systems are reflected in national legal frameworks. In the 1990s, countries experiencing rapid growth in enrolments and numbers of private providers began to develop regional mobility programmes along with quality assurance frameworks. These frameworks established a responsible national agency, either independent or part of the education ministry. Increasingly, frameworks designate several agencies to separate out tasks either by function (registration, accreditation) or by institutional sector (public, private).

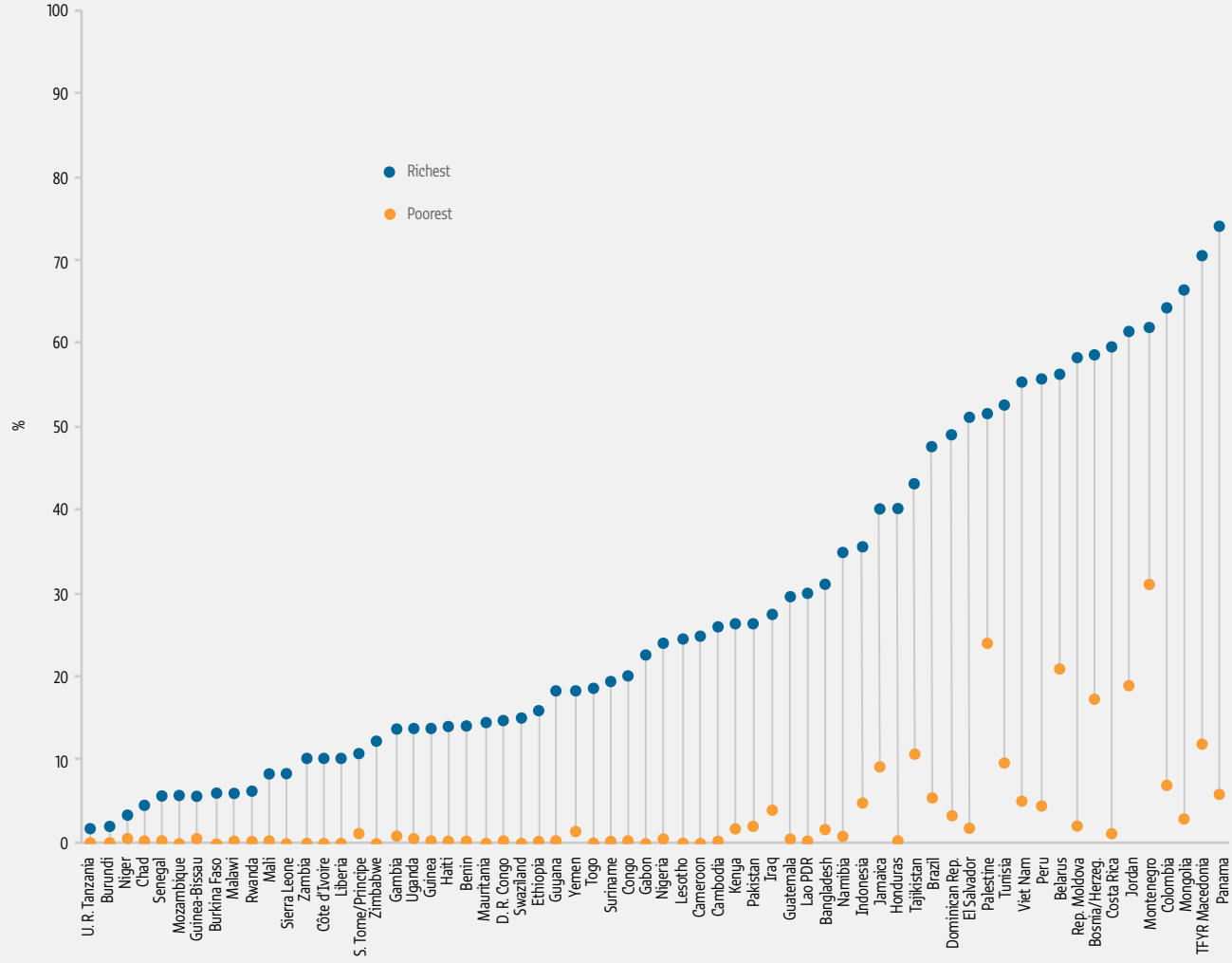
Many low income countries where enrolment and provider numbers remain limited have yet to establish a national quality assurance system (Materu, 2007; Wangenge-Ouma and Langa, 2011). Instead, universities implement quality control at the campus level, often through audits.



> “Poor countries with expanding tertiary education systems often struggle to establish a quality assurance mechanism”

Poor countries with expanding tertiary education systems, on the other hand, often struggle to establish a quality assurance mechanism. Bangladesh has a complex higher education structure with four types of institutions: about 80 public and private universities; 1,500 colleges affiliated with National University (five in six of which are private); 1,200 private religious institutions affiliated with Islamic University; and various types of professional colleges. There has been no recognized quality assurance body (Nagashima et al., 2014) due to delay in passing a bill establishing an accreditation council. Political opposition from the private sector, which resisted the inclusion of foreign universities, and a dominant national public university are among the reasons for the delay (Kinser and Lane, 2017).

FIGURE 11.10:
The poorest have hardly any post-secondary education opportunities in low and middle income countries
Post-secondary education attendance rate by wealth, selected countries, 2010–2015



Source: GEM Report team calculations based on household surveys.

Small countries with moderate enrolment or a dominant public sector often use a single national agency. In Mauritius, the Tertiary Education Commission was established in 1988. Legislation in 2005 gave it the responsibility to register and accredit private universities and other post-secondary institutions, recognize international academic qualifications and exercise oversight for academic quality assurance. Its Quality Assurance and Accreditation Division plans and coordinates quality assurance oversight for both the public and private sectors (Ramlugun, 2013).

In countries with many and diverse providers or high private enrolment, several agencies often share responsibility for quality assurance. Brazil established the National System of Higher Education Evaluation in 2004. It consists of institutional evaluation, course evaluation and student achievement assessment. Its guiding principle is to recognize the diversity of institutions and courses (Semyonov and Platonova, 2017). The National Commission for Higher Education Evaluation and the Ministry of Education's National Institute of Educational Studies and Research Anísio Teixeira are responsible for

coordinating and operating the evaluation process. In 2011, the Secretariat for Higher Education Regulation and Supervision was established to evaluate private institutions (Castro, 2015).

In Argentina, the 1995 Higher Education Law created institutions responsible for quality assurance and introduced a system linking research results to monetary and non-monetary rewards (Salto, 2017). In 2007, Malaysia established a qualifications framework to merge existing processes in public and private institutions, benchmarked against international models (Kinser and Lane, 2017). The Russian Federation established a national higher education accreditation agency in 1995 and accountability requirements in 2013. In annual performance monitoring, the agency evaluates over 100 parameters on education, research, facilities and financial, economic and international activity. If an institution underperforms on key indicators, a special regional–federal commission determines what action to take (Semyonov and Platonova, 2017).

In high income countries, with a wide array of institutions, various types of quality assurance agencies exist. For example, out of 28 European Union countries, 3 used a single government quality assurance agency, 18 set up a single independent agency and 7 used multiple independent agencies (Wächter et al., 2015). The 1997 Lisbon convention, which set out down a pathway to recognize diplomas and awards in Europe, spurred national legislative reform in 48 countries that participated in the Bologna process and was a strong driver for the development of national quality assurance frameworks. According to Article VIII of the Lisbon convention, parties are responsible for providing specific information about their education and quality assurance systems (UNESCO, 2016a). Also as part of the Bologna process, a set of European Standards and Guidelines provides guiding principles and describes accepted practices for quality assurance across the European Higher Education Area (ESG, 2015).

Portugal's legislation to meet the Lisbon convention requirements, developed in 2006–2007, defined general principles governing quality assurance procedures in higher education, established conditions for accreditation of programmes of study and created the Agency for the Assessment and Accreditation of Higher Education. In addition, Portugal required higher education institutions to develop internal quality assurance systems, with support from the agency, which also audits these systems (Semyonov and Platonova, 2017).

Every higher education institution in Finland underwent an audit between 2005 and 2011. Institutions that fulfilled a set of criteria received a quality label, valid for six years. Institutions that did not receive the label had to be reaudited within two to three years. Audit outcomes did not affect institutions' funding or degree-granting powers, however (Aurén, 2017).

REGULATION IS NOT KEEPING PACE WITH THE GROWTH OF HIGHER EDUCATION

As private higher education institutions have proliferated, regulations seem to play catch-up to developments in many countries. In January 2016, 3,422 of 4,274 higher education institutions in Indonesia were not accredited, implying that three-quarters of graduates earned illegitimate diplomas (Felicia and Ramli, 2017). In 2014, to overcome limits to regulation of private institutions, Peru's congress established a superintendence to authorize or license new and existing universities. It also passed a university law that universities heavily criticized as significantly encroaching on their autonomy (GRADE, 2017). In Poland, rapid expansion of private higher education almost doubled the number of students between 1990 and 1995, leading to worries about teacher quality, but an accreditation committee was not established until 2002 (Jakubowski, 2017).

> "In January 2016, 3,422 of 4,274 higher education institutions were not accredited in Indonesia"

In some countries, there are calls to keep regulations at a minimum to increase institutional flexibility and promote private participation. An analysis of the regulatory framework of India's rapidly expanding higher education system argued that regulations were numerous, costly, rigid and tough to navigate. It recommended streamlining regulations and eliminating duplication (Shah, 2015).

Still, the presence of fraud, predatory lending and exploitative practices highlights the importance of sensible regulations and effective quality assurance (Stensaker, 2013). In Ghana, there is evidence of private institutions having submitted misleading information, e.g. qualified professors listed for accreditation purposes disappear from employee lists after approval (Tsevi, 2015). Higher Education Degree Datacheck, which verifies diploma claims and investigates fraudulent

degree-granting in the United Kingdom, has identified over 180 bogus education providers (HEDD, 2017). Federal regulators in the United States have penalized several institutions, such as Corinthian Colleges, charging that they engaged in predatory lending and misled students about job prospects (Lobosco, 2015).

The transnational marketplace presents additional regulatory challenges. Higher education is increasingly viewed as an international commodity and supported by trade treaties, such as the General Agreement on Trade in Services (Verger, 2010). While no global statistics on cross-border higher education exist, 34 countries had opened 310 international branch campuses in 91 countries, as of January 2017. The largest 'exporters' include Australia, France, the Russian Federation, the United Kingdom and the United States (C-BERT, 2017).

Countries that have 'imported' such branches include China, Malaysia, Qatar, Singapore and the United Arab Emirates. The United Arab Emirates has the world's highest percentage of foreign education providers (C-BERT, 2017). As branch campuses initially spread, most were exempt from quality assurance. However, complaints led Dubai to establish the University Quality Assurance International Board to ensure that branch campuses' academic offerings were comparable to those at their home campuses. In other countries, quality assurance of cross-border higher education is relatively weak. Such issues are especially challenging for poorer countries lacking capacity to regulate private higher education (Kinser and Lane, 2017).

DIVERSE QUALITY ASSURANCE MECHANISMS REFLECT DIFFERENCES IN OBJECTIVES

Quality assurance mechanisms employed by national agencies and higher education institutions typically involve standard setting, initial self-assessment, external expert and peer review, evaluation reports, and appeals processes (Martin and Stella, 2007). They are adapted to cover a range of providers (e.g. research universities, junior colleges, technical institutes), degree levels (e.g. from six-month technical programmes to post-doctoral certificates), academic disciplines and professions, and higher education governance types (e.g. public/private, centralized/autonomous).

The first step is agreeing standards and criteria as the basis for quality assurance decisions. Standards span higher education inputs, activities and outputs and may be prescriptive or suggestive. For example, they may refer to admissions in order to encourage access for under-represented populations, or to research output in order to focus universities' attention on their contribution to social and economic development. In China, the Quality Assessment of Undergraduate Education standards cover 19 subindicators in 8 major areas: university mission, teaching staff, facilities, academic curriculum, management, atmosphere, learning outcomes and feature programmes (Liu, 2011). After a self-evaluation and site visits, a review report ranks institutions in one of four categories: excellent, good, qualified or unqualified. By 2010, 72% of the 589 universities reviewed were ranked excellent. About 4% were designated as qualified and none as unqualified (Liu, 2015).

In South Africa, the Higher Education Quality Council placed equity at the core of its quality-focused transformation agenda to redress historical inequality. Minimum standards were instituted across historically white and historically black universities, and a capacity-building programme undertook to improve institutional ability to respond to common quality requirements. Audits examine whether historically white institutions have concrete policies to recruit black students from deprived backgrounds and to improve the learning environment for diverse students. The programme accreditation criteria include equity targets and goals of widening access. However, these measures are not linked to strong financial consequences (Lange and Singh, 2010).

Higher education institutions often participate in additional quality assurance programmes to highlight their expertise. For example, professional accreditation, concentrated in Europe and the United States, measures skills fundamental to professions, providing feedback in reviews targeted at teaching and learning, assessment, and programme design and management (de Paor, 2016). Graduates of specially accredited programmes are often eligible for jobs in the civil service or as licensed professionals.

Another way to stand out is to participate in self-evaluation for a special characteristic, such as sustainability. For example, 838 institutions, mainly but not exclusively in North America, participate in the Sustainability Tracking, Assessment and Rating System. This transparent self-reporting framework allows colleges and universities to measure their sustainability performance. Institutions submit surveys and receive ratings on their incorporation of green concepts and practices in curriculum, research, public engagement, campus operations and administration. Of the

421 institutions reviewed thus far, only one has received the top platinum rating while 29% received the gold rating and 49% silver (AASHE, 2017).

QUALITY ASSURANCE AGENCIES NEED TO BE MORE TRANSPARENT

The methods quality assurance agencies use to hold themselves accountable include regional and international agency registers, national information centres, annual reports and databases. The International Network for Quality Assurance Agencies in Higher Education (INQAAHE), which counts 270 member and affiliate quality assurance agencies in 100 countries among its members, publishes a manual of best practices to encourage accountability and transparency. About 18 members, from Costa Rica to the United Arab Emirates, have been recognized as meeting the INQAAHE Guidelines of Good Practice (INQAAHE, 2017; Wells, 2014).

Agencies can enter quality assurance registries after a review of their practices. The European Quality Assurance Register for Higher Education lists 47 agencies in 23 countries that demonstrate substantial compliance with a common set of principles for quality assurance (EQAR, 2017). On the joint website of the European Network of Information Centres in the European Region and the National Academic Recognition Information Centres in the European Union, the European Commission, the Council of Europe and UNESCO publish national quality assurance information for 55 countries that participate in the Lisbon convention. The Asia Pacific Quality Register has so far recognized one member, the Fiji Higher Education Commission. In the United States, the Council for Higher Education Accreditation recognizes 60 accrediting organizations.

> “The International Network for Quality Assurance Agencies in Higher Education (INQAAHE) with members from 100 countries publishes a manual of best practices”

However, the results of those agencies' activities are often not easily accessible. Austria organizes annual stakeholder meetings to discuss review outcomes, allow for stakeholder debate and collect qualitative information on the impact of the process. But in many countries, little of that information reaches the public or even other professional groups. Most of it stays within the small circle of higher education practitioners and experts (Wächter et al., 2015). Among 17 Asian national agencies, 14 review themselves periodically and 10 are reviewed by other government agencies. But one-third have not made public any annual reports, self-review reports or other relevant material (Hou et al., 2015).

Given how costly quality assurance processes are in terms of staff, facilities and other resources, failure to share the results widely not only compromises higher education systems' effectiveness but also represents a lost opportunity. In Viet Nam, 875 quality assurance specialists work in over 700 universities, colleges, and technical and vocational schools (Nguyen et al., 2017). Quality assurance requirements mean increased workloads for academics who perform self-evaluations and serve as external peer reviewers for other campuses (Cardoso et al., 2016). In Norway, which has a well-developed quality assurance system, a survey of university leaders, faculty, staff and students showed that few were aware of its impact on teaching or research quality (Stensaker et al., 2011).

CONCLUSION

The rapid increase in higher education enrolment, the diversification of provision and governance structures and, in some regions, the growth of student mobility have increased demand for quality assurance mechanisms. Yet despite growing sophistication, the establishment of standards and good practices, and the considerable amount of resources invested, it appears that even when such mechanisms are designed to play a formative role, faculty, students and families may not yet understand whether they improve teaching, learning and research. The outputs of quality assurance systems should be more widely shared; resources also need to be set aside for communicating the reports to the ultimate beneficiaries.

POLICY FOCUS 11.2: ACCOUNTABILITY AND AFFORDABLE ACCESS TO HIGHER EDUCATION

Enrolment in higher education has been on the rise. As more students complete secondary education, they look to higher education to expand their career and life opportunities. In high income countries in Europe, participation is also increasing among non-traditional students: adults aged 25 and older make up more than a third of undergraduate students in ten countries, while in five countries at least one in four is a part-time student (Hauschildt et al., 2015).

As demand for higher education increases, governments have responded by shifting some of the cost burden to households (Johnstone and Marcucci, 2010). Two strategies are commonly adopted. First, tuition is introduced or increased either across the board or for designated groups of students (dual track). Tuition income thus makes up for reduced budget allocations to universities. Second, the private sector is encouraged to provide degree programmes. This diversifies enrolment options while allowing government to concentrate on the public system. The global trend seems to be towards reduced public expenditure and increased privatization and cost-sharing in higher education finance (Yang and McCall, 2014).

> “The gap in access to institutions of good quality is pronounced, and very dependent on ability to pay”

While the gap in access to higher education remains large, the gap in access to institutions of good quality is pronounced, and very dependent on ability to pay. In China, India and the Russian Federation, elite research universities received more public funds and often charged higher tuition and other fees. Meanwhile, comprehensive or non-elite colleges and technical institutes received less public funding and charged their students lower tuition (Carnoy et al., 2014).

This section reviews government responsibility for affordable access to higher education, examines policy tools and practices for fostering affordable access, and explores ways to target assistance at those who need it most.

NATIONAL LEGISLATIVE FRAMEWORKS CAN PROVIDE A BASIS FOR EQUITABLE ACCESS

Legislating for equal opportunity and against discrimination is a key strategy governments use to foster equity and affordability in higher education systems. A few countries guarantee universal access to post-secondary education, such as Ecuador and Greece in their constitutions and Tunisia in its 2008 law on higher education. The Constitution of the Republic of Korea states that ‘all citizens have an equal right to receive an education corresponding to their abilities’.

> “Many laws and acts prohibit discrimination and encourage access for minorities and disadvantaged groups; fewer legal frameworks mention affordability”

Many laws and acts guaranteeing access to higher education prohibit discrimination and encourage access for minorities and disadvantaged groups. Brazil’s 2002 law on diversity in universities promotes access for people from socially disadvantaged groups, specifically targeting Afro-descendants and indigenous people. In the Lao People’s Democratic Republic, the 2009–2015 Education Sector Development Framework emphasizes equality of access.

Fewer legal frameworks mention cost and affordability. Those that do set expectations about the balance between public investment and household spending. The 1995 Higher Education Loans Board Act in Kenya aims to increase access for socio-economically disadvantaged students by ‘grant[ing] loans out of the Fund … as the Board may deem fit, to any eligible person to enable him … to meet the cost of higher education’. Peru’s Constitution considers cost as a possible means of discrimination and guarantees ‘the right to free education’ based on performance for those who ‘lack the economic resources needed to cover the cost of education’ at public universities. The goal of the 1994 Higher Education Act in the Philippines is to ‘protect, foster and promote the right of all citizens to affordable quality education’.

A JUDICIOUS MIX OF FEES AND FINANCIAL AID IS NEEDED FOR EQUITABLE ACCESS

One approach to affordability is to make higher education free for all. However, a free tuition policy that is not accompanied by support for disadvantaged groups can be inequitable. In the Philippines, a 2016 law abolished tuition for 1.6 million students in 112 state universities and colleges – 40% of all students in the country (CHED, 2017). While the policy seems a move towards affordability, students who enrol at a state university or college are already more likely to afford higher education (Orbeta and Paqueo, 2017). The law does not apply to the 2.5 million students enrolled in private institutions, where fees can be up to three times higher (ADB, 2012). Public loans and grant programmes to help with private university fees base their eligibility on a combination of household income and academic performance, which excludes more disadvantaged students. In 2015, less than 4% of students enrolled in private institutions in the Philippines were funded (CHED, 2017).

> “A free tuition policy that is not accompanied by support for disadvantaged groups can be inequitable”

To increase equity in access and survival to graduation, tuition policy (whether free, dual-track, deferred or upfront) has to be designed in conjunction with financial aid programmes, which can combine grants and scholarships, income-contingent loans, and tax benefits (Marcucci, 2013).

In Germany, public universities where 94% of students are enrolled charged no tuition until 2005, when 7 of the 16 states imposed payments of up to €1,000 per year. Despite the fees' moderate size, the policy is estimated to have reduced the probability of enrolment by between five and seven percentage points (Hübner, 2012). Thus the states gradually abolished the fees, the last two being Bavaria and Lower Saxony by 2014. Financial support through the Federal Education and Training Assistance Act reaches one-quarter of students and covers living expenses and fees. The assistance is split equally between a grant and an interest-free loan with a five-year grace period (Lavinson, 2017). Increasing the annual amount by €1,000 increases higher education participation by just two percentage points (Steiner and Wrohlich, 2012). However, only 60% of eligible low income students take up their entitlement; the probability increases with the level of the benefit, the existence of older siblings who received a benefit, and lower aversion to debt (Herber and Kalinowski, 2016).

Tools to increase access in Chile include four grant programmes exempting beneficiaries from various fees, depending on the type of institution attended. In addition, two loan schemes target students from the bottom 80%. The Fondo Solidario Universitario, available only to students enrolled in public universities, is administered by the institutions. The Crédito con Aval del Estado is available to students at all institutions, administered by a central loan office and provided by private banks. Both charge 2% interest and monthly instalments are tied to income. The likelihood of remaining in college to graduation improves from 37% to 62% for low income students who receive grants. Grants only cover a portion of tuition, but loans that cover the rest of the cost raise persistence to 79% (Santelices et al., 2016).

Poland uses a combination of low tuition fees, scholarships and loans to offer broad access to higher education. In 2011, it broadened the scholarship system by changing the ratio between merit grants and income-based grants in favour of the latter and raising by 30% the income threshold for eligibility for a grant covering other costs, such as housing and transportation (OECD, 2015a).

China charges upfront tuition but recently improved its financial aid policy, which serves over 27 million students. The net cost of attendance for low income Chinese students is 187% of per capita income. Low income students in less selective institutions have higher unmet needs than wealthier students in more elite universities (Yang and Cheng, 2013). The reforms addressed this equity gap by expanding the pool of students eligible for government assistance, extending the loan repayment period to 20 years and adding repayment assistance for low income students (ICHEFP, 2017).

Loan repayment assistance for low income students is necessary. Income-contingent loans limit repayment to a percentage of the individual's discretionary income (Baum and Schwartz, 2005). In Thailand, the government offered a flat repayment loan to help with fees. For those earning at the national average level, the repayment burden for graduates was low, about 3% for men and 5% for women. But among the poorest, the burden was 9% for men and 14% for women. The higher education commission introduced an income-contingent loan in 2006 but the

programme was cancelled a year later because it was expensive and difficult to implement (Chapman et al., 2010).

Excess demand for loan programmes is an issue in several countries. Colombia introduced a programme called Ser Pilo Paga ('Hard work pays off') in 2014 to cover tuition and living costs at 39 high-quality universities, on condition that the students graduate. Eligibility was based on a combination of merit (measured by the secondary education exit exam score or grade point average) and income (measured by the stratum to which a household belonged in the national system of identification of potential social programme beneficiaries) (ICETEX, 2017a). In 2015, the country introduced Tú Eliges ('You choose'), with more flexible repayment schedules. Depending on the criteria, repayment options range paying off the entire amount while still at school to repaying the entire loan after graduation (ICETEX, 2017b). Around 40% of requests go unfulfilled, however (OECD, 2016b).

Uganda waives fees for 'deserving' students in public universities according to their entrance exam score. About 7% of students benefited from this programme in 2012, but they tended to be richer than average (Lavinson, 2017). This phenomenon was exacerbated by the growing privatization of university education in Uganda, where the private sector accounted for 74% of institutions and 49% of enrolment in 2013/4 (Basheka, 2015). A needs-based student loan scheme introduced in 2013/4 covered the fees of about 1,000 students enrolled in science-related programmes in public or private universities. A little over one in three candidates received the loan in the first three years, but loan allocation decisions have been an issue of debate in the parliamentary education commission (Parliament Watch, 2017).

Indeed, while targeting poorer students is critical, means testing can be difficult in low and lower middle income countries with less reliable measures of income. In sub-Saharan Africa, governments use proxies, such as parental education, home characteristics and family assets, to gauge need (ICHEFP, 2003). In the absence of a robust income tax system and loan repayment collection mechanism, loan boards and education trust funds in Ghana, Kenya and the United Republic of Tanzania have instructed employers to deduct repayment from wages (Pillay, 2013).

HOLDING GOVERNMENTS TO ACCOUNT FOR AFFORDABILITY

Students and parents need reliable, easy access to data on higher education affordability to make informed choices about which university to attend, where and for how long. National monitoring of attendance costs is particularly important when tuition and other fees vary by subject area, institution or form of study (e.g. part-time/full-time, distance/on-campus) (Orr, 2016).

Yet few countries provide data on average tuition fees or attendance costs and their relation to student ability to pay, even among those with a constitutional or legal framework guaranteeing affordability. In Peru, the National Council of Education annual report states that public university education is nominally free, but lists no fees for public or private institutions, even nominal (Peru CNE, 2015). The European Union publishes information on fees for its 28 member states and 9 partner countries but at a highly aggregated level (European Commission/EACEA/Eurydice, 2016). The OECD publishes estimated annual average tuition fees of educational institutions but the data is directed more at policy-makers and experts than at students and their families (OECD, 2016a).

> "Only a few countries provide data on average tuition fees or attendance costs and their relation to student ability to pay"

One exception to the rule is the United States, which since 1963 has published annual tuition fees and room and board rates through the National Center for Education Statistics. The average cost of undergraduate education rose in constant terms from US$9,641 in 1963 to US$22,432 in 2015 (NCES, 2016). The legal framework for higher education attendance costs is provided in Section 1092 of Title 20 of the US Code of Laws. In 2008, Public Law 110-315 built upon prior reporting on tuition fees to add transparency on college tuition for consumers to the regulatory framework (Heuser et al., 2012).

To be eligible to participate in Title IV federal student aid programmes, US colleges and universities must report attendance costs and the net price. Attendance costs cover average annual tuition and fees, room and board, books, supplies and transport. The net price is the average

attendance cost minus average student financial aid from all sources – federal, state and institutional. The Department of Education posts net price information on College Navigator, a website designed for students and their families. The law also requires campuses to make a net price calculator available on their websites (Heuser et al., 2012).

CONCLUSION

Affordability, a concept enshrined in SDG target 4.3, follows on commitments by several countries to ensure access to higher education without discriminating against disadvantaged groups. However, given the global trend towards cost sharing in higher education finance, it is not clear how governments can be held to account for such commitments. Fee-free policies alone do not deliver equitable access. The need to integrate fee policies and financial need approaches is critical. Governments have to develop financial assistance policies, combining grants and loans, that are flexible and respond to student need. While examples are emerging, there is a lack of data to help students and their families choose programmes and to assist policy-makers and experts in monitoring progress to 2030.

Students from Des Moines Public Schools, Iowa, take part in the Skilled Trades Academy.

CREDIT: Des Moines Public Schools

KEY MESSAGES

Most adults in low and middle income countries do not have even basic computer skills. In 2014–2016, only 4% of adults in Sudan and Zimbabwe could copy and paste files, while 2% to 4% in Egypt, the Islamic Republic of Iran, Jamaica and Pakistan could use basic arithmetic formulas in a spreadsheet.

There are wide gender gaps even in simple ICT skills. About 75 women for every 100 men could use basic arithmetic formulas in a spreadsheet in Italy, Germany and the Netherlands.

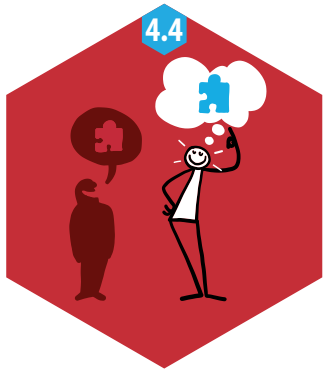
Adult ICT and digital literacy skills can be assessed either indirectly, by self-reporting, or directly, by testing. Comparing the two shows that indirect assessments, the basis for the global indicator, capture only basic skills levels.

Skills for work are commonly acquired outside formal education, e.g. in the community or workplace, and throughout life. Governments need to ensure that provision is of good quality and that qualifications and certificates correspond to the skills workers have and employers need.

Establishing regulations and accreditation processes for skills training providers, public and private, is important for accountability but requires resources and expertise many countries lack.

Many countries have introduced elements of a quality assurance system to strengthen accountability in skills development. A review of 20 low and middle income countries showed that 6 had no experience of any regulatory mechanism for non-government training provision and 9 had no experience of a functioning information system to improve system performance.

CHAPTER 12



TARGET 4.4

Skills for work

GLOBAL INDICATOR

4.4.1 *Percentage of youth/adults with information and communications technology (ICT) skills, by type of skill*

THEMATIC INDICATORS

4.4.2 *Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills*

4.4.3 *Youth/adult educational attainment rates by age group, economic activity status, levels of education and programme orientation*

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OVERVIEW

Skills for employment, decent jobs and entrepreneurship, the focus of target 4.4, encompass a wide scope. The 2016 *Global Education Monitoring Report* outlined a range of skills that could be covered but emphasized that skill requirements were specific to job opportunities, which differ by country. Given the task of identifying skills that (a) are relevant over diverse labour market contexts, (b) are acquired through education and training, and (c) can be measured in a meaningful way at low cost, the SDG monitoring framework has focused on ICT and digital literacy skills.

The global indicator of ICT skills – the percentage of individuals who, on a standard household survey or census, report performing any of nine computer-related activities in the previous three months – is an example of an indirectly assessed measure.[1] Analysis of the International Telecommunications Union (ITU) survey database for 2014–2016 revealed that most adults in low and middle income countries did not perform even the most basic ICT functions. Only 4% of adults in Sudan and Zimbabwe could copy and paste files; only 2% to 4% in Egypt, the Islamic Republic of Iran, Jamaica and Pakistan could use basic arithmetic formulas in a spreadsheet (**Figure 12.1**).

> “Most adults in low and middle income countries did not perform even the most basic ICT functions”

There is considerable inequality in the distribution of more sophisticated skills, such as programming. The share of adults with such skills within the European Union ranges from 1% in Bulgaria to 5% in France and 14% in Denmark. Particularly striking is the gender gap. The gender parity index of programming skills in European countries including Austria, the Czech Republic and Hungary is extremely low: At most 25 women for every 100 men have such skills. Few countries achieve parity even in less sophisticated skills: About 75 women for every 100 men could use basic arithmetic formulas in a spreadsheet in Italy, Germany and the Netherlands (**Figure 12.2**).

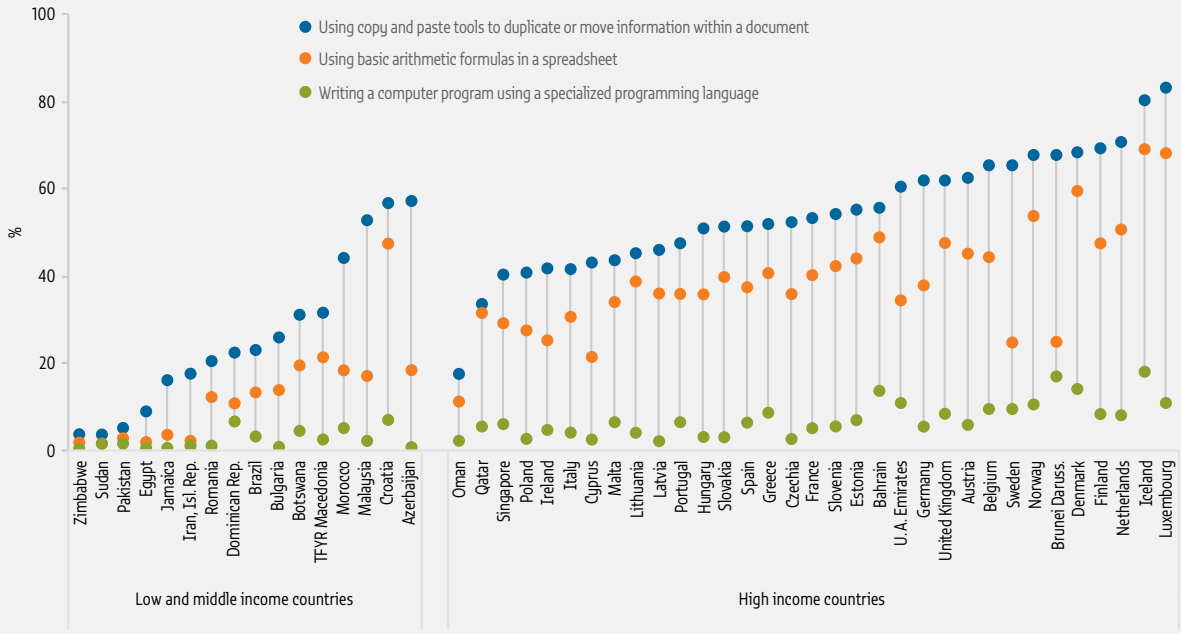
Two questions arise in monitoring ICT skills acquisition. Which of the nine activities captured by household and labour force surveys are the most suitable for reporting? And, since indirectly assessed and self-reported activities are only proxies for skills, which most accurately capture both underlying skills and substantive differences among countries? These questions require extensive research, but some insights can be gained from comparing data from indirect and direct assessments of skills (**Data focus 12.1**).

Like other skills for work, ICT and digital literacy skills are commonly acquired outside formal education, e.g. in the community or workplace, and throughout life. Indeed, as governments cannot be responsible for directly providing all skills for work training, their priority should be to ensure that available provision is of good quality and that qualifications and certificates correspond to the skills workers have and employers need (**Policy focus 12.1**).

FIGURE 12.1:

Very few adults in low and middle income countries have basic ICT skills

Percentage of adults who performed a computer-related activity in the previous three months, selected countries, 2014–2016

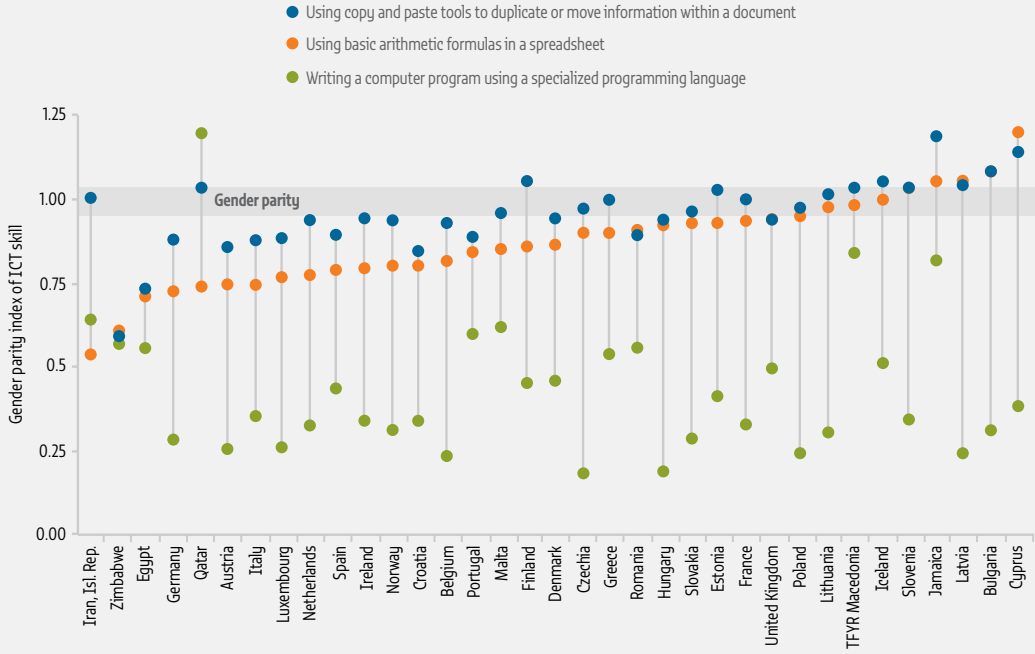


Source: ITU database.

FIGURE 12.2:

Far fewer women than men have ICT skills

Gender parity index among adults who performed a computer-related activity in the previous three months, selected countries, 2014–2016



Source: ITU database.

DATA FOCUS 12.1: ARE INDIRECTLY REPORTED ICT SKILLS A GOOD PREDICTOR OF DIRECTLY ASSESSED DIGITAL LITERACY SKILLS?

Those with poor ICT skills risk being shut out of modern work environments increasingly dominated by technology. A series of related skills, variously called information literacy, digital literacy or problem-solving in technology-rich environments, are directly assessed through surveys of students and adults (International ICT Literacy Panel, 2002; OECD, 2015c, 2016f). However, the assessment methods are expensive and not suited to the realities of labour market contexts in low and middle income countries. If indirect methods were good at approximating the underlying distribution of technology skills in the population, it would strengthen confidence in the information the current global indicator provides, which is based on indirect and self-reported assessment of nine computer-related activities.

Two data sets were used to correlate indirect and direct measures in 16 European countries where both were available for adults aged 25 to 65. As an indirect measure, Eurostat collects information on nine computer-related activities through annual surveys on ICT capacity in households, individuals and enterprises in a manner consistent with the ITU definition of global indicator 4.4.1.

> “Indirect and direct measures of digital literacy skills can be compared from OECD and Eurostat data sets in 16 European countries”

As a direct measure, the OECD Programme for the International Assessment of Adult Competencies (PIAAC) survey included proficiency levels of problem-solving skills in technology-rich environments in 2011 and 2013. At level 1 proficiency, participants were able to use widely available applications, such as email or a web browser, to access the information or commands necessary to solve a problem. At level 2, they were able to use specific applications and tools with multiple steps and operators to resolve problems. At level 3, they were able to resort extensively to inferential reasoning. One in four adults in the mostly high income participating countries had no prior computer experience, opted out of the computer-based assessment or failed the most basic skills assessment.

The percentage of those who had performed each of the nine computer-related activities according to the Eurostat survey was compared with the percentage of those who had achieved each of the three PIAAC proficiency levels. Twelve of the Eurostat survey countries participated in the first PIAAC round in 2011/2 (matched with Eurostat data from 2011) and four in the second round in 2014/5 (matched with Eurostat data from 2013/4).

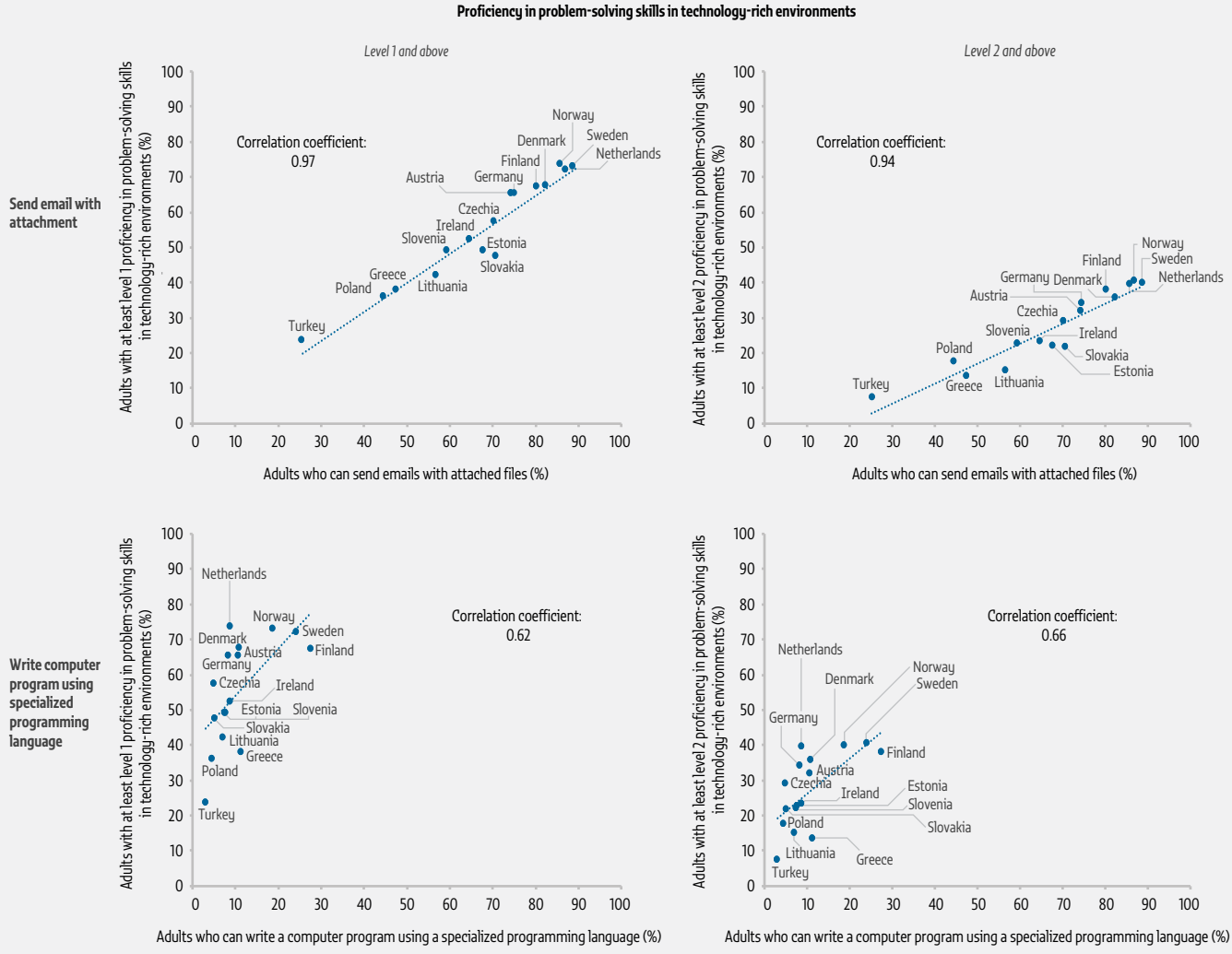
The indirect and direct measures of skills were positively correlated everywhere, but the correlation was higher in two cases. First, it was higher in simple skills, such as sending emails with attachments, than in complex ones such as programming. Visually, this is shown by how close countries are arranged along the line relating the two types of skills measures (**Figure 12.3**). Statistically, it is shown by the magnitude of the correlation coefficient (0.97 in the top left quadrant vs 0.62 in the bottom left).

Second, correlation of indirect measures was higher with the lower level of PIAAC proficiency (i.e. level 1 and above) than the higher level (i.e. level 2 or 3) (e.g. top left vs top right quadrant). This may indicate that reaching level 1 is sufficient to perform these activities but also that the global indicator, using indirect assessment of nine computer-related activities, captures this lower level of problem-solving skills precisely. The only exception was complex skills, where correlation was slightly stronger with the higher level of proficiency (e.g. bottom left vs bottom right quadrant).

Evaluating the strength of the correlation coefficient between three proficiency levels of the directly assessed skill measure (PIAAC) and all nine indirectly assessed ICT skill measures (Eurostat) confirms these findings (**Figure 12.4**). Correlation coefficients are stronger for copying and pasting information than for configuring software. Indirect ICT skills also better predict the percentage of the population with low directly assessed skills (i.e. level 1 and above) than the percentage of the population with high directly assessed skills (level 3).

Further interesting comparisons emerge along education level, age group and sex. While the percentage of adults possessing the relevant indirectly assessed ICT skills differs widely in each group, correlation with the directly assessed problem-solving skills differs too. For example, more 25- to 34-year-olds than 55- to 64-year-olds have performed the nine computer-related activities. The strength of correlation is also higher for the younger group than the older group.

FIGURE 12.3:
Not all types of indirectly assessed ICT skills accurately predict the population's directly assessed problem-solving proficiency in technology-rich environments
Correlation between two indirectly assessed ICT skills and two directly assessed proficiency levels of problem-solving skills in technology-rich environments, selected countries, 2011–2015



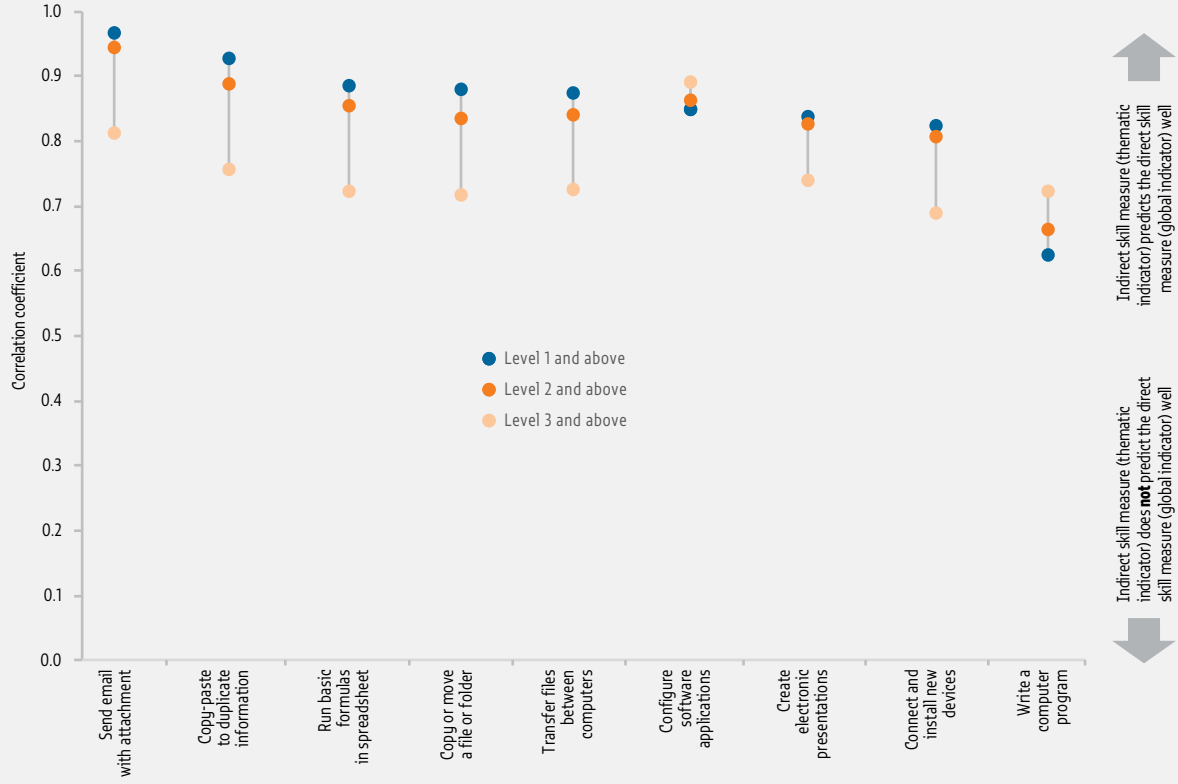
Source: GEM Report team analysis using data from Eurostat and OECD PIAAC.

To summarize, among high income countries participating in both indirect and direct assessments of adult ICT and digital literacy skills, the global indicator for target 4.4, which is based on indirect assessment, seems to capture differences in the distribution of such skills among countries. This is positive because indirect assessments are far less costly. However, data on the nine activities are not all equally successful in capturing the underlying skills. In addition, they capture only the most basic proficiency level requiring familiarity with the most widely available applications. Countries are more likely to be interested in the acquisition of the more sophisticated skills, which can make a bigger difference in the economy.

FIGURE 12.4:

The indirectly assessed global indicator of ICT skills better captures relatively simple skills in the population

Correlation coefficients between nine indirectly assessed ICT skills and three directly assessed proficiency levels of problem-solving skills in technology-rich environments, 2011–2015



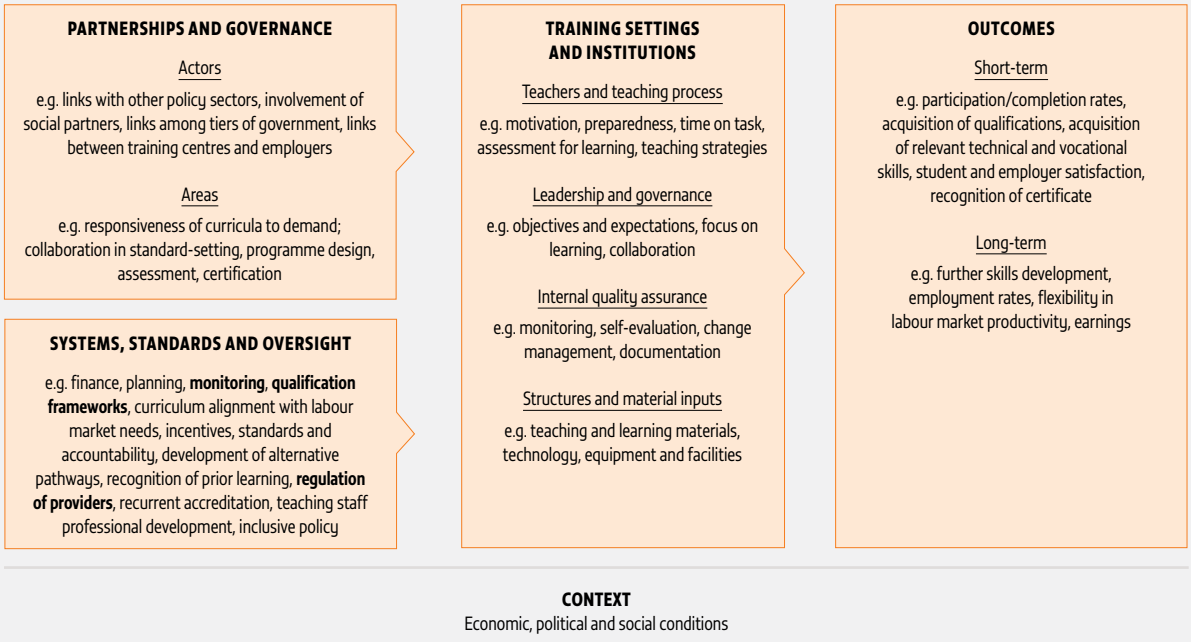
Source: GEM Report team analysis using data from Eurostat and OECD PIAAC.

POLICY FOCUS 12.1: ENSURING THE QUALITY OF SKILLS DEVELOPMENT AND CERTIFICATION

The concept of quality, hard to define in well-structured, formal education settings, is even more elusive in the area of professional skills development, given the diversity of training providers, purposes and intended outcomes. Some go as far as to argue that 'there is no general definition of quality' because 'the concept of quality is context dependent' (ETF, 2008). As governments and non-government actors, notably employers, share the task of skills development, it is also difficult to define the boundaries of their responsibilities for quality. Nevertheless, aspects of quality can be framed in terms of partnerships, systems, training settings and outcomes (**Table 12.1**). This framework can be used to analyse training activities occurring in institutional settings and in the workplace.

A system of quality assurance verifies whether commonly accepted standards of service delivery and skills outcomes are met (ETF, 2008). Ultimately, if the system is effective, workers and employers who benefit from skills development programmes trust that qualifications are a robust signal of acquired skills that have currency in the labour market (Bateman and Coles, 2013). This will particularly be the case when social partners and other stakeholders, such as chambers of commerce, are involved in the planning and further adjustment of skills development programmes and certificates. Such

TABLE 12.1:
A framework for quality in professional skills development



Note: The three areas discussed in this section are highlighted in bold.
Source: GEM Report team analysis, based on CEDEFOP (2015), ETF (2008), UNESCO (2016c) and World Bank (2013).

a quality assurance system helps hold government authorities and training providers accountable not only to beneficiaries but also to each other. For authorities, quality assurance is a basis for determining whether providers use public funds for the intended purposes. For providers, quality assurance is a means of holding authorities to account for setting clear rules and providing the right incentives.

This section discusses three accountability mechanisms related to skills training, and their implications. First, governance of the skills development system needs to be coherent, with clear aims for authorities and providers under a common qualification framework. Second, government and non-government training providers, which are increasingly involved in service delivery, need to comply with regulatory standards and procedures to be accredited and operate (Bateman and Coles, 2013). Third, governments need to collect and provide transparent information on provider operations and student outcomes to ensure provider accountability.

ROBUST QUALIFICATION FRAMEWORKS ARE A ROUTE TO ACCOUNTABILITY

National qualification frameworks classify the certificates, diplomas or titles obtained through a learning outcome assessment and validation process, with the aim of setting national or sector standards of knowledge, skills and competences (CEDEFOP, 2011). Qualifications are attached to levels of skills and competences acquired by the end of training rather than to the means required to acquire them, such as training duration or subjects. Qualification frameworks allow competences to be recognized regardless of whether they were acquired through formal institutional training or work experience. They help avoid misallocation of resources by reflecting existing and future labour market needs.

Qualification frameworks can support accountability, especially if they are accompanied by skill or competence standards that are used as the benchmarks for training and assessment. The support of employers and other social partners in identifying occupational standards and skills is crucial to ensure the relevance of training.

> Qualification frameworks can support accountability, especially if they are accompanied by skill or competence standards that are used as benchmarks for training and assessment

Tunisia established a national qualification framework in 2009 but has yet to implement it. Social partners were reluctant to participate because they felt they were under-represented in the national commission assigned to manage implementation. Instead, sector federations have taken the lead in developing occupational standards, which are not equivalent to qualifications but can guide providers in developing qualifications and curricula (UIL et al., 2015).

In Poland, social partners, including employer confederations, the craft association, the national chamber of commerce and trade unions, were invited to participate in setting vocational qualification standards. They were asked to provide advice and feedback on the design of job profiles, the development of curriculum guidelines on inputs (educational objectives and content) and outcomes (skills and competences), and the establishment of assessment standards. However, social partners did not participate actively (CEDEFOP, 2009b).

To be meaningful, national qualification frameworks need to be overarching, covering public and private provision. Among Southern African Development Community countries, Botswana and Malawi have frameworks only for private and enterprise-based provision. Mauritius has separate frameworks for public and private provision. In Namibia, the United Republic of Tanzania and Zambia, both sectors are covered by a single framework (UNESCO and SADC, 2013).

National qualification frameworks also support accountability by linking to cross-national frameworks. When the Caribbean Community (CARICOM) established a single market and economy, it emphasized the importance of free movement of labour and mutual recognition of diplomas, certificates and other qualifications. The Caribbean Association of National Training Agencies established a regional training and certification system, the Caribbean Vocational Qualifications, to ensure uniform delivery of competence-based education and training and to help students transfer seamlessly between systems. The CARICOM regional qualification framework was developed in 2012 with eight generic skill level descriptors for countries to adapt to the corresponding national levels. Barbados, Belize, Jamaica, Saint Kitts and Nevis, Suriname, and Trinidad and Tobago have established or are establishing national qualification frameworks using CARICOM descriptors (UIL et al., 2015).

Despite the growing prevalence of national qualification frameworks, which exist in almost three-quarters of countries, not all are actually in use. Developing qualifications involves lengthy procedures and can be slow, especially in countries with weak capacity (Graham and Deij, 2015). Moreover, to be useful, including in terms of accountability, qualifications must correspond to the needs of the labour market. And quality assurance is needed for the qualification process itself, from development of a qualification to certification of learners.

REGULATION OF SKILLS DEVELOPMENT PROGRAMMES IS KEY TO HOLDING PROVIDERS TO ACCOUNT

Many countries struggle to integrate multiple public training providers into a common governance and regulatory framework with established standards and qualifications. The proliferation of private training provision and certification makes this process challenging. An integrated regulatory framework, covering all public and private organizations delivering skills training within the scope of the national qualification framework, is an important priority.

Accreditation is a quality assurance process whereby legislative or professional authorities confirm that an education or training provider meets predetermined standards (CEDEFOP, 2011). It is usually an external evaluation process, but many countries, including Denmark, Ireland and the Netherlands, also require providers to carry out a self-evaluation and establish internal quality assurance systems as a condition for accreditation (CEDEFOP, 2009a). In Finland, providers are legally obliged to regularly assess their own operations and make key results of the assessments public (Finnish National Board of Education, 2010).

India's National Policy for Skill Development and Entrepreneurship aims to train 400 million people by 2022. To meet its ambitious target, which exceeds current capacity, the government has sought to involve private sector funding support and institutional

mechanisms. These include the National Skill Development Corporation (NSDC), a public-private partnership established in 2009 to promote private sector participation. The NSDC has partnered with more than 200 training providers and helped set up 37 sector skills councils to engage industry in the development of training programmes (India MSDE, 2015).

> “Accreditation is a quality assurance process whereby authorities confirm that an education or training provider meets predetermined standards”

On the demand side, the NSDC is the implementing agency of the National Skill Certification and Monetary Reward Scheme, better known as STAR (for Standard Training Assessment and Reward). Between its introduction in 2013 and mid-2017, it provided about US$90, on average, to 1.4 million beneficiaries who completed approved training programmes. Managing such a large programme poses numerous oversight challenges, including ensuring that candidate certification by assessors is transparent, beneficiaries receive the full reward, candidates register using a unique identification number or national population register card, and no illegal subcontracting to non-accredited providers occurs. An elaborate set of criteria, including minimum infrastructure conditions and control procedures, is in place to assure the programme's integrity (India NSDC, 2013).

The same concerns applied to Pradhan Mantri Kaushal Vikas Yojana (Prime Minister's Skill Development Scheme), launched in 2015 and also run by the NSDC. Its various components include short-term training followed by work placement assistance for unemployed or dropout youth. The government was concerned about forged claims and appointment letters that defrauded trainees by promising employment through the programme and requesting fees (India NSDC, 2016).

Market competition has not prevented a profusion of qualifications of low labour market value in much of the world (Marope et al., 2015). In 2012, the Council of Australian Governments adopted the National Agreement for Skills and Workforce Development, which promoted subsidized training and public funding for private providers and assigned responsibilities to federal and state governments. VET FEE-HELP provided income-contingent loans for students undertaking vocational education and training courses with an approved provider. More than three-quarters of total funding went to private providers.

Australia's Senate Education and Employment References Committee set up an inquiry to examine whether the programme distorted the market, as there were no controls over the number of eligible providers or fee levels. Of particular concern was marketing that either gave 'deceptive impressions of the qualifications to be earned' or used inducement techniques targeting disadvantaged people. Providers had unclear ownership structures, used subcontracting arrangements and made excessive profits. The committee recommended that the Australian Skills Quality Authority be given powers to regulate marketing agents directly (Australia Senate, 2015). The Australian programme was discontinued in December 2016 when reforms placed additional restrictions on private providers and requirements on students to prove they were actively enrolled.

TRANSPARENT INFORMATION IS A FOUNDATION FOR ACCOUNTABILITY IN SKILLS DEVELOPMENT PROGRAMMES

Finding ways to collect, use and share reliable and timely information on skills supply and demand is key for accountability. Relevant information would cover issues such as employer-reported skills gaps, training programme availability and affordability, and graduates' labour market success in terms of employment rates and earnings. Labour market success measures are very important to accompany a gradual shift to qualifications based on learning outcomes.

> “Relevant information on skills would cover issues such as employer-reported skills gaps, training programme availability and affordability, and graduates' labour market success”

Few countries' systems satisfy all stakeholders' information needs. The Republic of Korea generates high-quality information for policy, but its career guidance to prospective students needs further development. The Korean Research Institute for Vocational Education and Training conducts research on qualifications, analyses labour market trends and

evaluates skills development policies. Surveys provide useful information on training programme outcomes. For example, the annual Graduates Occupational Mobility Survey traces college and university graduates 18 to 24 months after completion to analyse their transition to the labour market (Lee and Cho, 2017). However, available information on labour market outcomes tends to be at the level of institutions and fields of study rather than individual programmes, which does little to help prospective students select courses (Kis and Park, 2012).

Australia's Department of Education and Training, through its My Skills website, provides information on thousands of courses, including providers and student outcomes, such as salary and employability. The latter are based on results of the National Student Outcomes Survey, originally devised to collect information on government-funded vocational education and training students. In 2016, its scope was expanded to cover graduates who paid for their training, or whose employer did so (Australia DET, 2017; Australia NCVER, 2017).

Countries with fewer resources tend to rely on administrative data. In Northern Africa and Western Asia, monitoring and evaluation systems are weak and there is little information on the adequacy of skills acquired during training, completion rates, employment rates and type of employment achieved (Masson et al., 2010). In Turkey, public and private training providers are required to report graduation and job placement data. While these data contribute to institutional performance assessments, they do little to improve system performance, and public access to the database is limited (World Bank, 2012).

By contrast, in Peru, the web platform Ponte en Carrera (Career Bridge) provides information on institutions, programmes, duration, fees and average graduate wages by institution. It was established by the government in collaboration with the Peruvian Institute of Business Administration (Peru Ministry of Education et al., 2017). In countries with very low capacity, administrative data are less likely to be accompanied by in-depth analyses and studies or to be used to identify exemplary or lagging training providers (Tan et al., 2016).

CONCLUSION

Many countries have introduced elements of a quality assurance system to strengthen accountability in skills development. However, approaches vary in their requirements and the probability of a successful rollout.

This is confirmed by analysis of reports from 20 countries in which the World Bank Systems Approach for Better Education module on workforce development was used; it included questions on the three accountability mechanisms covered in this section (World Bank, 2017b) (**Figure 12.5**). All but two countries had elements of a national qualification framework, even if it was not fully implemented. By contrast, six countries had no experience of any regulatory mechanism for non-government training provision, and nine had no experience of a functioning information system to improve system performance.

Countries need to ensure that as many social partners as possible participate in building accountability mechanisms for training provision. They also need to invest in processes to monitor service delivery by government and non-government providers and in information systems that help match skills supply and demand.

FIGURE 12.5:

Many accountability mechanisms for professional skills development are not applied systemically in low and middle income countries

Number of countries demonstrating selected workforce development policy actions, by rating, 2012–2015

Source: World Bank (2017b), based on ratings in 20 low and middle income countries in which the World Bank Systems Approach for Better Education Results module on workforce development was used.

ENDNOTES

1. The nine activities are (a) copy or move a file or folder; (b) copy or cut and paste to duplicate or move information on screen; (c) use basic arithmetic formulas to add, subtract, multiply or divide figures in a spreadsheet; (d) write a computer program using a specialized programming language; (e) send email with attached files; (f) connect and install new devices; (g) modify or verify the configuration parameters of software applications; (h) create digital presentations with presentation software; and (i) transfer files between a computer and other devices.

Children of a remote village in India working hard to finish their daily lesson before nightfall, as there is no electricity in their village.

CREDIT: Rahul Saha/UNESCO

KEY MESSAGES

While there is gender parity in education participation, global averages mask gaps between countries: only 66% have achieved gender parity in primary education, 45% in lower secondary and 25% in upper secondary.

There tend to be more female than male teachers but far fewer women than men become school leaders. Though 68% of lower secondary teachers in the Republic of Korea were female, only 13% of head teachers were.

Wealth disparity at all education levels remains large. While the global lower secondary completion rate is 69%, only 12% of the poorest males and 8% of the poorest females complete.

Inequality is underestimated, as survey design may exclude up to 250 million vulnerable people worldwide, while a further 100 million, such as slum dwellers, may be under-represented.

Combining population statistics, language demographics, education policy documents, surveys and research can help in assessing the share of students taught in their home language.

The UN Convention on the Rights of Persons with Disabilities outlines state obligations for providing inclusive education. Monitoring compliance is vital but restricted by the vagueness of disability definitions.

In 42 of 86 countries, there is an explicit reference to inclusive education in constitutions, laws and policies, although interpretations of the term differ.

The collection of information on population groups at risk of exclusion faces considerable obstacles, often due to government reluctance.

Concerns about privacy, stigmatization and definitions of population groups at risk of exclusion also hinder development of sound monitoring and policy tools.

CHAPTER 13

TARGET 4.5

Equity

GLOBAL INDICATOR

4.5.1 *Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated*

THEMATIC INDICATORS

4.5.2 *Percentage of students in primary education whose first or home language is the language of instruction*

4.5.3 *Extent to which explicit formula-based policies reallocate education resources to disadvantaged populations*

4.5.4 *Education expenditure per student by level of education and source of funding*

4.5.5 *Percentage of total aid to education allocated to least developed countries*

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OVERVIEW

The 2030 Agenda for Sustainable Development puts inequality at the heart of all goals and targets. In the case of education, this crowns a period in which knowledge of disparity by gender, location and wealth has increased rapidly. At the same time, the agenda offers the opportunity to shed light on other, no less important if less easily compared characteristics, such as disability, language and migrant status. The 2030 Agenda also underlines the need to monitor equity in both inputs and results at all levels of education.

> “Only 66% of countries have achieved gender parity in primary education, 45% in lower secondary and 25% in upper secondary”

Gender disparity has been a focus of the international education community since the launch of the Education for All movement in 1990. The world has achieved the target of gender parity at all levels except tertiary education. However, the same is not true of all regions, country income groups or individual countries. Only 66% of countries have achieved gender parity in primary education, 45% in lower secondary and 25% in upper secondary (**Table 13.1**).

Between 2000 and 2015, the share of countries that achieved gender parity increased by 8 percentage points in primary education and 14 percentage points in upper secondary. In tertiary education, only 6% of countries have achieved parity, with the gender imbalance increasingly at the expense of males (**Figure 13.1**). In 2015, the share of countries where there were fewer than 80 females for every 100 males enrolled was 1% in primary education (Afghanistan and South Sudan), 5% in lower secondary and 10% in upper secondary.

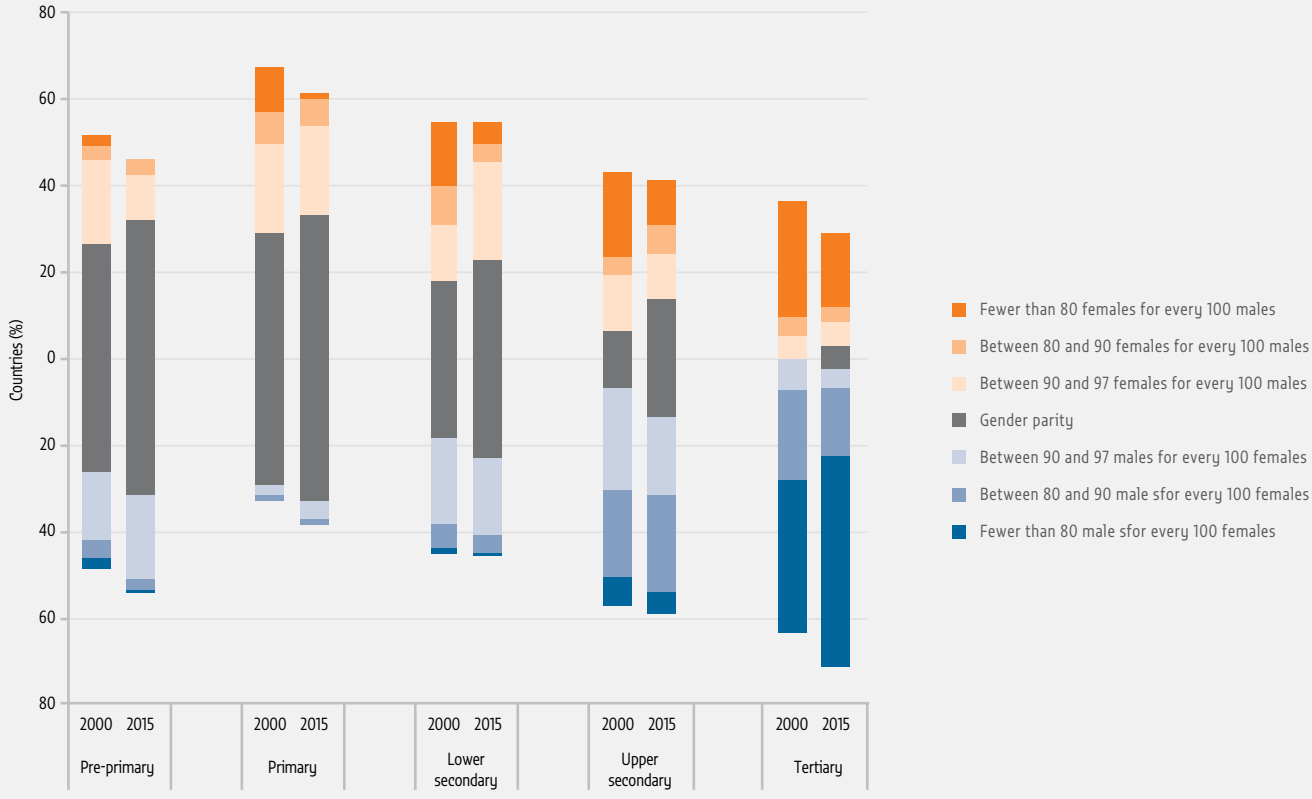
Gender disparity in learning outcomes is equally important and exhibits often unexpected patterns among subjects and over time. Girls’ advantage in reading is well recognized, although new evidence casts doubt on what the gap truly represents (**Data focus 13.2**). The gender gap in mathematics is also dynamic. In a number of low and middle income countries in Latin America and the Caribbean and in sub-Saharan Africa, there is a clear disadvantage for girls in the later primary school years. Only two girls for every three boys reached minimum proficiency in grade 6 in Chad and Niger in 2014. In 2013, 85 girls for every 100 boys in grade 6 achieved minimum proficiency in Colombia, the Dominican Republic and Peru. At the lower secondary level, for a different set of countries and learning assessments, more countries were closer to parity in mathematics (**Figure 13.2**). All 20 countries observed at both levels, other than Costa Rica, remained in parity, on average, at the end of both primary and lower secondary education. However, as the 2016 *Global Education Monitoring Report* argued, it is important to look beyond gender parity in participation and learning. The continued disparity in leadership positions is one example (**Data focus 13.1**).

TABLE 13.1:
Gender parity index of the gross enrolment ratio and percentage of countries that have achieved parity, by education level, 2015

	Pre-primary		Primary		Lower secondary		Upper secondary		Tertiary	
	Gender parity index	Countries at parity (%)	Gender parity index	Countries at parity (%)	Gender parity index	Countries at parity (%)	Gender parity index	Countries at parity (%)	Gender parity index	Countries at parity (%)
World	**0.99**	**62**	**1.00**	**66**	**0.99**	**45**	**0.98**	**25**	**1.12**	**4**
Caucasus and Central Asia	1.04	71	0.99	100	0.99	88	1.03	43	1.04	0
Eastern and South-eastern Asia	1.00	46	0.99	88	1.01	47	1.02	40	1.13	7
Europe and Northern America	0.99	85	1.00	93	0.99	67	1.01	31	1.28	5
Latin America and the Caribbean	1.01	66	0.98	61	1.02	41	1.11	17	1.31	5
Northern Africa and Western Asia	1.01	50	0.95	61	0.93	38	0.96	38	1.01	0
Pacific	0.98	43	0.97	69	0.95	31	0.94	8	1.38	0
Southern Asia	0.94	63	1.06	33	1.04	22	0.95	38	0.95	22
Sub-Saharan Africa	1.01	49	0.94	36	0.90	26	0.84	9	0.70	0
Low income	1.00	40	0.93	29	0.86	16	0.75	12	0.55	5
Lower middle income	0.99	50	1.03	63	1.02	33	0.94	23	0.99	6
Upper middle income	1.00	66	0.98	71	1.00	56	1.06	28	1.18	3
High income	0.99	78	1.00	83	0.98	58	1.01	29	1.24	4

Source: UIS database.

FIGURE 13.1:
More countries have achieved gender parity, but the challenge remains, especially at higher education levels
Percentage of countries by level of gender parity index of gross enrolment ratio, by education level, 2000 and 2015

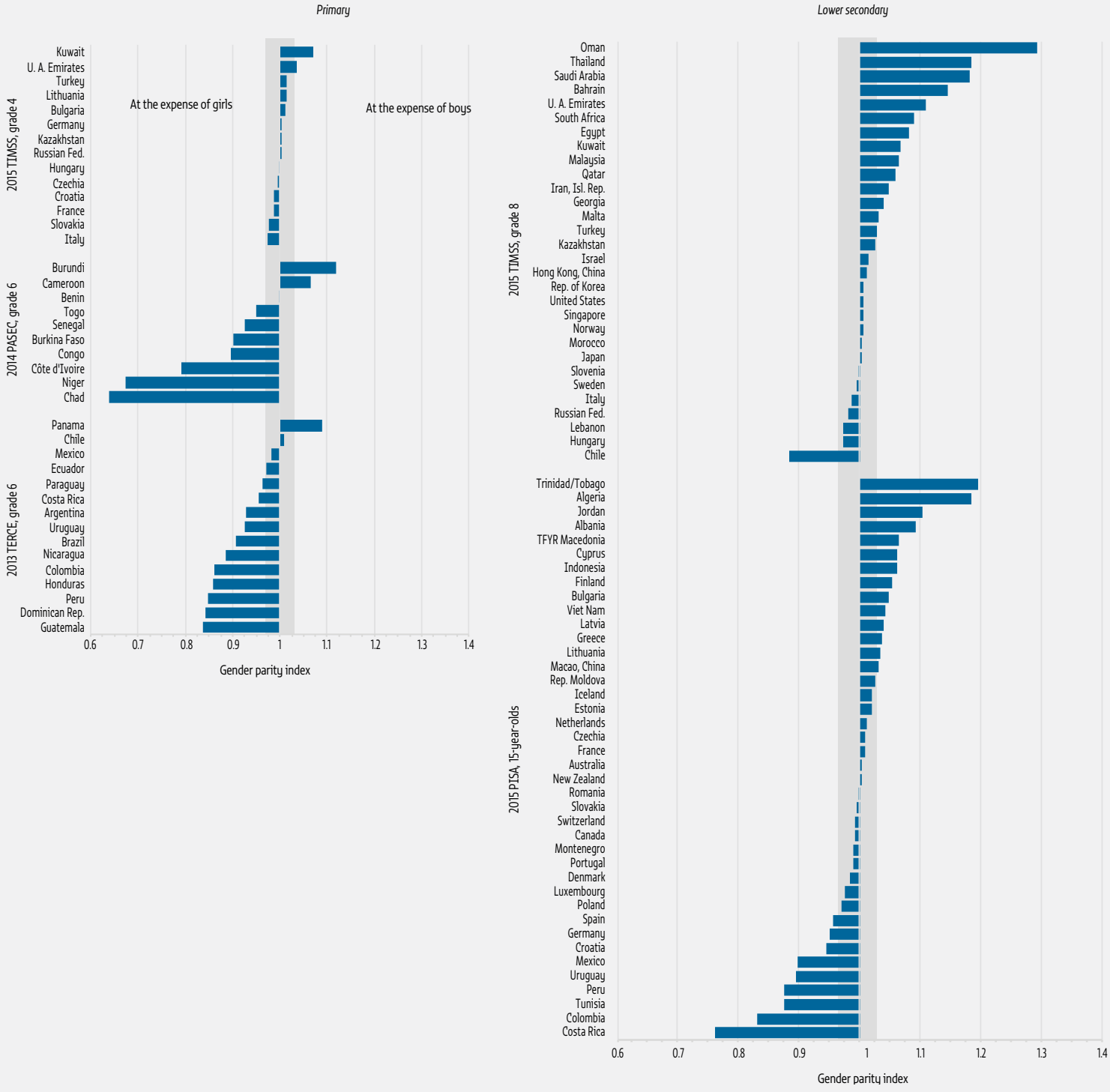


Source: UIS database.

FIGURE 13.2:

Gender disparity in mathematics proficiency is at the expense of girls in primary but not in lower secondary education

Gender parity index of mathematics proficiency, by education level and learning assessment, 2013–2015



Source: UIS database.

In addition to gender, location and wealth are two key dimensions that merit closer monitoring. Completion rates for the three education levels provide insights into general patterns and cross-country variation. For example, 75 adolescents from rural areas completed lower secondary education in 2010–2015 for every 100 from urban areas. The wealth parity index is more adverse for the poorest fifth of the population: 61 completed lower secondary for every 100 of the richest fifth. It is still worse for the poorest in lower middle income countries (54 for every 100) and in low income countries (14 for every 100). While the global completion rate was 69%, only 12% of the poorest males and 8% of the poorest females completed lower secondary (**Table 13.2**).

Depending on the indicator, the parity index can be a somewhat misleading measure of inequality. As the 2016 GEM Report showed, the value of the parity indices will be close to parity in countries that are close to universal completion. It is, therefore, important to compare countries that are at roughly similar levels for the indicator. For example, 75 females completed upper secondary for every 100 males in Nigeria, but 75 males completed for every 100 females in Tunisia. In wealth terms, 44 of the poorest fifth of the population for every 100 of the richest fifth completed upper secondary in Montenegro, but the corresponding ratio was 10 to 100 in Honduras (**Figure 13.3**).

By definition, household surveys, which provide key estimates on progress towards eliminating disparity in educational participation and attainment, exclude people not living in households. These are some of the most vulnerable populations, such as the homeless and those in institutions. In addition, the surveys cannot easily capture people who move, such as nomads (**Box 13.1**).

Among the less comparable characteristics, language of instruction was strongly highlighted in the 2016 GEM Report. The challenges are somewhat different in high income countries with large immigrant populations than in low and middle income countries with large ethnolinguistic diversity. The 2015 Programme for International Student Assessment (PISA) highlights both cases. In the former case, there was a 54-point gap in science test scores (equivalent to almost a year and a half of instruction) between 15-year-old non-immigrant students who spoke the test language at home and immigrant students who did not. The gap was about 90 points in Belgium, Germany and Switzerland. In the latter case, the gap between students who mainly spoke the test language and those who did not was, on average, 33 points in Viet Nam, 67 in Peru and 79 in Bulgaria (OECD, 2016e). There are still important unresolved issues in defining language (**Data focus 13.2**).

The next few years will see a steadier flow of data on people with disabilities, as the MICS will include the short questionnaire of the Washington Group described in the 2016 GEM Report. The twin challenges will be to assess the extent of disability in the population and its impact on educational disadvantage. For example, in two

TABLE 13.2:
Location and wealth parity indices for the completion rate, and completion rate of the poorest males and females, by education level, region and country income group, 2010–2015

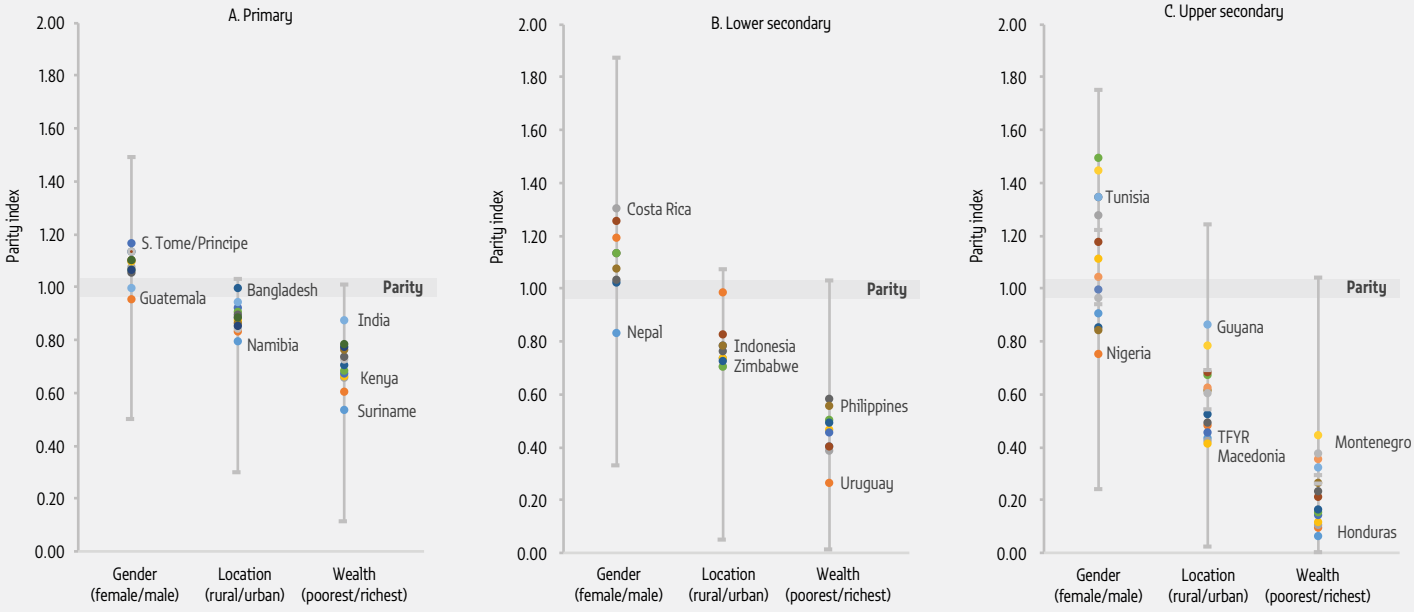
	Primary				Lower secondary				Upper secondary			
	Location parity index (rural/urban)	Wealth parity index (poorest/ richest)	Poorest males	Poorest females	Location parity index (rural/urban)	Wealth parity index (poorest/ richest)	Poorest males	Poorest females	Location parity index (rural/urban)	Wealth parity index (poorest/ richest)	Poorest males	Poorest females
World	**0.86**	**0.73**	**72**	**71**	**0.75**	**0.61**	**54**	**54**	**0.55**	**0.40**	**32**	**33**
Caucasus and Central Asia	...	...	...	...	...	...	...	...	...	...	...	...
Eastern and South-eastern Asia	0.97	0.91	88	92	0.84	0.75	65	72	0.65	0.60	45	48
Europe and Northern America	...	...	99	98	1.00	0.97	95	96	0.95	0.84	77	81
Latin America and the Caribbean	0.90	0.85	80	86	0.79	0.62	56	63	0.60	0.38	31	34
Northern Africa and Western Asia	0.86	0.69	69	63	0.73	0.49	44	42	0.54	0.27	18	16
Pacific	...	...	...	...	...	0.97	97	96	...	0.80	80	69
Southern Asia	0.91	0.76	75	71	0.83	0.63	60	53	0.53	0.31	23	16
Sub-Saharan Africa	0.61	0.37	34	31	0.41	0.18	17	13	0.30	0.08	8	5
Low income	0.56	0.36	31	28	0.33	0.14	12	8	0.19	0.05	3	2
Lower middle income	0.88	0.72	70	68	0.77	0.54	53	47	0.52	0.27	21	15
Upper middle income	0.96	0.92	89	93	0.86	0.82	69	78	0.69	0.63	49	52
High income	...	...	...	...	...	0.95	89	92	...	0.81	73	79

Source: GEM Report team calculations using household surveys.

FIGURE 13.3:

The degree of disparity varies even among countries with similar completion rates

Gender, location and wealth parity index of completion rate, by education level, selected countries close to the average completion rate, 2010–2015



Note: Relative to the gobal average, countries compared are within 5 percentage points for primary completion and 10 percentage points for lower and upper secondary completion. The highest and lowest values on each vertical line indicated by a grey dash show the maximum and minimum value of the parity index for all countries.
Source: UIS and GEM Report team calculations using household surveys.

BOX 13.1

Many vulnerable populations are not captured by household surveys

Monitoring target 4.5 requires the estimation of parity indices for SDG 4 indicators on the basis of household surveys that allow disaggregation by characteristics such as wealth, disability or ethnicity. A list of all households, derived from a population census, is necessary to draw a representative sample. Although modern censuses use various techniques to estimate the size of marginalized populations, members of these groups are less likely to be on such lists. They may not live at a fixed address, have identity papers or be registered with authorities. As a result, many do not participate in censuses and surveys, which underestimates levels of exclusion.

Due to measurement complications, household servants, nomads and pastoralists, seasonal and migrant workers, the homeless, stateless persons, refugees living in camps, prisoners and others living in institutions may not be captured in census design. Certain ethnic minorities or populations in conflict-affected areas may also be excluded. Slum dwellers are included in censuses but may be unrepresented or under-represented in household surveys due to costs and security risks.

The size of the population potentially excluded from household surveys is large. One estimate puts the population excluded by design from household surveys at 250 million worldwide and those under-represented due to difficulties in identifying or interviewing at a further 100 million, all of whom are likely to be in the poorest wealth quintile. Even major international household surveys, such as the Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), notably do not make special arrangements to cover populations living in slums. According to one estimate, the share of the population missed in samples of eastern African capitals ranged from 14% in Kampala to 52% in Dar es Salaam.

There are ways to improve representation of hard-to-reach populations. Civil registration and vital statistics systems that record births and deaths may function poorly, but their quality can be improved relatively inexpensively. In addition to improving census coverage, household surveys might be complemented by citizen-led surveys, which can be more effective in sampling hard-to-reach populations by using community-based enumerators who are more aware of local population composition and/or better able to operate in security-sensitive areas.

Sources: Carr-Hill (2013); Chan et al. (2010); Rubenstein and Stark (2016); Stuart et al. (2015); Vlahov et al. (2011).

DHS surveys, a large difference in estimated disability rate (2.1% in Cambodia and 9.7% in Maldives) was reflected in differing estimates of the effect of disability on school attendance: In Maldives, the primary attendance rate was 85% for those with disabilities and 94% for those without, while in Cambodia, the respective figures were 43% and 93% (UIS, 2017b). The latter case indicates that governments struggle to fulfil their responsibilities under the Convention on the Rights of Persons with Disabilities, including their right to education. Various mechanisms exist to hold governments to account (**Policy focus 13.1**).

The 2030 Agenda for Sustainable Development recognizes that all people, 'irrespective of sex, age, race, ethnicity, and persons with disabilities, migrants, indigenous peoples', should have access to lifelong learning opportunities. However straightforward it might seem, though, to collect information on these various groups, in practice there remain considerable obstacles imposed by states and concerns expressed by several marginalized populations (**Policy focus 13.2**). These need to be resolved in order to realize the commitment to leave no one behind.

DATA FOCUS 13.1: GENDER INEQUALITY PERSISTS IN EDUCATION LEADERSHIP

While the feminization of the teaching workforce in most countries is well known, less attention is paid to the continued imbalance favouring men in school leadership, let alone in other education management positions, as most countries do not regularly collect and publish relevant data.

Where countries do have data, they are often not published or data from different sources need to be matched (Wills, 2015). When data are available from national sources, they are typically not easily comparable among countries. Definitions and titles differ, as do the education levels at which data are aggregated or published. Attempts at cross-national reporting prefer to show results separately by country (Commonwealth Secretariat and UNESCO, 2010).

> "The Teaching and Learning International Survey is one of few sources that asks whether a principal is male or female"

Cross-national school surveys that administer questions to school principals, such as PISA and Trends in International Mathematics and Science Study (TIMSS), do not ask the gender of respondents. The Teaching and Learning International Survey (TALIS), which focuses primarily on lower secondary school teachers, is one of few sources that asks whether a principal is male or female. The estimate is based on a sample and not a census of schools but is broadly consistent with the administrative data reported by Eurostat on school management personnel in EU and European Economic Area countries. Eurostat includes principals, headmasters, assistant headmasters and other management staff with similar responsibilities, but not administrative support staff.

Overall, gender inequality persists in school leadership. In most countries, there are more male head teachers than male teachers. However, in some cases, women are especially under-represented in school leadership. While 39% of lower secondary teachers in Japan were female, only 6% of head teachers were. In the Republic of Korea, the respective shares were 68% and 13% (**Figure 13.4**). Where data are available for different levels, the share of women in leadership positions decreases at higher levels. For example, in Austria, 79% of primary school heads but only 32% of lower secondary school heads were female. In Sweden, the shares were 73% in primary and 45% in upper

FIGURE 13.4:
In Japan, only 6% of lower secondary school principals are female
Percentage of female lower secondary teachers and head teachers, selected countries, 2010–2013

Sources: Data from 2013 OECD TALIS, supplemented by Commonwealth Secretariat and UNESCO (2010) for Dominica and Lesotho at the secondary level and Wills (2015) for South Africa.

secondary (European Commission/EACEA/Eurydice, 2013). In Rwanda, 30% of primary and 19% of secondary principals in Rwanda were women (USAID, 2014).

Nevertheless, the proportion of female school leaders is increasing. For example, in the United States, the percentage of female principals in public schools rose from 35% in 1993/94 to 52% in 2011/12 (United States NCES, 2016). Because principals are usually recruited from teaching staff and experience increases the likelihood of being recruited, the overall share of women in school leadership is likely to continue to grow.

> “As of 2009, only 13% of higher education institutions in 27 EU countries were headed by women”

Even fewer women occupy leadership positions in higher education. As of 2009, only 13% of institutions in 27 EU countries were headed by women (Morley, 2014). A survey of Commonwealth countries showed that, in 2006, women were the executive heads in 9% of 107 higher education institutions in India and just 1% of 81 higher education institutions in anglophone sub-Saharan African countries. The shares increased to 20% and 13%, respectively, for the position of dean and to 23% and 18% for the position of department head or director (Singh, 2008).

DATA FOCUS 13.2: IT IS DIFFICULT TO ESTIMATE THE SHARE OF STUDENTS WHO ARE TAUGHT IN THEIR HOME LANGUAGE

Language of instruction policy can hold the key to making education more inclusive for disadvantaged groups. Sustained use of the first or home language as a medium of instruction for at least six years of schooling has been highlighted as a way to improve student performance in language skills and other subjects (Heugh et al., 2007; Piper et al., 2016). In Ethiopia, the introduction of mother tongue instruction in 1994 is estimated to have increased educational attainment by half a year, reading ability by 40% and the probability of reading a newspaper by about 25% (Ramachandran, 2017a) (see **Data focus 14.1**).

Despite the importance of language of instruction in determining learning outcomes, gathering information on the percentage of students whose home or first language is the language of instruction is not easy. There are various ways to monitor this indicator, such as using official documents, asking teachers, including questions in household surveys or drawing on learning assessments.

> “Mother-tongue policies are often not implemented because of resource constraints”

Regular mapping of official policy documents provides a starting point for monitoring language in education. A recent systematic review of policy documents in 21 countries in eastern and southern Africa showed that three countries still required an international language as the medium of instruction from grade 1. Two of these, Angola and Mozambique, also had some provision for use of local languages (**Table 13.3**). Most countries, including Kenya, Lesotho, Swaziland and Zambia, have adopted an early-exit transitional bilingual education policy that uses one or more local languages in early primary grades. After grade 4 or 5, an international language becomes the medium of instruction for the rest of primary, secondary and higher education (Trudell, 2016).

However, policies are only one dimension of what happens in classrooms (Trudell and Piper, 2014). Mother-tongue policies are often not implemented because of resource constraints and barriers and resistance from key actors, such as parents and teachers (Nyarigoti and Ambiyo, 2014; Phindane, 2015). Factors related to demographic composition, population distribution, resources and political will affect whether a policy is implemented.

A recent study in Timor-Leste, drawing on inputs from over 8,000 teachers, mapped the languages spoken by primary school students. The education ministry trained school heads of 1,415 schools in how to collect data. Teachers in those schools were asked to identify the strongest language of each child and to report their own strongest languages. Over 50% of primary school children were reported to have Tetun Prasa, the main language of instruction in the country, as their strongest language. Yet discrepancies with the population census suggest reported percentages could have been overestimates: In 2015, only 30% of primary school students reported Tetun Prasa as their main language (Kosonen, 2017).

New analysis for this report combined population statistics, language demographics and language in education policy documents with supplementary

TABLE 13.3:
Language of instruction policies in sub-Saharan African countries

International language medium from grade 1	African-language medium through grade 3, transition in grade 4	African-language medium through grade 4, transition in grade 5	Other
• Angola (Portuguese; policy permits local languages) • Comoros (Arabic and French) • Mozambique (Portuguese; policy permits local languages)	• Kenya ('languages of catchment area' to English) • Lesotho (SeSotho to English) • Madagascar (Malagasy to French) • Namibia (local languages to English) • Rwanda (Kinyarwanda to English) • South Sudan (local languages to English) • Uganda (local languages to English) • Zimbabwe (local languages to English)	• Botswana (Setswana to English) • Burundi (Kirundi to French) • Swaziland (Siswati to English) • Zambia (local languages to English)	• Malawi (Chichewa and English from grade 1) • Eritrea (9 languages, through grade 5) • Ethiopia (many languages; transition to English at grade 5, 7 or 9, depending on region) • Somaliland, Puntland, South central Somalia (Somali through primary grades) • South Africa (11 languages; primary and secondary grades) • U. R. Tanzania (Kiswahili through grade 11)

Source: Kosonen (2017).

TABLE 13.4:
Percentage of children taught in home language in South-eastern Asian countries

Level of use of home language for instruction	Country (percentage of children taught in home language)
High	Cambodia (90%) Viet Nam (90%)
Medium	Philippines (60% to 75%) Malaysia (45% to 60%) Myanmar (60%)
Low	Thailand (50%) Lao PDR (50%) Timor-Leste (30% to 50%) Singapore (25% to 50%) Indonesia (10% to 25%) Brunei Darussalam (5% to 20%)

Source: Kosonen (2017).

information, such as the study from Timor-Leste, to assess the share of students whose home language was the language of primary education instruction in 11 countries of Eastern and South-eastern Asia (**Table 13.4**). As available data were not sufficient to calculate exact percentages for most countries, the analysis ranked countries high, medium and low, according to the level of use of home language for instruction. In Brunei Darussalam, 5% to 20% of children were estimated to have access to education in their home language, compared to around 90% in Cambodia and Viet Nam (Kosonen, 2017).

Distinct language variants are a major challenge in making such estimates. For instance, many distinct variants of Malay are spoken in Malaysia, and they are often seen as dialects of Standard Malay. Yet no data on population proficiency in Standard Malay are available. Moreover, many ethnic Chinese Malaysians have access to education in Mandarin Chinese at the primary level, but no data exist on whether Mandarin Chinese is their home language (Kosonen, 2017).

Household surveys can also help monitor progress. The new MICS questionnaire for children and adolescents aged 5 to 17 will assess basic reading skills and collect background information, including on home language and language of instruction. Again, however, the use of generic language names may be misleading if speakers of distinct dialects have difficulty understanding each other. Survey enumerators will need a good understanding of and training on the linguistic situation.

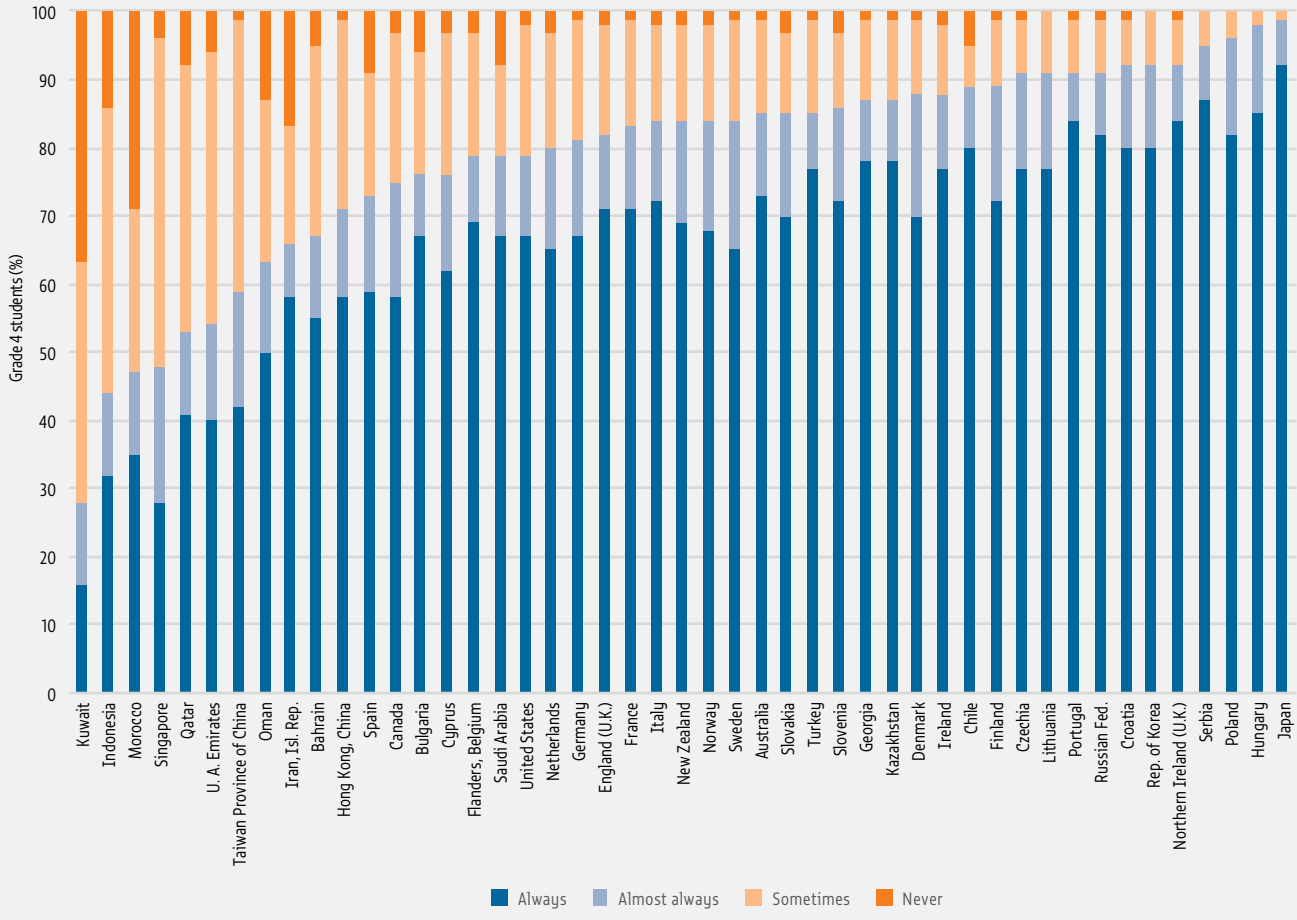
Language of instruction policy implementation can also be captured by cross-national and national learning assessments. The 2015 TIMSS collected data in grades 4 and 8 on the frequency with which students spoke the test language at home; 79% of grade 4 students always or almost always did, 17% sometimes did and 4% never did. The percentage of those who only sometimes or never spoke the test language at home varied by country, from 53% in Morocco to 24% in Bulgaria and just 1% in Japan (**Figure 13.5**).

Similarly, the 2015 PISA showed that, in member countries of the Organisation for Economic Co-operation and Development, two in three first-generation and almost one in two second-generation immigrant students spoke a different language at home than the assessment language. In Austria, Germany, Sweden and the United States, over 75% of first-generation immigrant students spoke another language at home, compared to less than

FIGURE 13.5:

On average, among countries participating in the TIMSS, 21% of students only sometimes or never spoke the test language at home

Percentage of grade 4 students by frequency of use of test language at home, 2015



Source: Martin et al. (2016b).

50% in Australia and New Zealand. Between 2006 and 2015, there was an increase by four percentage points in the share of immigrant students who did not speak the test language at home (OECD, 2016d).

POLICY FOCUS 13.1: HOLDING GOVERNMENTS TO ACCOUNT FOR THE RIGHT OF PEOPLE WITH DISABILITIES TO INCLUSIVE EDUCATION

Discussion on special education and the needs of students with disabilities has evolved considerably in recent years. After an initial focus on 'integration', more recently 'inclusion' has emerged as the term of choice for an approach recognizing that problems with education for people with disabilities lie more often with the system than with the students. Inclusive education aims to change structures and content, including curricula,

> Parties to the Convention on the Rights of Persons with Disabilities must ensure their laws promote the right of persons with disabilities to education at all levels and allow them to learn alongside their peers in inclusive schools

pedagogy and assessment, to eliminate barriers to and within education. While inclusion responds to the needs of all students, it is widely associated with persons with disabilities.

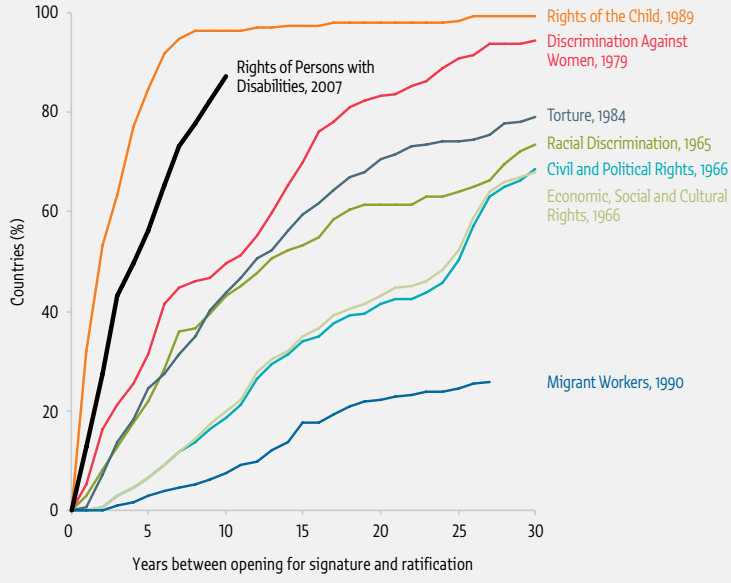
The adoption of the UN Convention on the Rights of Persons with Disabilities (CRPD) in 2007 marked a turning point in inclusive education. Article 24 calls for the development of inclusive education at all levels, with a clear emphasis on countries' obligations. In particular, parties to the convention must ensure their laws promote the right of persons with disabilities to education at all levels and allow them to learn alongside their peers in inclusive schools, for example through individual education plans. Specific measures should guarantee the right of persons with disabilities to receive education in a manner accessible to them and to be taught by qualified, trained teachers (United Nations, 2007).

For treaties to be legally binding, countries must not only sign and but also ratify them, an action involving approval by the legislature or head of state and formal consent by the country at the international level. The CRPD had a rapid ratification rate, with 87% of parties ratifying within 10 years of adoption. Only the Convention on the Rights of the Child had a faster ratification rate (**Figure 13.6**).

This rights-based approach to education provides a solid basis for persons with disabilities holding duty bearers, notably governments, accountable. Governments are expected to (a) demonstrate, explain and justify how they have discharged their obligations regarding the right to education of persons with disabilities and (b) enable rights holders to seek redress for violations.

This section discusses the characteristics and effectiveness of three kinds of accountability mechanisms ensuring the right to education of persons with disabilities: judicial (e.g. review of laws), administrative (e.g. complaint procedures) and social (e.g. monitoring by civil society) (**Table 13.5**).

FIGURE 13.6:
The Convention on the Rights of Persons with Disabilities was ratified rapidly compared to other major human right treaties
Percentage of countries ratifying major human rights treaties by number of years since adoption



Source: GEM Report team analysis based on OHCHR (2017).

TABLE 13.5:
Accountability mechanisms regarding the right to inclusive education

Level	Judicial	Administrative	Social	Approach
International	Treaty monitoring			Formal
National	Legislation reviews	National monitoring		
Subnational		Complaint procedures	Facilitating Advocating	
Local			Local monitoring	Non-formal

Source: Based on Leonard Cheshire Disability (2017).

> All but 5 of the 86 country submissions to the UN Committee made explicit reference to the right to education of persons with disabilities in constitutions, laws or policies

INTERNATIONAL MONITORING MECHANISMS DRAW ATTENTION TO THE RIGHT TO INCLUSIVE EDUCATION

Realizing the right to inclusive education as guaranteed in the CRPD and other human rights instruments, e.g. the Convention and Recommendation against Discrimination in Education, depends on effective monitoring (UNESCO, 2013c). Monitoring information allows governments to determine areas for action and rights holders to determine whether obligations have been met. The CRPD provides for the creation of implementation and monitoring mechanisms. At the international level, the UN Committee on the Rights of Persons with Disabilities examines country reports on convention implementation, handles individual complaints and conducts enquiries. Articles 31 and 33 set out national obligations for data collection, implementation plans and reports to the committee.

Article 33(§1) requires governments to identify focal points responsible for implementation and a mechanism for intragovernmental coordination. Article 33(§2) requires formation of a national framework to promote, protect and monitor implementation. At least one mechanism, created by law, must be independent from government interference and include, or coordinate closely with, organizations for persons with disabilities. Article 33(§3) requires persons with disabilities to participate in monitoring implementation.

An analysis of 86 country submissions to the UN committee prepared for this report showed that the constitutions, laws or policies of all but 5 made explicit reference to the right to education of persons with disabilities (Leonard Cheshire Disability, 2017). However, very few countries included definitions related to disability or education, which are important for programmes subsequently developed and for country compliance with Article 33.

Lack of a clear, internationally established definition of disability or special education can be a significant obstacle. Austria reported being uncertain how to differentiate concepts such as impairment or functional restriction (OHCHR, 2011). Mongolia reported that statistics on education of persons with disabilities from central and local administrations and authorities were incompatible because of differences in domestic definitions. Moreover links with organizations for persons with disabilities were weak, and methodologies for diagnosing children with disabilities were not in place (OHCHR, 2013a).

> Only 23 of 56 countries disaggregated data on students with disabilities by disability type

Only 23 of the 56 countries that provided information about numbers of students with disabilities in education disaggregated the data by disability type. Several countries drew on international standards used to identify disability. China, Cyprus, Thailand and Uruguay used the World Health Organization's International Classification of Functioning, Disability and Health. Morocco, Myanmar and South Africa used the Washington Group Short Set of Questions on Disability. The Philippines used both.

Constitutions, laws or policies in 42 of the 86 countries explicitly referred to inclusive education. This suggested a trend away from special schools and towards regular schools offering inclusive education. In Croatia, the more severely developmentally challenged children had been educated in special schools, mostly in larger cities, usually requiring separation from families. The Law on Primary and Secondary Education (2008) and the National Pedagogical Standard (2008 and 2010) made education in special schools the exception, for students also needing health and social care (OHCHR, 2013b).

While many countries' laws and policies referred to inclusive education, the interpretation varied significantly. Armenia defined inclusive education as 'the joint education at general education institutions of persons with special education needs, through the establishment of specific conditions of education, with those having no need for such

conditions' (OHCHR, 2015a). By contrast, Slovenia's policy covered 'adapted curricula; individualized programmes; adjustments regarding organisation, methods of verification and assessment of knowledge, progress and timing of lessons ... [and] additional professional assistance; ... development process guidance ... [and] a more active role of parents and education institutions in the process of guidance; [and] home education'.

There are notable exceptions to the shift towards inclusive education. Azerbaijan's law states that 'the purpose of special education is adapting persons with disabilities to the society by teaching necessary knowledge, skills and habits, including habits for self-service, labour activities and family life' (OHCHR, 2013c). Although developing common competences fits within inclusive education policy, persons with disabilities having to adapt to society conflicts with the principle of adapting systems to the diverse education needs of all students.

The intent of education policy is not necessarily the reality. Most schools in Jordan are not prepared to adopt and implement inclusive programmes due to transport challenges, inadequate physical environment and lack of harmonization of curricula commensurate with the needs of persons with disabilities (OHCHR, 2012). South Africa's Constitution and 1996 Schools Act entrench the right to education, making education compulsory for all children aged 7 to 15 and requiring special needs education to be available to all children with disabilities. A 2001 white paper further defined inclusive education (South Africa Department of Education, 2001). However, a government monitoring report found that 26% of 5- to 15-year-olds with a disability were not attending school, there was a critical shortage of health and social service professionals, new special schools were being built and there were no specific provisions for children with severe intellectual disabilities (South Africa Department of Basic Education, 2015).

NATIONAL MONITORING MECHANISMS ARE STILL BEING DEVELOPED

Many countries have established monitoring activities and mechanisms. Of the 86 country reports reviewed, 49 provided clear information revealing a diverse understanding of Article 33. With respect to Article 33(§1), 22 countries assigned an implementation focal point, naming institutions ranging from the Ministry of Internal Affairs in the Cook Islands to the Federal Ministry of Labour and Social Affairs in Germany and the Commissioner for Rehabilitation in Hong Kong, China. Only 35 countries reported details on the coordination mechanism for implementation (Leonard Cheshire Disability, 2017).

With respect to Article 33(§2), 52 countries had or were establishing a 'mechanism to promote, protect and monitor' implementation, a function variously assigned to an ombudsman, a human rights commission or a national council for persons with disabilities. It was unclear in 16 of those countries whether the office was independent.

> "Most national monitoring mechanisms of inclusive education narrowly focused on enrolment rather than practices in schools and classrooms"

Several countries conflated implementation with monitoring, which should be independent. Spain's National Disability Council was responsible for both implementation and monitoring against international legal instruments relating to the rights of persons with disabilities. Vanuatu's Ministry of Justice appointed national and provincial task forces to coordinate and monitor implementation of the national disability policy and the CRPD.

Another challenge is that most country reports narrowly focused on enrolment rather than inclusive practices in schools and classrooms. Rwanda, for example, mentioned that 'much [remained] to be done, not only to improve enrolment ... but in providing meaningful learning, and progression to a similar standard as other students' (OHCHR, 2015b).

CIVIL SOCIETY ORGANIZATIONS FOR PERSONS WITH DISABILITIES HAVE A MAJOR MONITORING ROLE

Organizations for persons with disabilities, as well as families and communities, can play a significant role in monitoring country commitments. They can assist schools in making better decisions and educate and lobby governments about their obligation to provide education for all (UNESCO, 2009b). After New Zealand's Education for All, a collaboration of disabled persons and inclusive education organizations, reported that special education policy was undermined by limited professional development on inclusive education and families having to top up support staff incomes, the government

included the right to inclusive education among proposed amendments to the Education Act (Educators, 2017).

Non-government organizations and independent human rights groups can provide information, raise awareness and support families on issues such as legal rights and entitlements, service availability and local complaint procedures. Information and communication are strategic resources for empowering marginalized groups and ensuring their voices reach policy-makers and school leaders. In 2013 in South Africa, Section27, a public interest law centre, and the community-based organization Siphilisa Isizwa threatened the KwaZulu-Natal Department of Education with litigation in the High Court and eventually succeeded in protecting the right of special needs students to be admitted to a special school (Right to Education Initiative, 2015).

> “Organizations for disabled persons participated in monitoring CRPD implementation in 50 of 86 countries”

With respect to Article 33(§3), organizations for disabled persons participated in monitoring CRPD implementation in 50 of 86 countries, but took part in the country review in only 29, often due to lack of capacity. Rwanda's National Council of Persons with Disabilities, for example, 'has an urgent need to build capacity and work for participation of persons with disabilities in the national development' (OHCHR, 2015b).

CONCLUSION

A rights-based approach has broken new ground in inclusive education and offers a basis for accountability mechanisms. Governments can ensure inclusiveness in the right to education for persons with disabilities by fulfilling CRPD commitments to establish mechanisms for coordination, independent monitoring, enforcement, complaint and reparation. However, the challenges should not be underestimated. Foundational issues, e.g. ambiguity in definitions of disability and standards of inclusive education, can slow or stall the development of information systems, robust monitoring mechanisms and accountable institutions.

In addition to judicial and administrative accountability mechanisms, the CRPD, in principle, allows for social accountability mechanisms. In practice, implementation of CRPD innovations requires two conditions: (a) independent monitoring mechanisms and truly representative participation structures and (b) a strong and independent disability movement able to participate effectively. To fulfil their role, civil society organizations need to build capacity to work strategically, clearly understand policy processes and invest in technical, administrative and communication skills.

POLICY FOCUS 13.2: MONITORING THE EDUCATION STATUS OF DISADVANTAGED GROUPS

Education status data on disadvantaged and marginalized groups raise public awareness of inequality as well as that of policy-makers. Such data are also essential for determining the extent of discrimination and building an evidence base for more inclusive policies (Simon and Piché, 2012). International bodies monitoring compliance with human rights conventions, such as the Human Rights Committee and the Committee on Economic, Social, and Cultural Rights, call on member countries to disaggregate data by individual characteristics (United Nations, 2001, 2016a). In practice, countries' monitoring of education disparity varies. This section reviews monitoring approaches and constraints.

CENSUSES AND SURVEYS PROVIDE VALUABLE INFORMATION

Countries use sources of varying scope and purpose to gain information on the education status of disadvantaged and marginalized children, youth and adults. They include censuses, household and school-based surveys and a variety of administrative sources (UNDP, 2010).

Censuses provide general, self-reported data and are the only source covering the entire population. They can provide information on disadvantaged groups likely to be excluded in sample surveys, e.g. people with disabilities (Mont, 2007). However, an analysis of 138 national censuses used between 1995 and 2004 showed that over one-third of countries provided for no ethnic classification (Morning, 2015). A survey of national census practices between 2005 and 2014 in 51 countries in Central Asia and in Europe and Northern America showed that 71% of countries collected data on first language, 61% on ethnicity and 29% on country of birth of both parents (Economic Commission for Europe, 2013). Censuses captured aspects of individual education, most often the highest level of formal education attained.

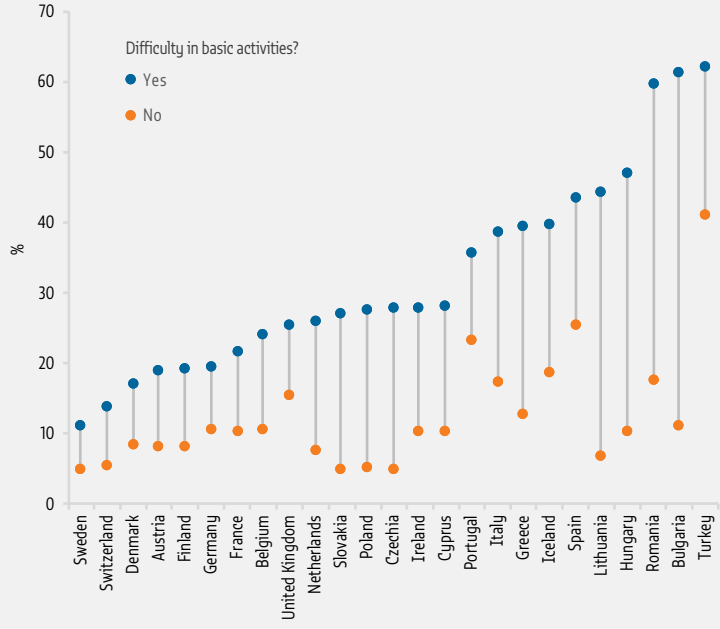
> A survey of national census practices between 2005 and 2014 in 51 countries showed that 71% of countries collected data on first language and 61% on ethnicity

Surveys can provide broader information through selected sampling, interviews or targeted questions. France's Trajectories and Origins survey oversampled minority groups otherwise represented by small sample sizes in standard surveys. Immigrants' descendants, a group not typically targeted, were also interviewed. The survey found that 13% of children of immigrants left education without qualifications, compared with 8% of children of non-immigrants. Figures were higher than average among children of immigrants from Algeria (18%), Morocco (15%), Tunisia (15%) and Turkey (27%) (Brinbaum et al., 2010).

The 2011 ad hoc module of the EU labour force survey on education involved 28 member countries and 3 partner countries. Two definitions of disability were used. Among those aged 15 to 24 in the 28 EU countries, the percentage of those who had basic activity difficulties, an operational measure of disability, was 0.8% in the case of seeing and 0.3% in the case of hearing, for example. The average proportion of early school leavers in the 28 EU countries was 25% among those with basic activity difficulties but 12% among those without. The gap was lowest in Sweden (11% vs 5%) and highest in Bulgaria (61% vs 11%) (**Figure 13.7**).

Cross-national school-based surveys that collect information on individual backgrounds can provide data on the education status of migrant populations. In the 2015 PISA, immigrant students in participating OECD countries were more than twice as likely as their non-immigrant peers to perform below minimum proficiency in science, even accounting for socio-economic status. In Brazil and Colombia, immigrant students were five times as likely to perform below proficiency (OECD, 2016e).

FIGURE 13.7:
European youth with disabilities are more likely to be early school leavers
Percentage of people aged 18 to 24 who left school early, by disability status, 2011



Note: The definition of disability is having basic activity difficulty (e.g. with sight, hearing, walking, communicating).
Source: Eurostat (2014).

CONCERNS ABOUT PRIVACY, STIGMATIZATION AND POLITICS CAN THWART DATA COLLECTION

Gathering education data on disadvantaged and marginalized groups raises several concerns. One is a widespread perception that data protection legislation prohibits collecting sensitive data revealing race, ethnic origin or religion (Ringelheim, 2006). While international laws support the principle of self-identification, leaving the individual to choose which ethnic, religious or linguistic group to identify with, how countries interpret data protection laws differs.

> There is a widespread perception that data protection legislation prohibits collecting sensitive data revealing race, ethnic origin or religion

In England, United Kingdom, the 1991, 2001 and 2011 censuses recorded ethnicity and minority status (e.g.

'Which ethnic group do you descend from?'). In 2011, for example, 60% of White Gypsy or Irish Traveller adults had no qualifications, two and half times the percentage of White British adults. An analysis of migrant groups showed that educational attainment levels improved among all adults between 2001 and 2011. The percentage of Bangladeshi-origin migrants with no qualifications decreased from 47% to 28%, while the proportion of Black African-origin migrants remained at around 10% (Lymperopoulou and Parameshwaran, 2014).

France's national census does not collect data on ethnicity or race but does on nationality and birthplace. In Sweden, schools were reluctant to gather information on ethnic minorities, considered an infringement on privacy (Nicaise et al., 2005). Yet the absence of disaggregated data on minority populations precludes proper evaluation of education policies (European Commission, 2009; Simon, 2008).

Data protection laws often distinguish between individually identifiable and anonymous data, permitting collection of the latter. European Union data protection regulations distinguish between individual, identifiable data and collective, anonymous data to safeguard privacy without impeding collection and dissemination of statistics. The Council of Europe balances research and policy needs with privacy protection, deeming statistical results not to be personal data since they are not linked to an identifiable person (UNDP, 2010).

FEAR OF THE CONSEQUENCES OF DATA COLLECTION NEEDS TO BE ALLAYED

Identifying groups' education-related characteristics poses a risk of stigmatization. Ethnic minority data have historically been misused for purposes of discrimination and mistreatment (Jacobs et al., 2009; Simon, 2008).

The production, publication and use of disaggregated data raises sensitivities in some communities. Fear of discrimination and experience with segregated schools have made the Roma particularly reluctant to provide data or participate in censuses. Some Roma also fear personal data may be misused to control movement or develop anti-minority policies (Gray, 2009). Yet collecting Roma education status data reveals stark disparity with non-Roma populations. The European Union Minorities and Discrimination Survey in nine countries showed that only one in two Roma children attended pre-school. Only 15% of young Roma completed upper secondary or vocational education. About 20% of Roma respondents could not read, compared to 1% of non-Roma respondents (European Union Agency for Fundamental Rights, 2014).

In some parts of the world, disability may bring shame to an individual or household, with particular disabilities being especially stigmatizing. In Southern Asia, disability is often viewed as punishment for sins, vices or faults (Hussain et al., 2002). A household survey in nine districts in Pakistan allayed stigmatization concerns by asking people to assess their level of difficulty with various aspects of functioning. The survey found a much higher prevalence of disability than official censuses and household surveys did (Singal et al., 2011).

> "Governments need to weigh the risks of data collection against their commitment to the SDG principle that no one should be left behind"

Some governments fear data showing inequality between groups reflect poorly on policies and may increase pressure to reallocate funding. Such data may also cause conflict or exacerbate tensions between groups or fuel resentment among the disadvantaged (Ramsay, 2006). Governments need to weigh such risks against their commitment to the SDG principle that no one should be left behind.

MEASUREMENT AND DEFINITION CHALLENGES SHOULD NOT BE UNDERESTIMATED

The diversity of past and present approaches to measuring disadvantage makes common statistical categories and comparison among studies, groups or countries challenging.

Despite efforts to harmonize disability categories, notably by the Washington Group, disagreement about what constitutes disability for measurement purposes in various contexts persists, and significant variation in data collection classification and methodology continues (United Nations, 2016b). A review of seven European countries suggested that expert commissions assigned to specify types and degrees of disability in the case of education sometimes produced categorizations that were unreliable and unsuitable for forming anti-discrimination policies (Chopin et al., 2014).

Nine ethnicity-related terms or concepts appeared in censuses, including 'race', 'country of birth', 'nationality', 'citizenship', 'parents' country of birth' and 'language',

while 'ethnicity' or 'ethnic' appeared in over half. One in six national censuses asked about indigenous status (Morning, 2015). In Australia, the range of indigenous-specific information has expanded with each census since 1971 (Australia Department of Immigration and Border Protection, 2014). The 2011 census, for instance, showed the gap in school attendance between aboriginal and non-indigenous children widening as they progressed through the system, from 8 percentage points for ages 6 to 14 to 20 percentage points for ages 15 to 17 (Australian Bureau of Statistics, 2012).

The category of tribe or caste in Southern Asia is a special case. An analysis of several National Sample Surveys in India over 1983–2010 indicated that, despite progress, the education level of scheduled tribes and castes was far below average. The higher education attendance ratio among scheduled tribes increased from 2% to 12% and that of scheduled castes from 4% to 15%, compared to a national average of 23% in 2010 (Tilak, 2015). Nepal's 2011 census showed that a far higher proportion than average of children from Dalit and other low castes were out of school; the rate was over 30% among many low castes and under the 14% national average among many high castes (Nepal Ministry of Education et al., 2016).

Caution is called for, however, as different definitions of caste can lead to different outcomes. Detailed information from India's Bihar, Odisha and Tamil Nadu states indicated that the relationship between caste and women's status (employment, decision-making, authority on household issues, physical mobility) depended heavily on location and definitions (Joshi et al., 2017).

DATA ON DISADVANTAGE MAY BE DISTORTED BY IDENTIFICATION AND PERCEPTION BIASES

In external identification of disadvantage, third parties attribute characteristics based on evaluation or estimation. For example, teachers reporting the number of students with disabilities impose their own perceptions and prejudices, increasing the likelihood of inaccuracy (UNDP, 2010). In Bulgaria, school directors reportedly based ethnic data on their perceptions, without seeking parental consent (Chopin et al., 2014).

One alternative methodology is self-identification, whereby respondents identify their ethnic origin, health status, disabilities, etc. While self-identification may be useful to resolve legal and ethical dilemmas, it does not ensure meaningful or comparable data. As noted above, many minorities feel deep-seated resistance to declaring their ethnic or religious identity.

Moreover, group membership, whether self-reported or assigned, is dynamic, changing with social and political developments (Abdikeeva, 2014). A comparative study of censuses and surveys in Australia, Canada and the United States suggested that demographic processes, such as immigration and intermarriage, made measuring race and ethnicity much more complex, with respondents allowed to provide multiple responses as to their race and ethnic identity (Stevens et al., 2015).

Where programmes benefit particular groups, individuals who do not meet the criteria may self-identify as belonging so as to gain the advantages. Affirmative action programmes in education, which give special consideration to minorities historically disadvantaged or discriminated against, call for new categorizations. In Brazil, race-targeted affirmative action policies provoked debate on whether and how government should engage in racial classification of citizens, and to what end (Loveman et al., 2012).

CONCLUSION

Assessing whether countries are making progress on SDG 4 equity targets requires disaggregated data, a point clearly articulated in the 2030 Agenda for Sustainable Development. In practice, this is more easily said than done. Concerns about privacy, stigmatization and definitions hinder development of sound tools for monitoring and policy purposes. Policy-makers need nevertheless to ensure compliance with human rights conventions so that the rights of marginalized and disadvantaged groups are not compromised.

A man takes part in night classes in Caracas, Venezuela, that are designed for those who work during the day but who still wish to obtain their high school certification.

CREDIT: Victor Jules Raison/Arete/A GEM Report

KEY MESSAGES

The adult literacy rate increased from 81.5% to 86% worldwide between 2000 and 2015. It is below 60% in low income countries.

The number of youth with no literacy skills has fallen by 27% since 2000, although more than 100 million young people still cannot read, including more than one in four in sub-Saharan Africa.

Insufficient use of local languages in instruction is one possible reason for low literacy in sub-Saharan Africa. In systems that privileged local languages, 69% of adults with five years of education could read a sentence, compared with 41% of adults educated partly or wholly in colonial languages.

Direct assessments estimate that 19% of adults in a sample of mostly high income countries did not meet the minimum literacy proficiency level. In the United States, 29% of adults did not reach the minimum numeracy proficiency level.

There is some evidence that literacy and numeracy levels may be declining in high income countries, including Denmark, Germany, Norway and Sweden. Reduced reading at work, even in high-skill jobs, is a potential factor.

In high income countries, literacy skills gaps between youth of high and low socio-economic status increase between age 15 (tested in school) and age 27 (tested at home). By contrast, wide gender literacy gaps narrow over time.

Governments can improve accountability of adult literacy programmes by establishing standards, reporting systems, accreditation and assessment.

A review of over 200 adult literacy and numeracy programmes showed that all carried out some monitoring and evaluation, usually as part of the management and implementation cycle.

CHAPTER 14

TARGET 4.6

Literacy and numeracy

GLOBAL INDICATOR

4.6.1 *Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex*

THEMATIC INDICATORS

4.6.2 *Youth/adult literacy rate*

4.6.3 *Participation rate of illiterate youth/adults in literacy programmes*

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OVERVIEW

The traditional literacy measure is dichotomous and largely self-reported. Significant efforts have been made to replace it with a directly assessed, more nuanced concept of literacy proficiency levels. But this more appropriate approach has not yet taken hold. Since very few countries carry out literacy assessments, estimates of literacy levels still draw largely on censuses. Between 2000 and 2016, the adult literacy rate increased from 81.5% to 86% worldwide, although it remains at 65% in sub-Saharan Africa and 61% in low income countries. The number of adults with no literacy skills has fallen by just 4% to 750 million (**Table 14.1**).

The number of youth (aged 15 to 24) with no literacy skills has fallen by 27%, although more than 100 million young people still cannot read, including more than one in four in sub-Saharan Africa and in low income countries. The continuing disconnect between local languages and language of instruction plays a particularly important role in the slow development of literacy skills in these populations (**Data focus 14.1**).

> “More than 100 million young people still cannot read”

The estimated 14% global adult illiteracy rate contrasts with the estimated 19% of adults who, on average, did not meet literacy proficiency level 2 in the mostly high income countries participating in the Programme for the International Assessment of Adult Competencies (PIAAC) survey, ranging from 5% in Japan to 53% in Chile. A larger proportion of adults lacked basic numeracy skills, PIAAC results showed. In the United States, 29% of adults did not reach numeracy proficiency level 2, compared to 17% who did not reach literacy proficiency level 2. There is some evidence that literacy and numeracy levels are, in fact, declining (**Box 14.1**).

> “In the United States, 29% of adults did not reach the minimum numeracy proficiency level”

No significant difference was found in literacy proficiency between men and women in most Organisation for Economic Co-operation and Development (OECD) member countries, which raises questions about the common finding that girls perform considerably better than boys on school reading tests (**Data focus 14.2**).

Inequality in literacy and numeracy proficiency by socio-economic status is widespread. In the OECD countries participating in PIAAC, the average probability of an adult falling below minimum numeracy proficiency was more than three times higher for those whose parents did not attain upper secondary education than for those who had at least one parent who attained tertiary education (33% vs 10%). In the Czech Republic and Slovakia, the probability was 10 times higher (29% vs 3%) (**Figure 14.1**).

About 12% of adults in countries participating in PIAAC were born in another country, and some grew up speaking

TABLE 14.1:
Youth and adult literacy indicators, 2000 and 2016

	Youth						Adults					
	Literacy rate (%)		Gender parity index		Number of illiterate (millions)		Literacy rate (%)		Gender parity index		Number of illiterate (millions)	
	2000	2016	2000	2016	2000	2016	2000	2016	2000	2016	2000	2016
World	**86.6**	**91.4**	**0.93**	**0.97**	**143**	**103**	**81.5**	**86.2**	**0.88**	**0.92**	**785**	**750**
Caucasus and Central Asia	99.7	99.9	1.00	1.00	0.35	0.12	98.7	99.8	0.99	1.00	0.6	0.12
Eastern and South-eastern Asia	98.1	98.8	0.99	1.00	6	4	91.4	95.8	0.92	0.97	125	74
Europe and Northern America	...	...	...	...	...	...	...	...	...	...	...	...
Latin America and the Caribbean	95.1	98.1	1.01	1.00	5	2	89.1	93.5	0.98	0.99	39	31
Northern Africa and Western Asia	84.8	89.3	0.89	0.96	10	9	69.8	79.7	0.74	0.85	65	66
Pacific	...	...	...	...	...	...	...	...	...	...	...	...
Southern Asia	73.2	88.6	0.80	0.94	77	39	58.6	71.8	0.66	0.79	386	369
Sub-Saharan Africa	65.9	75.4	0.84	0.89	44	48	56.0	64.6	0.71	0.79	157	200
Low income	58.2	72.9	0.81	0.89	34	36	50.7	60.6	0.69	0.77	115	148
Lower middle income	78.7	89.1	0.86	0.95	97	59	66.7	76.4	0.75	0.84	495	486
Upper middle income	97.3	98.1	0.99	1.00	10	7	90.4	94.9	0.93	0.97	158	103
High income	...	...	...	...	...	...	...	...	...	...	...	...

Source: UIS database.

BOX 14.1

Is literacy on the decline in OECD countries?

PIAAC is the third wave of adult literacy skills surveys in OECD countries in the past two decades, following the International Adult Literacy Survey (IALS) in 1994–1998 and the Adult Literacy and the Life Skills Survey (ALL) in 2003–2007. Although comparisons between surveys should be undertaken with caution, the evidence suggests declines in literacy scores in 9 of the 16 countries that participated in IALS and PIAAC. Data also show a decline in numeracy in five of the six countries that participated in ALL and PIAAC.

Changes in population composition are one potential explanation. Cognitive skills are known to wane with age and declining health. Population ageing, therefore, is likely to decrease average literacy levels. Composition is also affected by increased migrant populations, which tend to have lower literacy skills, on average.

However, observed declines in literacy are largely due to changes in proficiency throughout the population, rather than compositional changes, which tend to cancel each other out: While population ageing has likely contributed to declines, it is more than offset by increases in adult educational attainment. The largest declines are observed in the youngest age groups and those with tertiary education. The latter may indicate that the expansion of tertiary education in recent decades has lowered tertiary graduates' average ability.

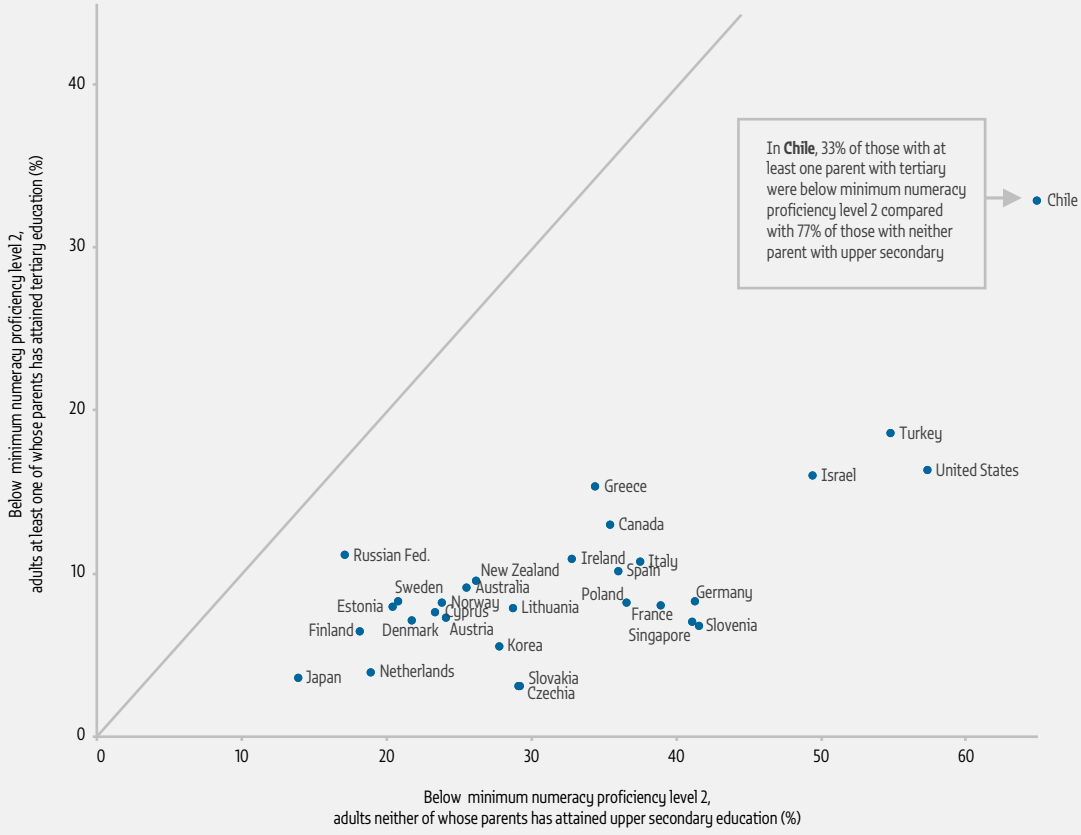
An additional factor is reduced reading at work. Comparable questions in IALS and PIAAC ask how often respondents read letters, memos, emails, reports, articles, magazines, journals, manuals, reference books or catalogues at work. Comparison revealed major declines, even in high-skills jobs and particularly in the countries with the largest drops in literacy, including Denmark, Germany, Norway and Sweden.

Sources: Desjardins (2016); Desjardins and Warnke (2012); Paccagnella (2016).

FIGURE 14.1:

Adults with less educated parents are less likely to have minimum numeracy skills

Percentage of adults below the minimum numeracy proficiency level, by level of parental education, selected countries, 2011–2014



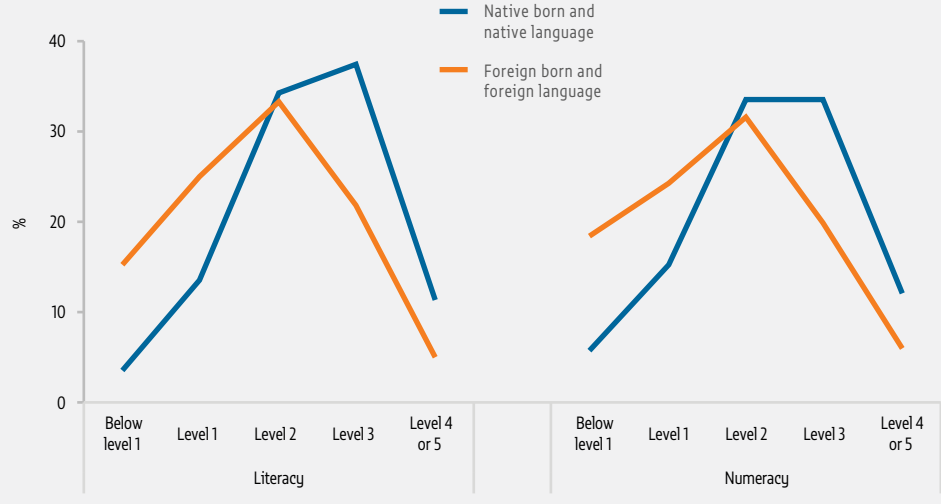
Note: The groups compared are (a) adults whose parents did not attain upper secondary education and (b) those who had at least one parent who attained tertiary education.

Source: OECD (2016f).

FIGURE 14.2:

Adults with immigrant backgrounds are more likely to fall below minimum literacy and numeracy proficiency levels

Percentage of adults by literacy and numeracy proficiency level, by country of birth/language spoken, average of PIAAC-participating OECD countries, 2011–2014



Source: OECD (2016f).

a different language. On average, they were twice as likely as native born, native language speaking individuals not to have minimum numeracy skills. The gap in literacy skills was slightly greater (40% vs 17%); in Sweden, it was almost seven times greater (46% vs 7%) (**Figure 14.2**) (Lind and Mellander, 2016; OECD, 2016f).

Outside of PIAAC and EU surveys, attempts to measure participation in literacy programmes seem to have stalled (see **Chapter 12** on measuring adult education participation). However, there are efforts to monitor literacy programme provision and results so as to provide accountability for commitments to deliver adult education of good quality (**Policy focus 14.1**).

DATA FOCUS 14.1: LANGUAGE OF INSTRUCTION POLICIES HAVE AFFECTED LITERACY OUTCOMES IN SUB-SAHARAN AFRICA

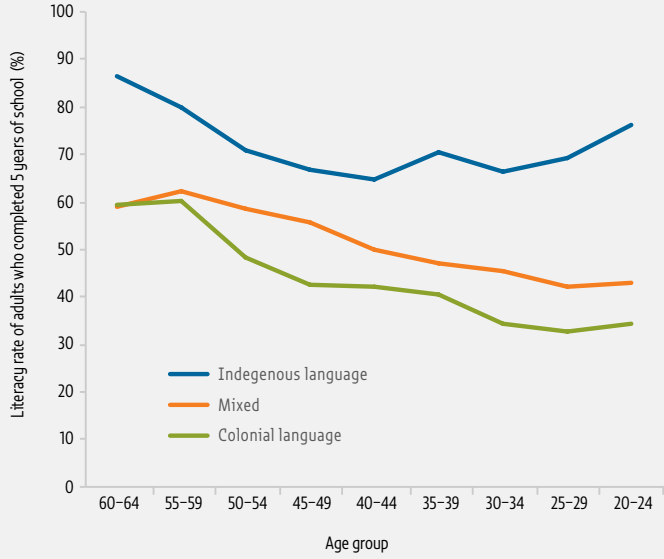
Low historic primary education completion is a key contributor to high levels of adult illiteracy in sub-Saharan Africa. Moreover, the quality of teaching and learning in recent decades has remained insufficient to guarantee acquisition of basic literacy skills after four years of primary education. Only half of adults aged 20 to 64 who had completed five years of school could read an entire sentence, according to the latest Demographic and Health Surveys in 36 countries.

Among the reasons for inadequate education quality in the region is language of instruction policy (see **Data focus 13.2**). In most countries, the vast majority of students are taught in a language other than their home or first language, which compromises their ability to learn effectively. Whether language of instruction policies support literacy skills acquisition, and to what extent, can be estimated with an index of local language of instruction usage in primary education in sub-Saharan African countries between 1960 and 2010 (Albaugh, 2015).

> “In most sub-Saharan African countries, the vast majority of students are taught in a language other than their home or first language, which compromises their ability to learn effectively”

According to a three-tiered classification of countries by type of language of instruction provision, 69% of adults with five years of schooling in systems privileging indigenous languages could read an entire sentence, compared to 41% in colonial or mixed language systems – a gap of 28 percentage points. After controlling for individual characteristics, such as age, religion and place of residence, the estimated effect on literacy outcomes was even larger at 40 percentage points (Ramachandran, 2017b) (**Figure 14.3**).

FIGURE 14.3:
Education systems privileging indigenous languages of instruction have been more effective in ensuring adult literacy in sub-Saharan Africa
Adult literacy rate among those who have completed five years of school, by language of instruction policy and age group, sub-Saharan Africa, 2010



Source: Ramachandran (2017b).

In addition to cross-country evidence, country-specific examples document positive effects of home language of instruction on literacy. An experimental project in north-western Cameroon to instruct in the local language instead of English in grades 1 to 3 showed that students involved achieved basic literacy outcomes. However, gains were not sustained with the switch to English in grade 4 – evidence of the need to avoid early-exit models (Laitin et al., 2017). In South Africa, an apartheid-era language law led to black South Africans in Natal province receiving two more years of education in their local language than their peers in Transvaal, Cape and Free State provinces, resulting in a Natal literacy rate 3.5% higher than that in the other provinces, despite the fact that the policy was intended to exclude and discriminate (Eriksson, 2014).

DATA FOCUS 14.2: GENDER AND WEALTH GAPS IN LITERACY IN HIGH INCOME COUNTRIES MOVE IN OPPOSITE DIRECTIONS DURING YOUNG ADULTHOOD

The wide gender and wealth disparity in student reading achievement is a striking finding of cross-national surveys. For instance, surveys since 2000 in the OECD Programme for International Student Assessment have shown lower literacy scores among boys and among students of lower socio-economic status, as captured through an index based on home possession of books and parental education, among other individual characteristics.

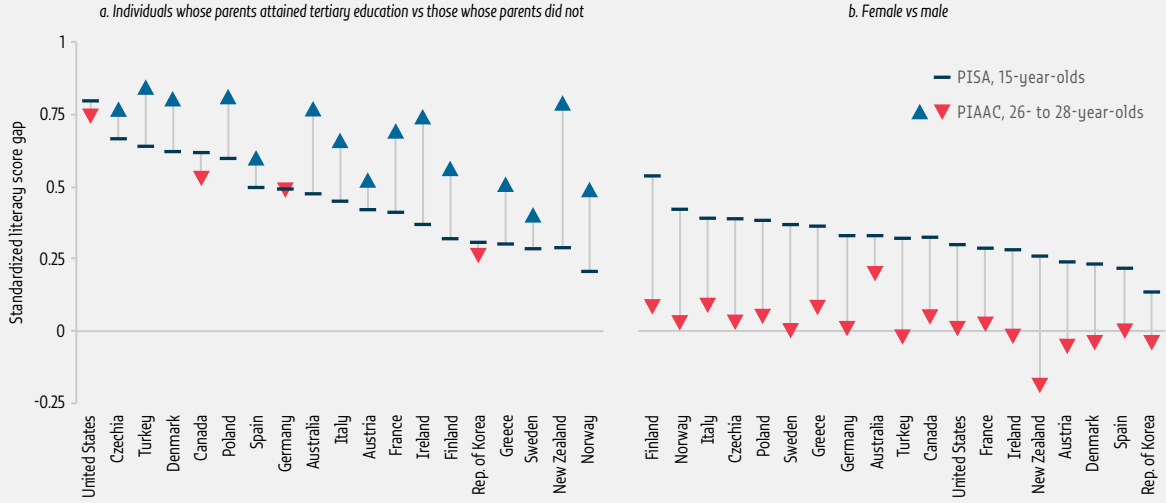
> "Young people's literacy and numeracy skills continue to develop after compulsory education, reaching a peak at around 30"

How learning disparity changes over young adulthood is of particular interest. Young people's literacy and numeracy skills continue to develop after compulsory education, reaching a peak at around 30 (Paccagnella, 2016). The many formative education and employment choices and paths young people pursue play a crucial role. Comparing cohorts that participated in a PISA survey at age 15 and in a PIAAC survey 12 years later showed unexpected changes in disparities (Borgonovi et al., 2017).

With parental education as a measure of socio-economic status, socio-economic disparity widened in three-quarters of the 20 countries compared. The reading score gap between those whose parents did not have tertiary education and those who did increased between ages 15 and 27 by 20%, on average, in all countries, and more than doubled in some, including Ireland, New Zealand and Norway (**Figure 14.4a**). Moreover, the growth in disparity was concentrated among those with low scores at 15. In the bottom decile of respondents, the gap increased by 50%, while in the top decile, it remained stable. A possible explanation is that the more disadvantaged are less likely to enter further education or occupations that demand the application and development of information processing skills.

By contrast, wide literacy gaps between girls and boys narrow or disappear in young adulthood. At age 15, girls in OECD countries outperformed boys in reading. By age 27, the gender gap has almost completely closed, with gains concentrated among low-performing males (**Figure 14.4b**). One possible explanation is a difference in how males engage with the PISA and PIAAC assessments. PIAAC's shorter duration, use of technology and use of a

FIGURE 14.4:
Literacy skills gaps between privileged and disadvantaged groups widen in early adulthood but those between men and women disappear in early adulthood
Standardized literacy score gap at age 15 (PISA) and ages 26 to 28 (PIAAC), selected countries, 2000/03–2011/14



Note: The y-axis measures the standardized score gap, which is defined as the difference in group means divided by the average standard deviation of participating countries.
Source: Borgonovi et al. (2017).

trained interviewer in the home may elicit greater male engagement than the PISA assessment, administered in schools, where peer effects may be present – a supposition supported by the already very low gender disparity in literacy found in PIAAC at age 16.

POLICY FOCUS 14.1: MONITORING AS A TOOL OF ACCOUNTABILITY FOR ADULT LITERACY PROGRAMMES

As this report has shown, applying accountability in education is complex. That is especially true of adult literacy and numeracy, given the diversity of programmes, providers, funding streams and contexts. Moreover, the definition of literacy has expanded beyond a set of generic skills to include multiple dimensions, often resulting in varied perceptions of programme aims and scope among planners, managers, educators and adult learners.

Governments, for example, tend to focus on developing human capital skills for greater productivity, whereas educators also value improving social capital skills for greater community engagement and active citizenship. Planners may focus on whether programmes meet goals, managers on whether they function well, facilitators on how learners respond and learners on their progress towards objectives.

The adult literacy community often disagrees about whether programmes should be more standardized or more flexibly aligned with learner needs and contexts (St. Clair and Belzer, 2010). However, there is a trend towards setting quality standards and clear expectations for programme results. For example, many non-government programme providers, such as Alfalit in Liberia, recognize the importance of official certificates to students' continued studies at regular or vocational schools and try to gain accreditation for their curriculum and assessment tools. Indonesia's National Accreditation Board for Non-Formal Education regulates the national literacy programme and accredits subnational providers based on curriculum, pedagogy, staff qualifications, management and other standards. New Zealand programmes must satisfy criteria for facilities, teaching and support staff qualifications, and admission procedures to receive accreditation.

Systems to monitor programmes, relatively rare a decade ago (Bhola, 2006), are increasingly common. A review of over 200 adult literacy and numeracy programmes, prepared for this report and published in the UNESCO Effective Literacy and Numeracy Practices Database, showed that all carried out some monitoring and evaluation, usually as part of the management and implementation cycle (Hanemann, 2017). Most produced monthly, quarterly, mid-term or annual reports. A few had formal monitoring and evaluation frameworks, with associated targets and performance indicators. Australia's Language, Literacy and Numeracy Program, for example, had a performance and quality assurance framework with indicators on learner participation and attainment.

> "All of the over 200 adult literacy and numeracy programmes reviewed carried out some monitoring and evaluation"

Programme monitoring tended to focus on two issues: (a) how efficiently and effectively available resources were used (operational or financial accountability) and (b) programme quality and results, including outputs (e.g. attendance), outcomes (e.g. learning) and impact (e.g. learners' employment status or further education opportunities) (performance accountability).

MONITORING OPERATIONS STRENGTHENS FINANCIAL ACCOUNTABILITY

The need to adapt to local contexts means literacy programme provision is often decentralized or contracted out. As governments are ultimately accountable for the financial performance of the public service programmes they contract with public funds, systematic collection of financial data helps them hold non-government providers accountable for the resources they receive and for meeting acceptable quality levels.

Programa Brasil Alfabetizado (Literate Brazil Programme) is a joint venture by state and municipal education secretariats, universities and private organizations. Services are contracted based on annual central government resolutions, which define selection criteria for partner entities, counterpart financial contributions, penalties in case of non-fulfilment and resource

> "Brazil has a national database that registers contracts and partner organizations, data on learners, teachers and classes, and produces reports on implemented activities for accountability purposes"

distribution criteria (Henriques et al., 2006). A national database (Sistema Brasil Alfabetizado) registers contracts and partner organizations, data on learners, teachers and classes, and, at the end of each cycle, a final report on implemented activities for accountability purposes. It is considered 'probably the only database of its kind in the world' (Tufani, 2016). The government, announcing that 2017 enrolment was 250,000, up from 168,000 a year earlier, acknowledged that only half of those registered acquired literacy skills (Brazil Ministry of Education, 2016).

Saakshar Bharat Mission (India Literacy Mission) was launched in 2009 with a budget of US$1.2 billion for the first four years. The national government provides 75% and district governments 25%. The programme covers districts with an adult literacy rate below 50% in the 2001 census; the allocation formula is based on numbers of non-literate adults by district.

Two information systems form the backbone of the programme. First, a customized financial management system helps national authorities track expenditure online in real time and ensure uninterrupted availability of funds. The government makes income and expenditure reports public. Second, a web-based planning and monitoring information system allows nearly 200,000 implementing agencies to update information on courses, teachers and learners. As individual learners are not tracked with identity numbers, reports capture only aggregate numbers of those completing courses and receiving certification.

The programme is subject to audit. For example, Andhra Pradesh state authorities carried out a survey in 2015 to identify illiterate adults and track whether procedures were followed. Despite the mechanisms in place, the Comptroller and Auditor General reported that implementation 'suffered from systemic lapses' and that the process of identifying participants was not effective. Many supervisory posts were vacant, and no internal audit had been conducted in 8 of 10 districts (Government of Andhra Pradesh, 2016).

South Africa's Kha Ri Gude (Let Us Learn) adult literacy programme contracts with a private company for financial accounting and reporting and updating of the learner and educator databases of a management information system. Teacher payments depend on submission of comprehensive expenditure and attendance data. The programme, considered high risk in terms of potential misuse of public funds, is subject to parliamentary scrutiny and audits. The audit committee recently suggested that the management should pay more attention to operations. For example, awareness-raising activities recruited over 40,000 volunteer monitors, coordinators, supervisors and educators. Volunteers were paid stipends and many allegedly filed claims for more learners than they actually had (South Africa Department of Basic Education, 2016).

MONITORING OF RESULTS STRENGTHENS PERFORMANCE ACCOUNTABILITY

Adult literacy programmes monitor results, such as attendance and acquired skills, using a range of approaches and instruments.

In Pakistan, the non-government Aagahi Adult Literacy Programme collects information on attendance and skills acquisition. A telecommunications provider runs a data collection system in 43 cities. Teachers send daily attendance reports by text message and the programme management unit monitors centres remotely. Weekly reports recommending corrective measures are sent to field teams. Field-level monitors conduct visits twice per phase to validate data and verify that community centres are running properly and have teaching and learning materials. The monitors also help evaluate outcomes during field visits, assessing whether learners achieve satisfactory skills. Monitoring forms measure centre effectiveness across regions.

> "In Pakistan, teachers report on daily attendance by text messages"

Field visits are just one way of assessing learning and skills acquired. A range of diagnostic, formative and summative strategies includes written and oral tests, oral presentations and self- and peer assessments, often with reference to pre-training levels.

High income countries use standardized national assessment frameworks and tools to assess outcomes. As part of Australia's Language, Literacy and Numeracy Program, independent verifiers sample student assessments to ensure learning quality, analysing learner progress against the Australian Core Skills Framework. Assessments may include pre-training evaluations, portfolio work and individual training plans, which may include work experience. Chile's Programa de Educación y Capacitación Permanente (Lifelong Learning and Training Programme, also called Chile Califica) collects information on individual enrolment, attendance, repetition, exam no-shows, dropout and completion. Accredited schools also enter written final exam data into the system.

Use of standardized assessments may be linked to funding. Programme providers in the United States, for example, must use the competence-based Comprehensive Adult Student Assessment System, validated by the Departments of Education and Labor, to be eligible for resources.

Some middle income countries use software that generates questions and creates online final exams randomly for each district. The Literacy for Students' Illiterate Parents Programme, administered by the Literacy Movement Organization in the Islamic Republic of Iran, uses such a system, as does the Modelo Educación para la Vida y el Trabajo Indígena Bilingüe (Bilingual Indigenous Education Model for Life and Work), administered by the National Institute for Adult Education in Mexico.

Other countries rely more on class facilitators to collect formative and summative assessments of learners and feedback from them. Although higher-level authorities commonly undertake field visits to monitor classroom activities, there is little evidence that test data is commonly and systematically collated for analysis by national or subnational authorities.

Some programmes integrate formative testing into monitoring and evaluation. In the Philippines, as part of a lifelong learning and peace literacy programme developed by the Tubungan municipality in Western Visayas region, learners prepare individual agreements that guide the learning process, which is captured in two ways. First, learners record progress and note difficulties in a dialogue journal, assisted by the literacy facilitator or district coordinator if their writing level is low. Second, individual work folders or portfolios contain learners' tests, quizzes, drawings, pictures and Accreditation and Equivalency Programme Assessment results.

Instead of a final exam, South Africa's Kha Ri Gude Adult Literacy Programme uses learner assessment portfolios, which include standardized test items applied flexibly at a learner's pace. Under the oversight and technical guidance of the independent South African Qualifications Authority, a representative sample of 10% of portfolios is analysed. This increases the programme's credibility, while analysis of items by language, district and age provides the campaign with important information to improve its interventions.

Some programmes use innovative approaches to assess learning outcomes, going beyond narrowly construed literacy skills. In France, Lutte contre l'Illettrisme (Fight against Illiteracy) conducts mid- and end-of-course evaluations of autonomy, confidence, motivation, everyday interactions, cognitive development and savoir faire. The Family Literacy Project in South Africa includes storytelling, photographs, focus groups and interviews. The United Kingdom's Prison Family Learning Programme uses a standardized questionnaire involving self-reflection: learners highlight what they have learned, how the programme has affected their lives and well-being, and what challenges they faced while learning.

Participatory approaches, social audits and community-based trust building can help create a culture of mutual accountability. The non-government organization Associação Progresso in Mozambique assesses the impact of literacy programmes through community monitoring carried out by learners themselves. In addition to raising awareness, it has an instructional function: through hands-on activity with survey forms and systematized data, learners apply, improve and demonstrate their reading, writing and numeracy skills. Their narrative reports have been presented to local leaders and public institutions.

CONCLUSION

Robust accountability systems that monitor both compliance with rules and the results of programmes are key to meeting adult literacy objectives. Greater coherence can be encouraged by streamlining administration of provision, which tends to be spread across multiple ministries or agencies. Despite the diversity of form, governments can establish common standards and reporting systems in areas such as financial management and transparency, provider accreditation and assessment practices, especially when contracting with non-government providers. Information and communication technology provides opportunities for enhancing accountability across the adult education sector, enabling collection of real-time data from multiple locations, quick data aggregation and near-instantaneous posting of information online.

While standardized quality criteria, indicators and tests are helpful in improving service quality and advancing a culture of accountability, the complex and diverse nature of adult literacy and numeracy programmes necessitates flexible application of tools and approaches to meet funders' requirements and the needs of learners and their communities. Accountability tools' potential unintended consequences for adult learners, including reduced motivation, programme withdrawal or a sense of stigmatization, also need careful consideration.

A Grade 6 student from Malaban Elementary School in Laguna, Philippines is intrigued as she examines a makeshift camera during a class activity that uses innovative recycled materials to teach using a multi-intelligence approach.

CREDIT: Domyson Dulay Abuan/UNESCO

KEY MESSAGES

Progress towards target 4.7 is measured through national reports on the implementation of the 1974 UNESCO Recommendation on Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms.

Analysis of 57 national reports from the fifth reporting cycle in 2009–2012 showed that only 7% of countries covered education for sustainable development in teacher education programmes.

A 48-country review found that almost 80% had supportive policies for sexuality education but they were not always implemented. Comprehensive sexuality education programmes addressing gender relations are five times likelier to reduce sexually transmitted disease rates than those that do not.

Almost 30% of 15-year-olds in 2015 performed below the minimum proficiency level on the science domains of earth and space systems. In Estonia and Japan, at least 90% of students achieved that level compared to less than 50% in Brazil, the Dominican Republic, Peru, Qatar and Tunisia.

Revising textbooks to reflect target 4.7 is a complex task, especially when revision involves challenging entrenched views of history.

In national conflicts, distrust of particular communities may prevent debate on textbook content. In cross-border conflicts, it can be politically costly to invite neighbouring countries to exchange views on historical issues.

In recent years, governments, NGOs and international organizations have made bold attempts to bridge gaps in textbook content. It is essential to avoid narratives that glorify violence and militarism, and instead to promote models of peace and reconciliation, inviting students to question received knowledge.

CHAPTER 15

TARGET 4.7

Sustainable development and global citizenship

GLOBAL INDICATOR

4.7.1 *Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment*

THEMATIC INDICATORS

4.7.2 *Percentage of schools that provide life skills-based HIV and sexuality education*

4.7.3 *Extent to which the framework on the World Programme on Human Rights Education is implemented nationally (as per the UNGA Resolution 59/113)*

4.7.4 *Percentage of students by age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability*

4.7.5 *Percentage of 15-year-old students showing proficiency in knowledge of environmental science and geoscience*

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OVERVIEW

Target 4.7 is the most distinctive of the 10 Sustainable Development Goal (SDG) 4 targets for its novel emphasis on the content and purpose of education. Monitoring progress on it in the years to 2030 will be challenging. The global indicator is based on country reporting on implementation of the 1974 UNESCO Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms. Responses to the sixth consultation on implementation will be converted into an operational measure (**Data focus 15.1**).

There are three core challenges for monitoring. First, self-assessment of policy implementation may be neither objective and credible enough for other countries to learn from nor nuanced enough for policy purposes. The *Global Education Monitoring (GEM) Report* supports approaches that rely on expert judgement regarding the mainstreaming of education for sustainable development and global citizenship. Building on work presented in the 2016 GEM Report, new work is reported on teacher education (**Data focus 15.2**). Political sensitivities in monitoring progress and explaining mechanisms that drive change towards target objectives are a challenge, as the case of textbook reform shows (**Policy focus 15.1**).

Second, an account of curriculum or teacher education policy is insufficient to establish whether it is being implemented. Monitoring implementation of comprehensive sexuality education is a case in point (**Data focus 15.3**).

Third, beyond policy intentions and implementation, there is no consensus on desirable outcomes of education for sustainable development and global citizenship: What are the expected learning outcomes? How are they achieved? How do we know they lead to desirable behaviour? How can we assess achievement? Monitoring acquisition of the knowledge and skills needed for sustainable development is not straightforward. There is a dearth of relevant learning assessments, developing context-relevant test items is difficult and the scope of topics to cover is very broad (**Data focus 15.4**).

One relatively straightforward option is to monitor acquisition of scientific knowledge of the Earth, the reasons for and forms of climate change, and its impact on habitats and ecosystems essential for sustainable development. The Programme for International Student Assessment (PISA) assesses scientific knowledge, including 15-year-olds' knowledge of foundational ideas and theories about (a) earth and space systems (e.g. history, structure and scale of the universe, changes

> Almost 30% of 15-year-olds in the countries that participated in the 2015 PISA performed below minimum proficiency level 2 in scientific knowledge

in earth systems) and (b) living systems (e.g. evolution by natural selection, ecosystem dynamics, biosphere).

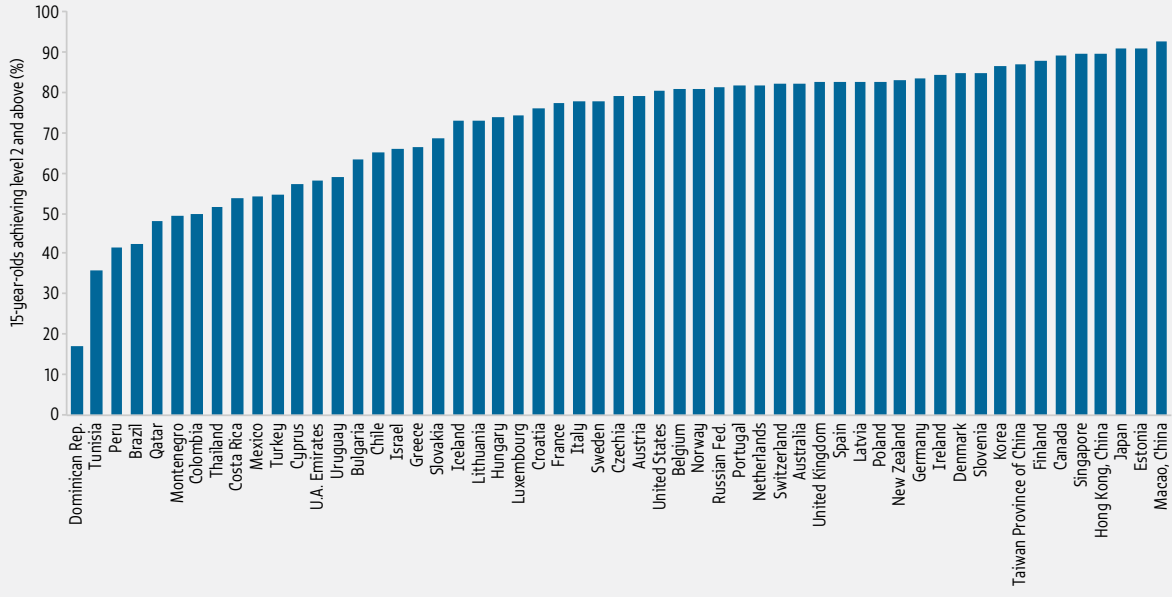
On average, almost 30% of 15-year-olds in the countries that participated in the 2015 PISA performed below minimum proficiency level 2 in both areas. In Estonia, in Macao (China) and in Japan, at least 90% of students achieved level 2 or above in earth and space systems, compared to less than 50% in Brazil, the Dominican Republic, Peru, Qatar and Tunisia (**Figure 15.1**).

The Trends in International Mathematics and Science Study (TIMSS), administered in grades 4 and 8, includes questions on earth sciences. Grade 4 students, for example, should have general knowledge of the structure and physical characteristics of the Earth's surface and resources, and be able to describe some of the Earth's processes in terms of observable change. Between the 2011 and 2015 studies, average performance improved in 15 participating countries, declined in 9 and made no significant change in 16. Observed improvement tended to be small. Morocco showed the greatest progress, improving by 40%, although its score remained comparatively low (**Figure 15.2**).

DATA FOCUS 15.1: MONITORING IMPLEMENTATION OF THE 1974 UNESCO RECOMMENDATION AS A FIRST STEP TO TRACK PROGRESS

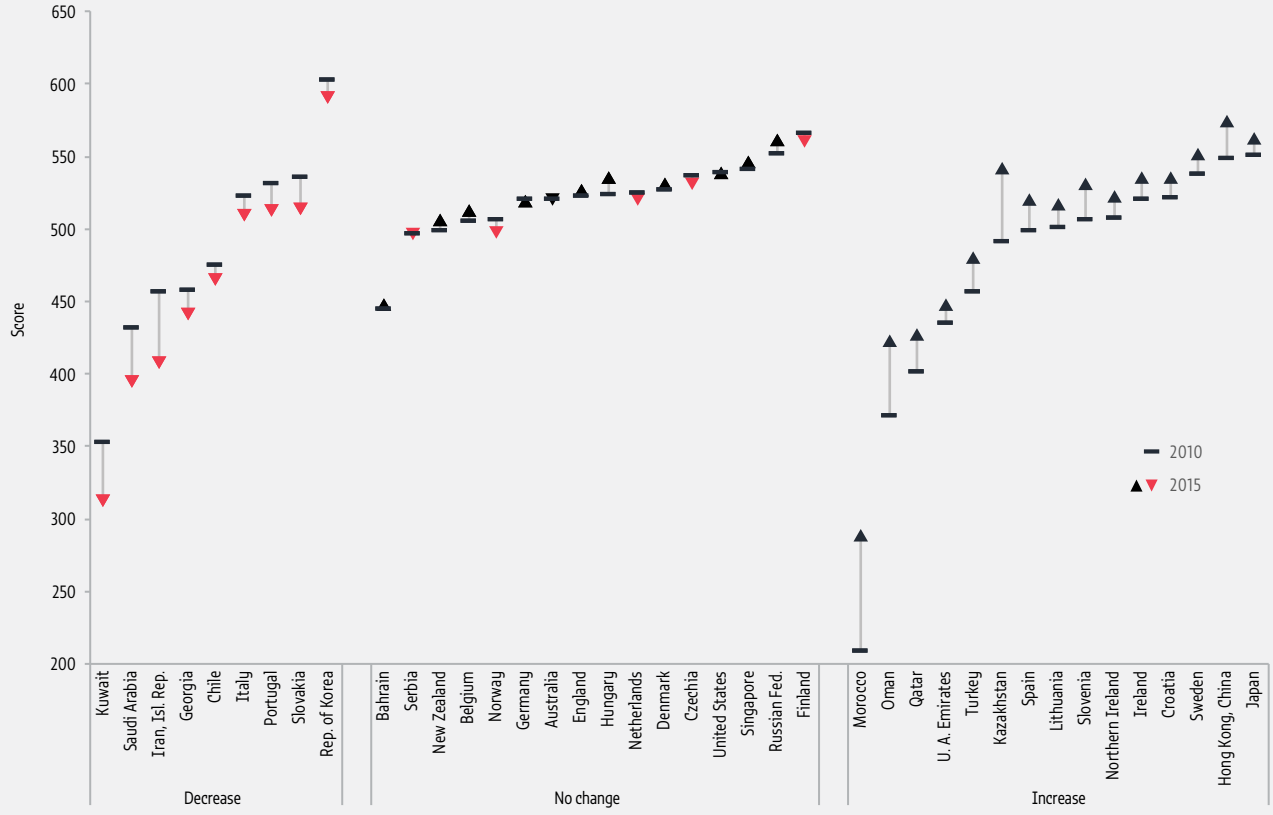
UNESCO Member States report on implementation of the 1974 Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms. This has been proposed as the mechanism to monitor progress towards target 4.7. The Recommendation lays out a normative framework on issues related to peace and human rights in the goals, policies, contents and teacher training materials of national education systems (Arora et al., 1994; Savolainen,

FIGURE 15.1:
Scientific knowledge among adolescents varies widely by country
Percentage of 15-year-olds performing at or above level 2 proficiency in earth and space systems on PISA, selected countries, 2015



Source: OECD (2016c).

FIGURE 15.2:
Primary student knowledge of the Earth's structure and systems has improved slightly
Average grade 4 scores in earth sciences on TIMSS, selected countries, 2011 and 2015



Source: Martin et al. (2016b), based on 2011 and 2015 TIMSS.

2010; UNESCO, 2008). Since 1974, UNESCO has conducted five consultations, and the sixth began in late 2016. The key question is how and if the information can be summarized to help monitor progress towards target 4.7. Assuming the self-reported information is valid and useful for monitoring, in what format should it be communicated to apprise countries of where they are and what they can do to improve?

An analysis of 57 national reports covering 2009–2012, submitted under the fifth consultation, sheds some light. The reports were coded using a protocol with a set of key terms (McEvoy, 2017). Over 85% of countries reported including human rights and fundamental freedoms in education policy and making them mandatory in curricula. Education for sustainable development and cultural diversity and tolerance were less common; 51% of countries reported integrating education for sustainable development in policy and 33% in curricula. In general, many terms that are common in curricula are not taken up in teacher education programmes (**Data focus 15.2**): About half of countries covered peace, non-violence, human rights and fundamental freedoms, 16% cultural diversity and tolerance and only 7% education for sustainable development (**Figure 15.3**).

> "51% of countries reported integrating education for sustainable development in policy and 33% in curricula"

Reports also include information on the subjects and grades in which global citizenship and human rights

> In 2012, only 7% of reporting countries provided stand-alone courses on global citizenship subjects at any level

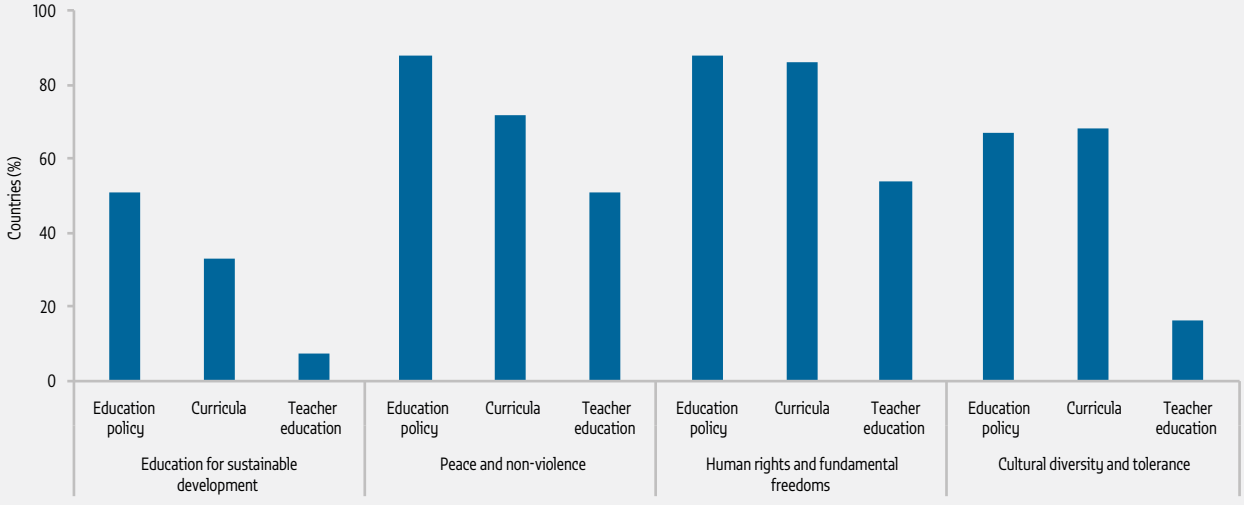
education is integrated. In 2012, only 7% of reporting countries, including Norway, the Philippines and Uzbekistan, provided stand-alone courses on global citizenship subjects at any level. Bosnia and Herzegovina taught democracy and human rights courses in primary grades 6 and 8 and as a compulsory subject in the third year of secondary school. Ethiopia, Mauritius and Zimbabwe put in place child parliaments, student governments and codes of conduct. Countries reported similar measures in non-formal education. In Togo, adult literacy programmes addressed issues related to human rights and discrimination against women (UNESCO, 2013a).

The questionnaire was revised for the sixth consultation to include fewer open-ended and more multiple-choice questions, as well as online reporting (UNESCO, 2016c). The 83 national reports received represented a 51% increase on the 2012 response rate. Most countries reported increased emphasis on Recommendation principles in policy development or curriculum reform, especially regarding equality, inclusion and non-discrimination (91% of countries). By contrast, just 66% of countries reported increased emphasis on global citizenship.

Countries integrate the principles in various ways, including a cross-curriculum approach, a whole school approach and a separate subject approach (the most common subject being civics at 81%). Two-thirds of countries had increased the number of programmes or practices that provided students with multicultural experiences through community work, community events and student exchange. About 70% of countries had revised textbooks to better reflect the principles.

Inclusion of the principles in student assessments increased significantly, from 14% of reporting counties in

FIGURE 15.3:
Only 7% of countries included education for sustainable development in teacher education
Percentage of countries reporting to the fifth consultation of the 1974 Recommendation that included selected terms in education policy, curriculum and teacher education, 2012



Source: McEvoy (2017).

> In many countries, teachers are poorly prepared to teach topics related to global citizenship and sustainable development

the fourth consultation (2008) to 46% in the fifth (2012) and 81% in the sixth (2016). The assessments mostly examined knowledge and skills, although several countries in 2016 reported plans to include values, attitudes and behaviours in the next five years.

A report expected in 2017 will summarize the information from the 83 latest national reports in an index. UNESCO recognizes the need to further refine report preparation guidelines to better meet monitoring requirements for the global indicator, as well as the need to conduct further research to cross-check reports with realities on the ground.

Reporting for the Council of Europe Charter on Education for Democratic Citizenship and Human Rights Education follows a similar process, from which lessons can be learned. The latest report, on the second review, highlighted gaps in evaluating education programme effectiveness. The overwhelming majority of participating countries felt the process encouraged stronger action, promoted good practice, supported dialogue within and between countries, and facilitated access to external expertise (Council of Europe, 2017).

DATA FOCUS 15.2: COUNTRIES FOLLOW A RANGE OF APPROACHES TO EDUCATE TEACHERS ON SUSTAINABLE DEVELOPMENT

In many countries, teachers are poorly prepared to teach topics related to global citizenship and sustainable development, since initial and in-service courses and programmes included limited or no core knowledge in these fields. Many programmes have begun to meet this need, but efforts tend to be fragmented and dependent on individual teacher educators' commitment (Bourn et al., 2017; Ferreira et al., 2015).

Initial teacher education should aim to supply graduates with the readiness and capacity to teach sustainability and global citizenship in schools. Analysis for this report identified various approaches, from specialist modules and courses to content within training for subject-based teachers and short sessions with little depth (Bourn et al., 2017; Gaudelli, 2016).

In Brazil, environmental issues are included in teachers' environmental sciences courses, and trainee teachers are expected to develop environmental projects in their placement schools (Bourn et al., 2017). In Ireland, international development and intercultural education have been a core component of initial primary school teacher education since 2003 (Martin et al., 2016a). Jamaica has made significant progress through the Sustainable Teacher Environmental Education Project, implemented by the Board of Teacher Education from 2000 to 2007, and has integrated sustainable development education in some teaching courses. A course on environment and sustainability is compulsory for all teachers of all levels in eight teacher training institutions (Hiebert, 2013).

Continuous professional development is increasingly used to support teachers but rarely provided systematically. In England (United Kingdom), the Global Learning Programme assists primary and secondary school teachers to be more confident and able to teach global issues. A major component is peer-led training. Teachers with experience and expertise in global learning set up local networks of schools to train and support other teachers. The programme has reached one in five schools (Hunt and Cara, 2017). In the Republic of Korea, the national professional development programme includes human rights, peace and cultural diversity. Each teacher is encouraged to take 60 hours of training per year (Bourn et al., 2017).

Such teacher education programmes are often run by non-government organizations (NGOs) or are part of externally funded projects. In Karamoja region, Uganda, UNICEF's Gender Socialization in Schools programme provided training to over 1,000 primary school teachers to enhance knowledge, attitudes and practices related to gender equality promotion and conflict resolution. While the programme improved teachers' knowledge and attitudes on gender equality issues, it did not lead to more gender-responsive classroom practices, pointing to the challenges of changing such practices in the short term (American Institutes for Research and UNICEF, 2016; El-Bushra and Smith, 2016).

ESTABLISHING A MECHANISM TO MONITOR TEACHER EDUCATION CONTENT IS CHALLENGING

Analysis for this report reviewed methods of monitoring the content of teacher education (Bourn et al., 2017). Many countries have developed professional standards and competences that ensure teaching quality. Coding and analysis of published competences and standards would make it possible to monitor country efforts. Yet this approach is not without challenges, including developing conceptual definitions for coding and applying them to diverse languages (IBE, 2016). Moreover, any analysis of teacher education curricula through a standard coding protocol must adopt a mixed methodological approach taking into account how a given curriculum works in practice.

> “Networks of teacher education institutions could collect information on programme content”

Networks of teacher education institutions could collect information on programme content. The International Network of Teacher Education Institutions, which is associated with the UNESCO Chair on Reorienting Teacher Education to Address Sustainability, brings together institutions in 60 countries. Regional networks, such as the Caribbean Network, the Mainstreaming Environment and Sustainability in African Universities Partnership, and the Baltic and Black Sea Circle Consortium for Educational Research, also have potential to gather data from institutions in their regions (Swedish International Centre of Education for Sustainable Development, 2017).

The UK Teacher Education for Equity and Sustainability Network provides an example of a comparative review of teacher education. In 2010, the network conducted an email survey to explore how teacher educators approached sustainable development and global citizenship in their course provision. Responses from 27 institutions indicated that, on average, such topics were provided in three subject areas – mostly geography, global citizenship and science.

In addition, indicators can be derived from international surveys such as the Teaching and Learning International Survey (TALIS) and the International Civic and Citizenship Education Study (ICCS). In the 2018 TALIS, teachers will be asked about the content of their initial formal training and whether they feel prepared to act on it. In the 2016 ICCS, school and teacher questionnaires asked about teachers' involvement in initiatives and programmes related to environmental sustainability.

DATA FOCUS 15.3: IMPLEMENTATION OF COMPREHENSIVE SEXUALITY EDUCATION PROGRAMMES VARIES

School-based comprehensive sexuality education programmes equip children and young people with empowering knowledge, skills and attitudes. In many contexts, programmes focus almost exclusively on HIV to delay sexual activity and encourage fewer sexual partners and less frequent sexual contacts (Fonner et al., 2014). However, international guidelines and standards, along with emerging evidence about factors influencing programme effectiveness, increasingly stress a comprehensive approach centred on gender and human rights (Ketting and Winkelmann, 2013). A review of 22 studies showed that comprehensive sexuality education programmes that addressed gender power relations were five times more likely to be effective in reducing rates of sexually transmitted infections and unintended pregnancy than those that did not (Haberland, 2015).

In 2009, UNESCO and other UN agencies published *International Technical Guidance on Sexual Education* to provide an evidence-based, age-appropriate set of topics and learning objectives for comprehensive sexuality education programmes for ages 5 to 18 (UNESCO, 2009a). Following a review process, updated guidance will be issued in late 2017 to include a stronger focus on human rights, gender equality and skills building. In 2010, the International Planned Parenthood Federation adopted a rights-based approach in its *Framework for Comprehensive Sexuality Education*, and the World Health Organization

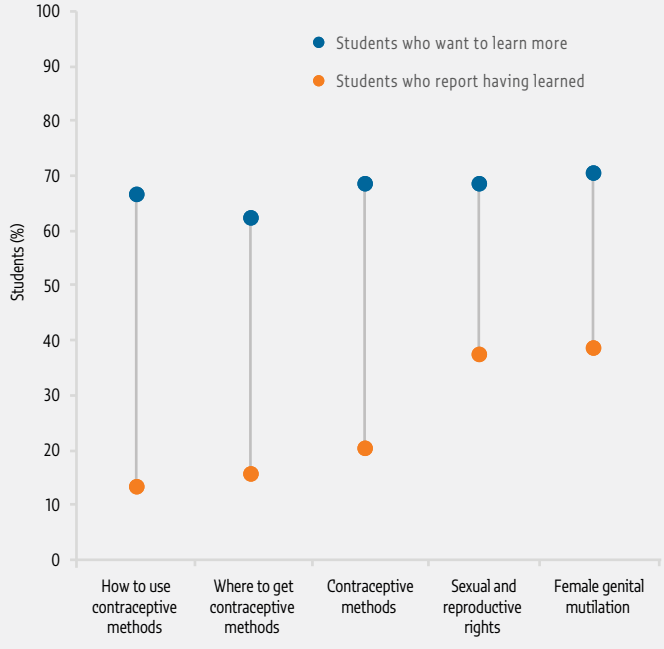
> “Comprehensive sexuality education programmes that addressed gender power relations were five times more likely to be effective in reducing sexually transmitted infections and unintended pregnancy than those that did not”

Regional Office for Europe produced *Standards for Sexuality Education in Europe* as a framework for policy-makers and education and health authorities (WHO Regional Office for Europe and BZgA, 2010).

A 2015 review of the status of comprehensive sexuality education in 48 countries found that almost 80% had supportive policies or strategies. Despite this political will, a significant gap remained between policies and implementation (UNESCO, 2015c). In western and central Africa, UNESCO's Sexuality Education Review and Assessment Tool was used to assess 10 out of 13 national sexuality education programmes. Fewer than half the curricula met global standards for required content for all age groups, with gender and social norms identified as the weakest areas (Herat et al., 2014; UNESCO and UNFPA, 2012).

Recent studies in Ghana and Kenya provided evidence of such gaps in content and delivery. The Kenya study covered 78 public and private secondary schools. While 75% of teachers reported teaching all topics of a comprehensive sexuality education programme, only 2% of students reported learning all topics. Only 20% learned about types of contraceptive methods, and even fewer learned how to use and where to get them (**Figure 15.4**). In some cases, incomplete and sometimes inaccurate information was taught. Almost 60% of teachers incorrectly taught that condoms alone were not effective in pregnancy prevention (Sidze et al., 2017). Moreover, 71% of teachers emphasized abstinence as the best or only method to prevent pregnancy and sexually transmitted diseases, and most depicted sex as dangerous or immoral for young people.

FIGURE 15.4:
In Kenya, only one in five students reported learning about contraceptive methods
Percentage of secondary school students who reported having learned or wanting to learn more about selected sexual and reproductive issues, 2015



Source: Sidze et al. (2017).

Barriers to effective implementation of comprehensive programmes include lack of well-trained teachers, poor support of schools, weak regulation and supervision of policy implementation, opposition from religious and conservative groups, and culturally imposed silence about sexuality. In the Ghana study, 77% of teachers reported lacking resources or teaching materials. A smaller share reported conflicts, embarrassment or opposition from the community or students on moral or religious grounds (Awusabo-Asare et al., 2017).

Monitoring the coverage of sexuality education programmes is not straightforward. Until 2011, a UN General Assembly Special Session core indicator attempted to monitor progress by identifying the percentage of schools providing least 30 hours of life skills-based HIV education per academic year. However, there were no standard guidelines on what constituted such education, the response rate was low and the information was self-reported, making it difficult to determine its quality.

In view of challenges in monitoring this indicator, UNESCO supported the development of *Measuring the Education Sector Response to HIV and AIDS: Guidelines for the Construction and Use of Core Indicators*. Some countries, including Botswana, Namibia, Seychelles, the United Republic of Tanzania and Zambia, have field-tested the indicator on the coverage of life skills-based HIV and sexuality education in their education management information systems.

Jamaica, which has a similar indicator in its annual schools census, will integrate key questions on the impact of life-skills education on student knowledge, attitudes and behaviour. Zambia has been collecting data on the percentage of schools providing life skills-based HIV and sexuality education since 2014, allowing better targeting of resources to areas most in need.

> School-based surveys can provide critical information on student exposure to sexuality education programmes

School-based surveys, such as the Global School-based Health Survey and the Health Behaviour in School-aged Children survey, can provide critical information on student exposure to sexuality education programmes. In some countries, the surveys' expanded questionnaires ask students if they were taught how to use a condom, how to avoid HIV, where to get tested for HIV or about the effectiveness of condoms.

DATA FOCUS 15.4: MEASURING KNOWLEDGE ON SUSTAINABLE DEVELOPMENT IN HIGHER EDUCATION

Knowledge of sustainable development issues is an essential first step towards related desirable behaviour. Since the 1990s, assessment tools displaying considerable diversity in scope and methodology have covered a broad range of aspects related to sustainability in tertiary education institutions. Yet a review of 16 such tools showed that they focused mainly on the environmental impact of institutions' operations rather than on education and learning outcomes (Yarime and Tanaka, 2012).

Cross-institutional or cross-national knowledge assessment tools play an important role in understanding where an institution stands regarding sustainability objectives, identifying areas and developing strategies for improving performance, and helping build a culture committed to sustainability. One such assessment is the Sustainability Literacy Test, which provides tertiary education institutions, companies and other organizations with an internationally comparable and locally relevant tool. After a pilot phase in 2014–2016 involving 260 universities in 35 countries, a new version was launched in September 2016.

The online multiple-choice questionnaire is randomly generated from a question bank. The 30 questions from the core international module, common to all countries, allow education institutions and organizations to benchmark at a global level. In some cases, core questions are combined with 20 questions specific to local contexts, which are not comparable among countries. At the end of the test, students are asked to answer a background questionnaire.

There are two sets of core questions. The first relates to basic understanding of sustainable development and general knowledge of trends and key figures on global environmental, social and economic issues. The second relates to the international standards of organization social responsibility (ISO 26000): governance, human rights, labour practices, environmental stewardship, fair operating practices, consumer issues, and community involvement and development. Some questions, developed with the UN Department of Economic and Social Affairs, form a complementary module on the SDGs. The new version includes a specialized module dedicated to the SDGs (Carteron et al., 2017).

The test can be administered either as an examination (supervised by a teacher, in a fixed time, without access to learning material) or a learning exercise (at home, with sufficient time to look up information and data). More than 55,000 students and faculty members of 550 higher education institutions in 57 countries have taken the test, 47% in examination mode. On average, participants correctly answered 54% of core questions in examination mode and 60% in learning mode. While scores did not differ significantly by gender or socio-economic status, there was some variation by subject. Participants performed much better on human rights and economic questions than environmental ones.

There was also variation by country. In India, 60% of respondents correctly answered questions on social trends, compared to 40% in South Africa. In Australia, 72% correctly answered environmental questions – almost twice as many as in India. The test's focus on the knowledge dimension of sustainability literacy is a

> Assessment tools on sustainability in tertiary education institutions focus mainly on the environmental impacts of the institutions rather than on learning outcomes

> Over 2000–2008, 25% of textbooks worldwide mentioned global citizenship, compared to 13% in the 1980s

major drawback. While international questions covering skills and attitudes are still being developed, some countries have chosen to integrate the skills and attitudes dimension in their local questions.

The survey includes questions about the delivery of sustainable development education. About two in three respondents reported it was included in related or dedicated courses, but it was a graduation requirement for only one in four.

POLICY FOCUS 15.1: TEXTBOOKS ARE CRITICAL TO FURTHER AN AGENDA OF TOLERANCE, PEACE AND RECONCILIATION

Few instruments shape young minds more powerfully than the teaching and learning materials used in schools. Textbooks convey not only knowledge but also social values, political perspectives and an understanding of history and the world. Teachers and students trust textbooks as authoritative and objective sources of information, assuming that they are accurate, balanced and based on the latest scientific findings and pedagogical practice. In some contexts, textbooks are the first and sometimes only books a young person reads (Lässig and Pohl, 2009). In most classrooms, they determine what and how teachers teach.

However, textbooks in many countries fail to deal comprehensively, clearly and fairly with concepts that are crucial for social cohesion and political stability, including peace and non-violence. Understanding the conditions under which changes can be made to textbooks is critical for advancing towards target 4.7.

DESPITE PROGRESS, COVERAGE OF GLOBAL CITIZENSHIP REMAINS LOW

Global citizenship education aims to teach notions of belonging not just to one's own country but also to a broader global community. It encompasses global principles, such as human rights, democracy and social justice (Davies, 2006). Countries have increasingly incorporated global citizenship into curricula to prepare students for citizenship in an interconnected world, but levels remain low. Over 2000–2008, 25% of textbooks worldwide mentioned global citizenship, compared to 13% in the 1980s (**Figure 15.5**). Latin America and the Caribbean registered the largest increase, from 20% in the 1980s to 50% in the 2000s (Bromley et al., 2016).

While textbooks increasingly impart global knowledge and values, they continue to instil a sense of national identity, values and ideals. In the late 2000s, in 76 countries whose textbooks mentioned global citizenship, nearly 90% of secondary school social studies and history textbooks also covered national citizenship (Buckner and Russell, 2013).

Textbooks can stoke or perpetuate conflicts

For education to contribute to the development of peaceful societies, textbooks should provide a platform to discuss conflict prevention, resolution and reconciliation. However, only 10% of textbooks included explicit statements on these issues (**Figure 15.5**). The proportion of textbooks referring to conflict resolution and reconciliation mechanisms was highest in Latin America and the Caribbean and in sub-Saharan Africa, at around 15% (Bromley et al., 2016).

Textbooks that glorify war and military heroes, exclude pluralistic perspectives or undermine other peoples or ethnicities can make teaching peace, non-violence and reconciliation difficult. In Pakistan, textbooks have been criticized for normalizing militarism and war and including biases and historical errors and distortions (Afzal, 2015). Prominent Pakistanis other than military heroes and nationalist movement leaders are often excluded (Naseem, 2014).

Pakistani textbooks published after a 2006 curriculum reform still emphasized wars with India and largely ignored peace initiatives. They also perpetuated a narrative of conflict and historic grievances between Muslims and Hindus, rather than discussing the potential for conflict resolution and reconciliation (Nayyar, 2013;

Peace and Education Foundation, 2016). For their part, Indian history textbooks from 2002 put blame on Pakistan and contained clear bias against Muslim elements in the region's history (Joshi, 2010).

In Sri Lanka, textbooks have long promulgated ethnic enmity. Sinhalese textbooks portrayed Sinhala kings as heroes defeating the Tamils, who were depicted as invaders. Sinhalese Buddhists were presented as the only true Sri Lankans (Cardozo, 2008). Six history textbooks spanning grades 7 to 11 published in 2007/8 no longer included overt Tamil stereotypes but largely brushed over Tamil history, culture and religion and presented almost exclusively Sinhalese role models. The absence of Tamil or Muslim role models offered minority students few figures with whom to identify. Textbooks also failed to recognize alternative interpretations of historical events or encourage students to engage critically with the past (Gaul, 2014).

NUMEROUS ACTORS ARE INVOLVED IN REVISING TEXTBOOKS

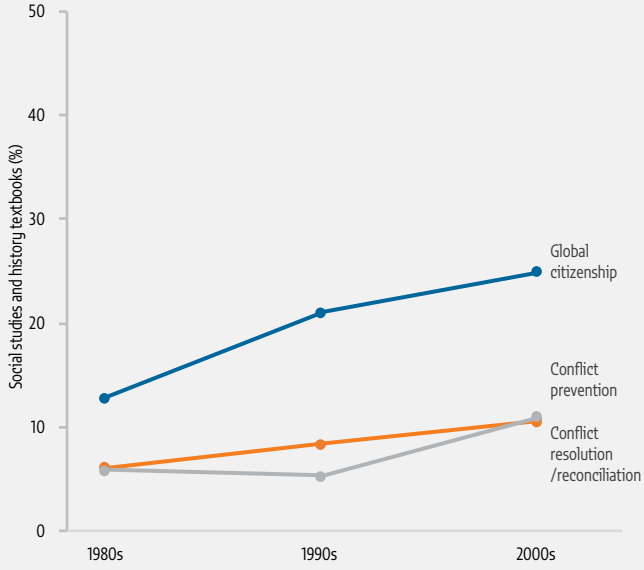
Textbook revisions will be needed to meet target 4.7. Revisions should enhance critical thinking, empathy skills, the willingness to question simplistic narratives and the ability to disagree about interpretations of the past without resorting to violence (Cole, 2007).

> "Textbook revisions should enhance the ability to disagree about interpretations of the past without resorting to violence"

At the national level, debates about textbook content reflect differences of opinion about national traditions, legitimation and identity within a society. In recent decades, textbook narratives have been being increasingly questioned in many countries. The debates have largely been prompted by globalization and by socially, religiously or ethnically disadvantaged groups demanding acknowledgement of their perspectives. The challenges of multi-ethnic classrooms, as well as attempts to foster supranational identities (e.g. 'European' or 'Eastern Asian'), highlight the limits of purely national narratives (Fuchs, 2010; Stöber, 2013).

At the international level, textbook controversies not only pertain to intra-societal issues but also extend across national boundaries (Fuchs, 2010; Stöber, 2013). Bilateral and multilateral commissions have been a means of developing a shared version of history. How textbooks are revised has undergone considerable change since the 1990s. Today, many agencies, including international and regional organizations, academic institutions, NGOs, trade unions, and teachers' and other professional organizations, are involved in textbook revision projects (Fuchs, 2010). Such projects aim not only to develop a harmonized version of contested histories and collective identities but also to build strategies that deal with controversial and sensitive issues in an open, discursive and comparative manner (Pingel, 2008, 2010).

FIGURE 15.5:
Few textbooks provide opportunities to discuss ways of preventing and resolving conflicts
Percentage of social studies and history textbooks explicitly mentioning global citizenship, conflict prevention and conflict resolution/reconciliation



Notes: For global citizenship, textbook sample sizes were 129 (1980–1989), 119 (1990–1999) and 165 (2000–2008). For conflict, textbook sample sizes were 103 (1980–1989), 131 (1990–1999) and 219 (2000–2011).
Source: Bromley et al. (2016).

Political actors must be committed to a positive environment for change

Given the pivotal role of government in education, national political actors are crucial in effecting changes in teaching and learning materials. For example, the 1972 German–Polish Textbook Commission initiated a key role for political leaders in revising the portrayal of Second

World War bilateral relations. High-level German politicians proactively proposed or established projects, provided financial and institutional support, raised public awareness and sought to alleviate nationalist pressure on the commission (Sakaki, 2012).

> National political actors are crucial in effecting changes in teaching and learning materials

In the lead-up to the 2004 unification referendum in Cyprus, the then recently elected Turkish Cypriot leadership undertook substantial history textbook revisions to focus on the shared experiences of both sides of the island. The textbook cover represented unification with a map of Cyprus with no dividing line. Phrases such as 'motherland Turkey' were replaced with phrases such as 'our island'. Instead of presenting history as a story of conflict, examples of coexistence and cooperation were emphasized, with a shift towards shared social, cultural and economic history (Papadakis, 2008). However, with political changes in 2009, history textbooks were again revised, returning to a more conservative perspective (Bozkurt and Yakinthou, 2012).

Following a conflict or a repressive period, revising the content of teaching and learning materials gives government the opportunity to convey a narrative about the recent past to younger generations. In some post-conflict countries, truth commissions and criminal trials have produced findings about the role of education in repression and conflict that can serve as a basis for recommending education reforms (Ramírez-Barat and Duthie, 2015).

In Peru, the final report of the truth commission in 2003 identified education as one of four essential areas for reform. It recommended building a new national vision for education focused on respect for human rights and socio-cultural differences. A six-textbook series called Recordándonos was developed for primary and secondary schools. It helped students explore knowledge of armed conflict, encouraged projects to investigate family, community and regional histories, and used case studies and stories to illustrate the realities of conflict (Paulson, 2017).

Civil society actors can contribute to a bottom-up change process

Civil society projects can prepare the ground for government-backed initiatives. They can bring sides together, exchange information and make proposals when political actors are deadlocked and official commissions cannot act.

Over 2003–2008, the Peace Research Institute in the Middle East, an NGO established by Palestinian and Israeli researchers, developed a history project for secondary education. It built on workshops in which Palestinian and Israeli teachers developed a joint textbook that included narratives from both sides on several important events in their conflict (Pingel, 2008).

Civil society projects involving Japan and the Republic of Korea also developed textbooks and other learning materials with a common perspective on highly controversial bilateral historical issues. Although these projects were important and encouraging, their ability to prompt policy change and cultivate broad public awareness was found to be limited (Sakaki, 2012).

International and regional actors have played a pivotal role in textbook reforms

Textbook revision as an international undertaking dates back 100 years. After the First World War, the League of Nations looked for ways to clear textbooks of the glorification of war and negative stereotypes of the 'other'. Since the end of the Second World War, numerous regional and bilateral projects on textbook revision have been carried out under the auspices of United Nations agencies and regional organizations (Pingel, 2008).

UNESCO in particular has been responsible for establishing norms and standards and supporting countries' efforts to ensure that textbooks meet standards in areas including discrimination, bias, human rights and mutual respect. From the first General

> UNESCO in particular has been responsible for establishing norms and standards in textbooks

Conference in 1946, the organization initiated activities to help improve textbook quality through internal, bilateral and regional reviews of history, civics and geography textbooks (UNESCO, 2014).

For example, the *UNESCO Guidebook on Textbook Research and Textbook Revision* provided support to systematic textbook and curriculum revision processes in eastern European countries where no in-depth textbook research had been done (Pingel, 2010). In Iraq, as part of the 2003–2005 Textbook Quality Improvement Programme, UNESCO reviewed textbooks to remove biased language and illustrations. The programme printed and distributed nearly 9 million revised mathematics and science textbooks to 14,000 public primary and secondary schools (UNESCO, 2005).

Other United Nations agencies, notably UNICEF, UNHCR and the UN Relief and Works Agency for Palestine Refugees in the Near East, have long supported governments in curriculum development and provision of textbooks and other learning materials, especially in emergency relief efforts (UNESCO, 2014). Afghanistan long used textbooks with violent, aggressive and militarist content, developed originally with aid from international donors (Vanner et al., 2016). The highly politicized textbooks promoted social division and violence, e.g. using bullets and bombs to teach counting or extremist content to teach literacy (Spink, 2005; Woo and Simmons, 2008). Since 2001, with UNICEF support, Afghan textbooks have emphasized peace, although new books have been of poor quality and politically divisive text remains (Burde, 2015; Spink, 2005; Vanner et al., 2016).

At the regional level, the Council of Europe has played a major role in funding projects to improve history textbooks (Stöber, 2013). The development of a European perspective that transcends national borders and traditional imagery of 'enemies' has been the council's central focus since the 1950s. In France and Germany, nationalist content in lower secondary school history and civics textbooks has largely been replaced with a pronounced European dimension and emphasis on social justice, human rights and democratic principles (Soysal et al., 2005).

CONCLUSION

Revising textbooks to come closer to the spirit of target 4.7 is a complex task, especially when revision involves challenging entrenched views of history. It takes courage to question the status quo expressed through instructional materials. In national conflicts, distrust of particular communities may prevent debate. In cross-border conflicts, it can be politically costly to invite neighbouring countries to exchange views on historical issues of mutual interest. Yet in recent years, governments, NGOs and international organizations have made bold attempts to bridge gaps. It is essential to avoid narratives that glorify violence and militarism and instead promote models of peace and reconciliation, inviting students to question received knowledge.

Chandaria Primary School building in Kenya.

CREDIT: Kate Holt/UNESCO

KEY MESSAGES

The global indicator for target 4.a spans several dimensions, making it difficult to give a quick snapshot of a country's school infrastructure situation.

In sub-Saharan Africa, only 22% of primary schools have electricity. Within-country disparity in access to technology can be large. The percentage of computers connected to the internet is twice as high in city schools as in rural areas in Colombia and the Dominican Republic.

In half of 148 countries, less than three-quarters of primary schools had access to drinking water. In Mexico, 19% of the poorest grade 3 students, but 84% of the richest, attended schools with adequate water and sanitation.

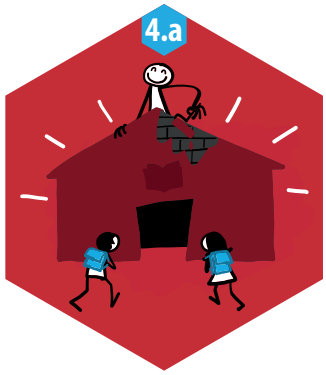
Schools surveys show that infrastructure shortages often hinder learning in countries at all income levels, particularly in disadvantaged schools. In 2015, about 40% of principals in Indonesia and Jordan and 25% to 30% in Israel and Italy reported that infrastructure problems significantly hampered instruction. In Turkey, 4% of principals in schools serving better-off populations, but 69% in those serving disadvantaged populations, reported such problems.

There has been a sharp uptick in attacks on schools since 2004, disproportionately affecting Southern Asia, Northern Africa and Western Asia. In Nigeria, at least 611 teachers were deliberately killed and 19,000 forced to flee between 2009 and 2015. By 2016, the Syrian Arab Republic had lost more than one-quarter of its schools.

Addressing school-related gender-based violence requires a multilevel approach, including effective laws and policies, curricula and learning materials, extracurricular activities, educator training, partnerships between education and other sectors, and monitoring and evaluation.

National laws and policies must show that violent behaviour cannot be tolerated. Teacher codes of conduct should explicitly refer to violence and abuse and ensure that penalties are clear and consistent with children's legal rights and protections.

CHAPTER 16



TARGET 4.A

Education facilities and learning environments

GLOBAL INDICATOR

4.a.1 *Proportion of schools with access to: (a) electricity; (b) Internet for pedagogical purposes; (c) computers for pedagogical purposes (d) adapted infrastructure and materials for students with disabilities (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)*

THEMATIC INDICATORS

4.a.2 *Percentage of students experiencing bullying, corporal punishment, harassment, violence, sexual discrimination and abuse*

4.a.3 *Number of attacks on students, personnel and institutions*

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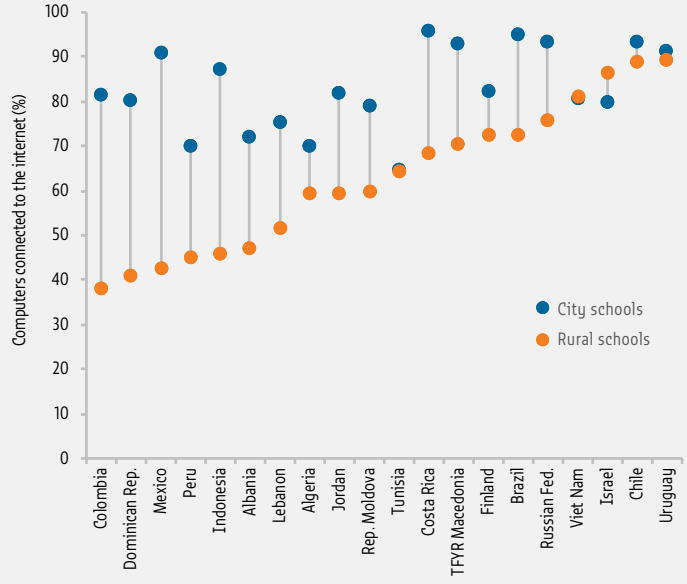
OVERVIEW

The global indicator on 'child, disability and gender sensitive' education facilities and 'safe, non-violent, inclusive and effective learning environments' is not a single measure but a set of several dimensions disaggregated by education level. This multiplicity of measures makes it difficult to give a quick snapshot of the school infrastructure situation in a country (**Data focus 16.1**).

FIGURE 16.1:
Computers in rural schools are less likely to be connected to the internet
Percentage of computers connected to the internet, by location, selected countries, 2015



Note: Countries shown have less than 95% of computers connected to the internet.
Source: OECD (2016c).

Primary schools in many poorer countries lack access to electricity. In Burundi, Guinea, Madagascar, Mauritania and Uganda, almost no primary school is connected to the grid. In sub-Saharan Africa, only 22% of primary schools have access to electricity, compared to 49% of lower secondary schools.

> "In sub-Saharan Africa, only 22% of primary schools have access to electricity"

Technology in schools has the potential to enhance teaching and learning in interactive and participatory ways. Results of the 2015 Programme for International Student Assessment (PISA) secondary school principal questionnaire indicated at least one computer was available per student in Australia, Austria, Canada, Iceland and New Zealand, with at least 95% of computers connected to the internet. Albania, Algeria, Indonesia and Tunisia had less than one computer per five students, with less than 70% of computers connected to the internet (OECD, 2016d). Disparity within countries is also large. The percentage of computers connected to the internet is lower in rural than in city secondary schools: In Colombia, the Dominican Republic and Mexico, computers in city schools are twice as likely to be connected (**Figure 16.1**).

Among 148 countries with data, primary school access to drinking water was below 75% in 72 countries and below 50% in 28, including Angola, Chad, Guinea and Niger. Among 145 countries with data, primary school access to basic sanitation facilities was below 50% in 28 countries, including 17 in sub-Saharan Africa. Data are limited on whether girls have separate facilities, let alone whether the facilities are well maintained or even functional. In

only 9 of 44 countries did more than 75% of primary schools have single-sex facilities; less than 5% of schools did in Benin and Comoros. There is very little information on handwashing facilities. In Burundi, only 10% of schools had them.

> “Primary school access to basic sanitation facilities was below 50% in 28 countries”

Learners with disabilities face particular obstacles, such as lack of mobility equipment, inappropriately designed buildings, negative social attitudes, absence of teaching aids and unsuitable curricula. The 2015 Trends in International Mathematics and Science Study (TIMSS) asked principals whether resource shortages for students with special needs significantly impeded provision of instruction. In countries including Serbia, South Africa and Turkey, over 35% of primary schools were affected by such shortages.

Concerning the thematic indicators, school-related violence takes many forms. Bullying alone can encompass deliberate exclusion or malicious rumours. The rates at which 15-year-old students reported any of six types of bullying in PISA 2015 ranged from around 10% in the Netherlands, Portugal and the Republic of Korea to over 25% in the Dominican Republic, in Hong Kong, China, in Latvia and in Tunisia (OECD, 2017c). Bullying is enforced by unequal power dynamics, which are often the result of gender norms and stereotypes.

In recent years, mobile phones, the internet and social media have transformed the nature of bullying. Among 15-year-old respondents to the 2013/4 Health Behaviour in School-aged Children survey, 11% had been bullied at least once via a malicious instant message, wall posting, email or text message in the previous two months, while 9% had had unflattering or inappropriate pictures posted without permission (World Health Organization, 2016). There are also gender patterns in school-related violence (**Policy focus 16.1**).

Finally, teachers and education institutions have been increasingly targeted by attacks. In Nigeria, where Boko Haram has targeted education workers and students, at least 611 teachers were deliberately killed and 19,000 forced to flee between 2009 and 2015 (HRW, 2016). The Global Terrorism Database, listing more than 125,000 attacks worldwide since 1970, has recorded a sharp uptick in attacks on schools since 2004. The spike has disproportionately affected Southern Asia and Northern Africa and Western Asia (Miller, 2014).

In most countries with armed conflicts, including at least 26 between 2005 and 2015, government armed forces and non-state armed groups have used schools and other education institutions for military purposes (The Global Coalition to Protect Education from Attack, 2015). By 2016, the Syrian Arab Republic had lost more than one-quarter of its schools: More than 6,000 were damaged by violence, forced to close or used for fighting or sheltering displaced families (UNICEF, 2016).

DATA FOCUS 16.1: EXPLORING ALTERNATIVE MEASURES OF SCHOOL INFRASTRUCTURE

Because school infrastructure is multidimensional, one approach to monitoring progress is to search for a composite measure that summarizes the essential information. Potential data sources are the PISA and TIMSS school surveys and Latin America’s Third Regional Comparative and Explanatory Study (TERCE), which include questions on selected aspects of infrastructure. Results suggest the state of physical infrastructure often significantly impedes instruction, particularly in socio-economically disadvantaged schools.

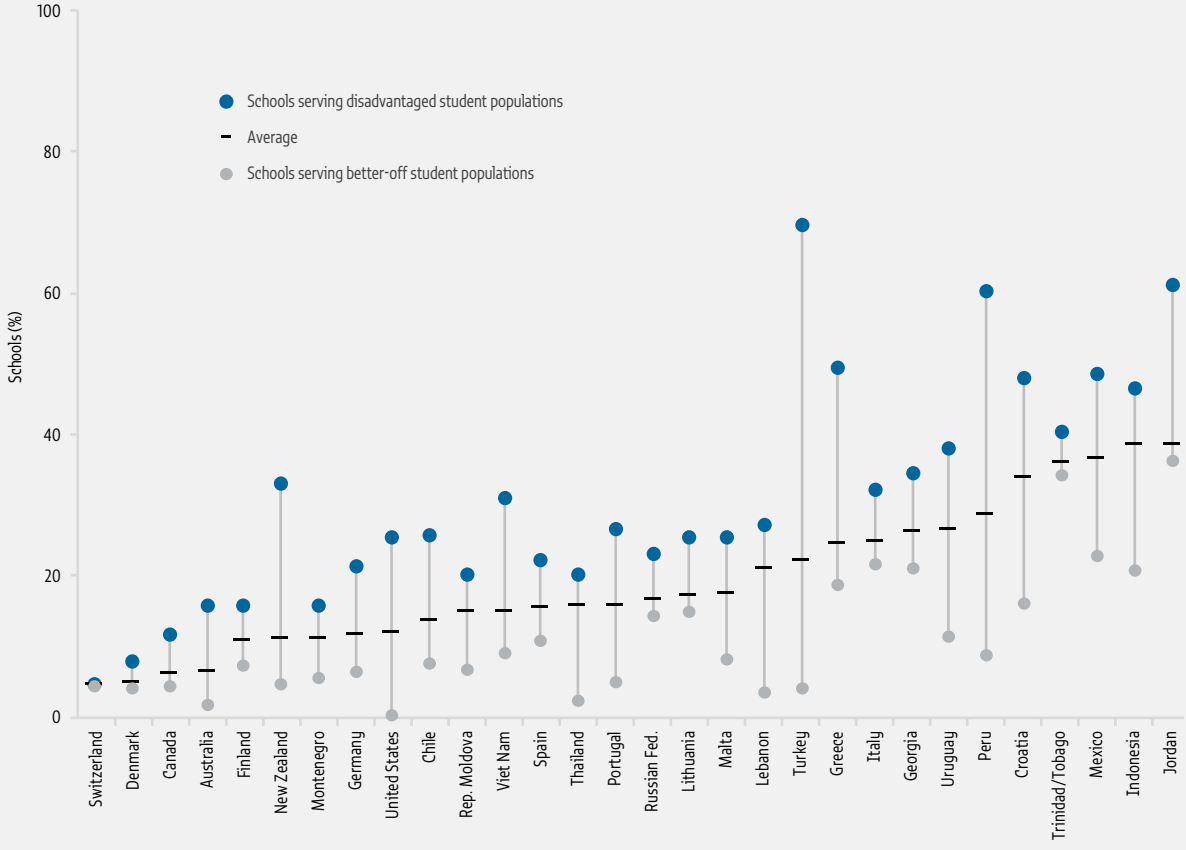
In the 2015 PISA, principals in about 40% of secondary schools in Colombia, Costa Rica, Indonesia, Jordan and Mexico reported that infrastructure problems significantly hampered instruction. Even in high income countries, such as Greece, Ireland, Israel and Italy, about 25% to 30% of schools reported infrastructure inadequacies.

> “The PISA, TERCE and TIMSS school surveys give some answers on the quality of school infrastructure”

FIGURE 16.2:

Poor infrastructure affects instruction in schools serving disadvantaged students

Percentage of secondary schools where absent or poor physical infrastructure (buildings, grounds, heating/cooling, lighting) significantly hindered instruction, selected countries, 2015



Note: Schools are ranked by the estimated proportion of socio-economically disadvantaged students. Results are reported for the top and bottom quartiles of schools.
Source: OECD (2016d).

Infrastructure deficiencies and their effect on instruction tended to be more common in schools serving disadvantaged populations. In Turkey, 4% of principals serving better-off populations but 69% of those serving disadvantaged populations reported that instruction was hindered by physical infrastructure issues (**Figure 16.2**)

The surveys also produce information on infrastructure dimensions affecting learning environment quality. In Jordan, Kuwait and Saudi Arabia, about half of primary school principals who participated in the 2015 TIMSS said insufficient instruction space and ineffective heating or cooling impeded teaching and learning (**Figure 16.3**).

TERCE also allowed for a breakdown of infrastructure conditions by population served. More than four in five grade 3 students from the richest quarter of households in participating countries attended schools with adequate water and sanitation facilities, compared to one in three from the poorest quarter (Duarte et al., 2017). In Mexico, 19% of the poorest grade 3 students attended schools with adequate water and sanitations facilities, compared to 84% of the richest students (**Figure 16.4**).

POLICY FOCUS 16.1: ADDRESSING SCHOOL-RELATED GENDER-BASED VIOLENCE IS CRITICAL FOR A SAFE LEARNING ENVIRONMENT

School-related violence can be physical, psychological or sexual; occur on school grounds, in transit or in cyberspace; and include bullying, corporal punishment, verbal and emotional abuse, intimidation, sexual harassment and assault, gang activity and the presence of weapons among students. Among the many factors contributing to school-related violence towards children and adolescents, the gender dimension is one of the most significant (Leach et al., 2014; Parkes et al., 2016).

> “School-related gender-based violence tends to be under-reported, as it often involves taboos.”

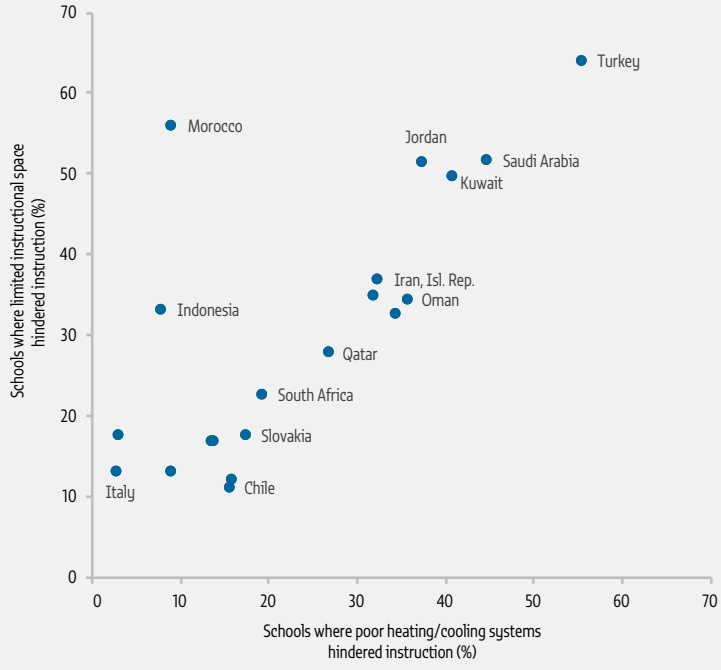
School-related gender-based violence tends to be under-reported, as it often involves taboos. Addressing it requires a multilevel approach, including effective laws and policies, relevant curricula and learning materials, educator training and support, partnerships between education and other sectors, and monitoring and evaluation (UNESCO, 2017b; UNESCO and UN Women, 2016).

LEGISLATION AND SUPPORTING POLICIES MUST UNDERPIN EFFORTS TO REDUCE GENDER-BASED VIOLENCE

Cultural and social norms can support violence in a society. For example, belief that men have a right to physically control women places girls at risk of sexual abuse. Tolerance of violent behaviour may be developed in childhood through witnessing violence at home (WHO, 2009). National laws, plans and policies addressing school-related gender-based violence should clearly state that government institutions will not tolerate violent behaviour. A legislative framework that explicitly protects against adult-to-child and peer-to-peer violence and promotes accountability is integral to a comprehensive strategy to address school-related gender-based violence, and necessary to its effectiveness.

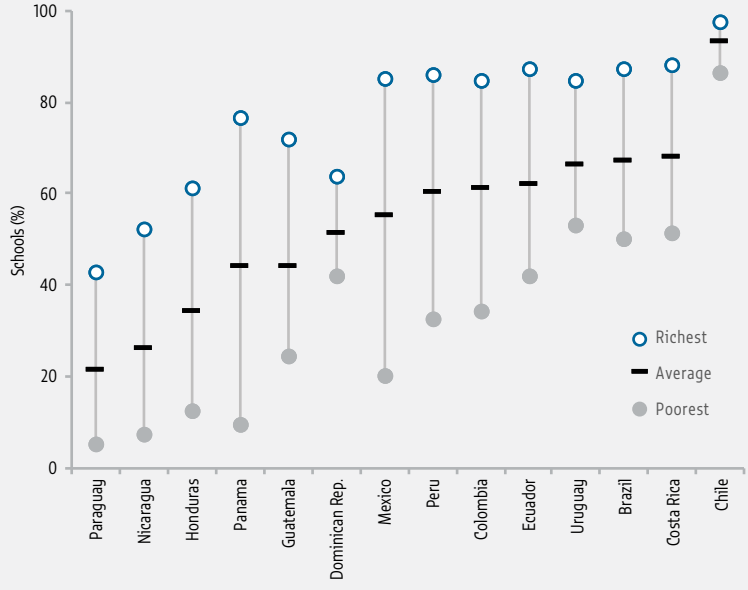
Some countries, including Chile, Fiji, Finland, Peru, the Republic of Korea and Sweden, have legislation referring to violence in education institutions (UNESCO, 2015d,

FIGURE 16.3:
Many primary school principals in Western Asia report limited instruction space and ineffective heating or cooling hinder instruction
Percentage of primary schools where lack of instruction space and heating or cooling significantly hindered instruction, selected countries, 2015



Source: Martin et al. (2016b).

FIGURE 16.4:
In Latin America, poor primary students are far less likely to attend schools with basic water and sanitation
Percentage of grade 3 students who attend schools with adequate water and sanitation infrastructure, by socio-economic status, selected countries, 2013



Source: Duarte et al. (2017).

2017b). In other countries, including Ireland, Singapore and the United Kingdom, anti-discrimination, human rights and equality laws address such violence in the absence of specific legislation (UNESCO, 2017b).

Supporting policies to implement legislation are equally crucial. In 2011, Palestine adopted a national strategic plan running to 2019 to combat violence against women. It provides a policy framework and interventions to address school-related gender-based violence, including strengthening the role of qualified counsellors, developing monitoring and accountability mechanisms and revising curricula (Palestine Ministry of Women's Affairs, 2011).

Teacher codes of conduct should also explicitly refer to violence and abuse and ensure that penalties are clear and consistent with children's legal rights and protections. Kenya has a range of penalties for breach of professional conduct, including suspension and interdiction. Teachers Service Commission regulations state that teachers convicted of sexual offences against students are deregistered (Kenya Teachers Service Commission, 2013).

Advocacy and lobbying through national networks and alliances have been key in developing teacher codes of conduct to prevent and respond to gender-based violence in schools. In Ghana and Malawi, the Safe Schools Programme lobbied successfully for revisions to the codes of conduct and called for stronger enforcement of regulations on teacher misconduct (DevTech Systems, 2008).

Regarding homophobic and transphobic violence, national policies vary greatly, reflecting diverse legal traditions and political contexts. Argentina is the only Latin American country with a full normative framework addressing sexual orientation and gender identity issues in education through the National Law on Integral Sexuality Education, the National Law on Education and the National Law for the Promotion of Coexistence and Tackling Social Conflict in Educational Institutions (UNESCO, 2016d).

National laws and policies on gender-based violence, when well designed and implemented in a context-sensitive manner, can create conditions for wider change. However, putting them into practice is never straightforward. A review of interventions to address violence against women and girls in low income countries showed that while an increasing number of countries have national policies, implementation remained patchy, with budget allocation and judicial and police support sometimes partial at best (Ellsberg et al., 2015).

> "Too often, educators' lack of awareness of national legislation and policy content and obligations impedes local implementation"

Too often, educators' lack of awareness of national legislation and policy content and obligations impedes local implementation. In the Philippines, the Anti-Bullying Act of 2013 requires all schools to adopt policies to prevent and address all acts of bullying. It explicitly refers to gender-based bullying, described as any act that humiliates or excludes a person on the basis of perceived or actual sexual orientation and gender identity. Yet just 38% of schools submitted child protection or anti-bullying policies in the following year, a rate attributed to low awareness of the requirements and weak monitoring. The Department of Education issued a memorandum to clarify submission requirements and is working to build implementation capacity (UNESCO, 2015d).

Whole-school approaches, combining legislation, school rules and sanctions with teacher training, curricula, mediation training, individual counselling and materials for parents, have been particularly successful (Holt et al., 2013). An example is the Good School Toolkit, developed by Raising Voices, a Ugandan non-government organization (NGO). It was associated with reduction

> "Teacher codes of conduct should explicitly refer to violence and abuse and ensure that penalties are clear and consistent with children's legal rights and protections"

> Helplines are a safe, confidential, accessible channel for students to relate experiences and seek advice

in overall levels of violence (physical, emotional, sexual, combined) from school staff and peers. The magnitude of the reduction was larger for boys than girls. The weaker effect on girls may reflect the degree to which they participated in the intervention or competing pressures and other experiences outside the school. Prevailing gender norms dictate that girls bear responsibility for household duties and caring for younger siblings (Devries et al., 2017; Devries et al., 2015).

CHILD-FRIENDLY REPORTING SYSTEMS ARE VITAL TO EFFECTIVE PROTECTION

Even the most elaborate and well-planned legislative framework will not reduce school-related violence unless students, teachers, school heads and parents can report it without fear or shame. Reporting mechanisms need to give confidence to all actors who report violence and ensure victim confidentiality (Greene et al., 2013).

Happiness and sadness boxes are an innovative and successful initiative to improve reporting in Malawi schools. Students participating in the Learn Without Fear project have used them to report violence and abuse anonymously, including bullying, corporal punishment, denial of food and working at teachers' houses (Alinane Consulting, 2010).

Helplines are another safe, confidential, accessible channel for students to relate experiences and seek advice. Helpline usage provides information on the violence children face. Child Helpline International gathers anonymous data on issues affecting children by distributing annual questionnaires to helplines in its network. In 2014, network helplines were contacted over 730,000 times about incidences of violence. Girls most often reported embarrassing stories spread by peers, often amplified via social media; boys most often reported physical bullying and extortion (Bazan et al., 2015).

Victims of school-related violence are likely to seek support from peers and teachers. School staff need to be trained to listen, support and help students report incidents. However, staff may be ill prepared to provide such support. In the United States, less than one-third of lesbian, gay, bisexual, transgender/transsexual or intersex students who reported victimization said staff effectively addressed the problem. More often, they said, staff did nothing or told them to ignore it. One in four were told to change their behaviour, e.g. the way they acted or dressed (Kosciw et al., 2016).

Additional support strategies include training teachers, hiring guidance counsellors and developing community volunteer and peer support systems. In the Democratic Republic of the Congo, the Communication for Change project trained teachers to act as first responders to school-related gender-based violence. The project evaluation found that after the project 95% of teachers and 90% of students reported being aware of how to prevent gender-based violence in schools, compared to 56% and 33% before, respectively. The project also led to a 66% reduction in teachers' use of violent corporal punishment, such as striking students or using whips or canes (C-Change, 2013).

TEACHING AND LEARNING CAN TARGET HARMFUL GENDER NORMS AND STEREOTYPES

Both curriculum content and delivery convey messages about the legitimacy and power dynamics of gender norms.

Comprehensive sexuality education is a key platform for discussing gender norms, yet programmes often fail to deal with the gender dynamics that accompany sexual and reproductive health. A review of curricula in 10 eastern and southern African countries showed that 8 had moderate to serious gaps in sexuality and sexual behaviour and 5 in gender focus, while many overlooked school-related gender-based violence (UNESCO and UNFPA, 2012).

The World Starts with Me, running in 10 countries, is a computer-based, interactive sexuality education programme aimed at secondary students aged 12 to 19.

Virtual peer educators guide 14 lessons on self-esteem, healthy relationships, sexual development, safer sex, gender equality and sexual rights, each with a related assignment, e.g. storyboards, artwork, role playing. The programme has increased students' capacity to deal with pressure to have sex (Rijsdijk et al., 2011).

Sexuality education that addresses sexual diversity and gender identity or expression can lead to more inclusive school cultures (Snapp et al., 2015). In the Netherlands, more extensive sexuality education on more topics correlated with increased willingness by witnesses to intervene in name-calling by staff (Baams et al., 2017).

Programmes engaging with boys and young men to promote critical reflection about gender behaviours and norms have also yielded promising results. In India, the curriculum for Gender Equity Movement in Schools, aimed at girls and boys aged 12 to 14 (grades 6 to 8), focused on gender, relationships, violence and emotions. Participation helped increase recognition of various forms of violence and led gradually to fewer incidents and more reporting of physical violence. One year after the programme's implementation in Jharkhand state, the percentage of students who disagreed that violence among students in schools was fine in certain situations increased from 40% to 67% (Achyut et al., 2016).

Teachers are central to any effective response to school-related gender-based violence

A culture of violence is embedded in teacher-pupil relations. Across 42 primary schools in Uganda, 54% of students reported physical violence by a staff member (Devries et al., 2017; Devries et al., 2015). On the other hand, teachers themselves may experience verbal abuse, threats and intimidation and physical violence by students (Horner et al., 2015).

Teacher agency in promoting a safe learning environment relies on their ability to think, feel and act to foster values and attitudes to transform violence. Teachers act as agents of change by promoting respect, fairness and inclusiveness among pupils. But they can also act as agents of conflict if they use pedagogy and curricula to perpetuate a culture of violence (Horner et al., 2015). For programmes to succeed, teachers need to know how to engage with gender issues. Specifically, training should enable teachers to deliver curriculum approaches promoting the knowledge, attitudes and skills children and adolescents need to prevent and respond to school-related violence.

The Doorways programme in Burkina Faso, Ghana and Malawi trains upper primary and lower secondary teachers. The curriculum focuses on children's rights and responsibilities, alternative teaching practices, basic counselling and listening skills, and the teacher code of conduct. In Ghana, teacher awareness of sexual harassment at school increased from 30% to 80% for girls and 26% to 64% for boys (DevTech Systems, 2008; Queen et al., 2015).

Campeche and Hidalgo, two poor Mexican states with high HIV and AIDS rates, added a 30-hour life skills programme, given over 15 to 20 weeks, to the fourth grade curriculum. The teachers received 40 hours of in-depth training in interactive pedagogy enabling them to tackle difficult subjects such as gender norms and risky sexual behaviour (Pick et al., 2007).

Extracurricular activities can help protect students

Extracurricular settings, such as school clubs, can strengthen and complement classroom interventions. Trained girls' club mentors can be positive role models and instil knowledge and confidence to speak out against violence and broader inequality. In Ghana, Kenya and Mozambique, an evaluation of ActionAid's Stop Violence Against Girls in School project found that girls' clubs strengthened participants' knowledge, attitudes and practices in identifying and managing incidences of violence. In Mozambique, club participants were almost twice as likely to report violence. Yet project implementation had challenges, such as ensuring fair membership criteria, avoiding elitism, tailoring approaches to local contexts and institutionalizing clubs within school culture as opposed to external NGO interventions (Parkes and Heslop, 2013).

Sports can be an equally constructive setting for learning about gender roles and relationships. In Mumbai, India, the Parivartan programme trained cricket coaches to model gender-equitable attitudes and behaviours and communicate positive messages to young male athletes about gender, norms, power, masculinity and violence. The programme improved bystander attitudes, with participants more likely to say they would intervene in response to sexual jokes or sexual assault against women (Das et al., 2012; Das et al., 2015).

CONCLUSION

Learning environments without gender-based violence are a key component of target 4.a. To address harmful gender norms, stereotypes and relations in schools, governments must make determined, multilevel efforts, including implementing specific legal and policy frameworks, mechanisms that facilitate confidential reporting, appropriate curricular content, and teacher training on incorporating gender issues into their practice.

Students from North High School in Des Moines, Iowa, celebrate their graduation.

CREDIT: Des Moines Public Schools

KEY MESSAGES

Aid spending on scholarships decreased by 4% to US$1.15 billion from 2010 to 2015, on a par with the overall decrease in aid to education.

Students from the least developed countries received US$151 million and students from small island developing states received US$81 million. Some $423 million in scholarships funded from aid budgets cannot be assigned to students from a given country.

Scholarship spending is underestimated, as many countries, including Brazil, China and India, do not include it in their aid programmes.

A review of three scholarship agencies, three scholarship programmes and one funding organization suggested that although they collect the necessary data, coordination to standardize data, build capacity and facilitate collaboration is needed for a global measure on the number of scholarships.

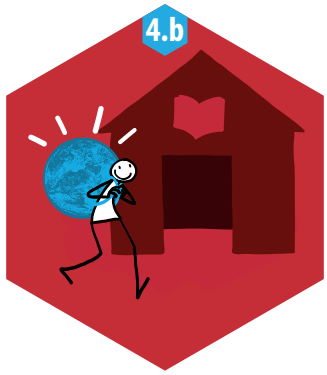
International scholarship programmes have multiple beneficiaries and aims, many of which materialize in the long term, making it difficult to develop accountability mechanisms.

Examples from the United Kingdom and South Africa suggest it is essential to establish reporting mechanisms to satisfy information needs for governments, beneficiaries and the general public.

In 2015, 4.6 million tertiary education students, 2% of the total, studied abroad. While this rate has remained constant, the percentage of those studying outside their home region increased from 57% in 2000 to 63% in 2015.

Students typically face challenges completing admission and visa processes, understanding degree requirements and ensuring their degrees are validated. They also need protection.

CHAPTER 17



TARGET 4.B

Scholarships

GLOBAL INDICATOR

4.b.1 *Volume of official development assistance flows for scholarships, by sector and type of study*

THEMATIC INDICATOR

4.b.2 *Number of higher education scholarships awarded, by beneficiary country*

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OVERVIEW

Target 4.b explicitly calls for the number of higher education scholarships to increase. Currently, there are no data available on this indicator (**Data focus 17.1**), only on total official development assistance for scholarships. As the 2016 *Global Education Monitoring Report* stated, the indicator is unsatisfactory because many countries do not include scholarships in their aid programmes.

Among countries that classify international scholarships as aid, spending on scholarships decreased from US$1.2 billion to US$1.15 billion in 2010–2015, or by 4%, in line with the overall decrease in aid to education (**Figure 17.1**). In 2015, donors invested US$752 million in education scholarship programmes and US$404 million in other scholarship programmes, with nearly half of the latter going to multisector initiatives.

FIGURE 17.1:
Scholarship aid remains at roughly 2010 levels
Official development assistance disbursements on scholarship and imputed student costs, education sector and all sectors, 2010–2015

Source: GEM Report team analysis based on data from the OECD-DAC Creditor Reporting System.

Low income countries received US$87 million, middle income countries US$625 million and high income, non-donor countries, such as Argentina, Chile and the Seychelles, US$12 million. The remaining US$423 million funded scholarships that could not be assigned to students from a single country. Students from the least developed countries received US$151 million while students from small island developing states received US$81 million.

By region, nearly two-thirds of scholarship aid went to students from Eastern and South-eastern Asia (26%), sub-Saharan Africa (17%) and Northern Africa and

> “Spending on scholarships decreased by 4%, 2010–2015, in line with the overall decrease in aid to education”

Western Asia (16%). Students from Indonesia received scholarships for education worth US$66 million, followed by Viet Nam (US$44 million) and Papua New Guinea (US$27 million). Papua New Guinea now receives one-third of all aid to small island developing states. Over half of all scholarship aid was disbursed by Australia (23%), France (14%) and EU institutions (15%).

Imputed costs that countries assume they will bear beyond the scholarships are another issue (Figure 17.1). There is no standard for calculating imputed costs; the ratio of scholarship funds to imputed costs varies by country. The Republic of Korea reported US$2.9 million in imputed costs for scholarship aid of US$67 million, or less than 5%, while France reported US$658 million in imputed costs for scholarship aid of US$164 million.

It is important to note that scholarship aid data come from reports by Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) members and the non-DAC countries Estonia, Lithuania and Romania. Major emerging donors, such as Brazil, China and India, do not report to the OECD-DAC, leaving a large information gap. Between 2000 and 2013, China funded 42 scholarship programmes for African students, but neither financial data nor numbers of recipient students are available (Strange et al., 2017).

DATA FOCUS 17.1: SCHOLARSHIP AID DATA AND MONITORING SHOULD BE STANDARDIZED

The 2016 GEM Report found that governments had made about 22,500 scholarships available to students from developing countries in 2015, equivalent to less than 1% of students studying outside their home countries (IIE, 2016). This was likely an underestimate, but correct figures are difficult to ascertain because scholarship data monitoring and reporting systems are absent, difficult to access or insufficient to report on target 4.b. The prospect of collecting scholarship data consistent with target 4.b requires delving into the characteristics of such systems.

An informative pilot study carried out for this report evaluated how data are collected by three scholarship management agencies, three scholarship programmes and one funding organization in Australia, Canada, France, Germany and the United Kingdom (Bhandari and Yaya, 2017). It is estimated that about 9,600 grants are currently being offered per year through 17 programmes. Not all of those would count toward target 4.b, as some provide scholarships to a mix of students from developed and developing countries and current reports do not separate out the data by the country of the recipient.

However, data are available, if not currently reported in a way that helps monitor target 4.b. All programmes reviewed collected data on recipients' countries. Most agencies also collected other relevant student information, including sex, field of study or receiving institution. Field of study data provide information on students studying 'information and communications technology, technical, engineering and scientific programmes', as specified in the target formulation (**Table 17.1**).

Building a direct measure of the number of scholarships for target 4.b requires a global endeavour to standardize data points, build capacity and facilitate collaboration among data managers.

UNESCO and other international higher education stakeholders need to facilitate a debate on standards and best practices for scholarship data that are applicable to both awarding agencies in developed countries and universities and agencies in developing countries.

The capacity of higher education management information systems is uneven. Moreover, many scholarship programmes are funded by ministries other than education and may involve a third-party programme manager (Bhandari and Yaya, 2017). Governments and programme sponsors must assess the capacity of the programme to collect data regularly.

Dissemination of best practices requires establishing a network or community of practice that allows scholarship programme managers from all countries to engage directly with each other. An online platform or regular meetings are critical to identify and address common challenges and share best practices. This community should build on existing efforts to work across student exchange agencies, as does the Institute of International Education Project Atlas, a collaborative global research initiative on international student mobility data.

TABLE 17.1:
Information collected on scholarship recipients by selected agencies, funders and programmes in five high income countries

	Australia	France	Germany	Germany	Canada	Canada	United Kingdom
	Agency	Agency	Agency	Funder	Programme	Programme	Programme
	DET	Campus France	DAAD	BMZ	PCBF	ALT	Chevening
Sociodemographic characteristics							
Gender	X	X	X	X	X	X	X
Race							
Age	X	X	X		X	X	
Health status on entry							X
Origin							
Country of origin	X	X	X	X	X	X	X
Destination							
Country	X	X	X	X	X		
State/province	X	X	X			X	
Institution/school	X	X	X	X		X	X
Programme							
Type of education (e.g. higher)	X	X	X	X	X		
Field of education (e.g. engineering)	X	X	X	X		X	X
Level of study (e.g. bachelor, master)	X	X	X	X	X	X	
Learning arrangements (e.g. remote)	X	X					
Scholarship							
Type (e.g. grant)	X	X	X	X			X
Source of funding (e.g. public)	X	X	X	X			
Coverage (e.g. full vs partial)			X	X			
Year of disbursement	X	X	X	X			
Length/duration of the scholarship					X		

Notes: ALT = African Leaders of Tomorrow; BMZ = Bundesministerium für wirtschaftliche Zusammenarbeit (Federal Ministry for Economic Cooperation and Development); DAAD = Deutscher Akademischer Austauschdienst (German Academic Exchange Service); DET = Department of Education and Training; PCBF = Programme canadien de bourses de la Francophonie (Canadian Francophonie Scholarship Programme).
Source: Bhandari and Yaya (2017).

POLICY FOCUS 17.1: ACCOUNTABILITY MECHANISMS FOR INTERNATIONAL SCHOLARSHIP PROGRAMMES ARE DIFFICULT TO DEVELOP

By one estimate, 102 governments sponsored 183 international scholarship programmes in 2013. Some 76% of the programmes were for advanced degrees rather than undergraduate study, and 78% were for full degrees rather than short-term exchanges (Perna et al., 2014). While the 2016 GEM Report stressed that high income country governments have primary responsibility for achieving target 4.b, it is notable that the Ford and MasterCard foundations have committed almost US$1 billion to scholarships since 2000 (Mawer, 2017).[1]

The aims of countries' international scholarship programmes are both altruistic, to train leaders for global progress, and self-interested, to build partnerships and exercise soft power (Perna and Orosz, 2016). Sponsoring governments see scholarships as benefiting private citizens and the public good alike, enabling recipients to become agents of social and political change in their countries (Dassin and Navarette, forthcoming). These principles should guide how scholarship programmes are assessed and whether the desired results are obtained in the short, medium and long term. If the results of scholarship programmes are to be monitored, the question is what approaches to accountability in their design, implementation and evaluation can make them more effective.

The selection process, for example, involves candidates, their home universities and supervisor referees, independent

> Reports on scholarship expenditure need to be transparent, clearly written and publicly available for debate and follow-up

career advisers, nominating agencies, awarding institutions' selection panels, and hosting universities and their academic and administrative staff. Accountability questions arise regarding all these actors. Are candidates truthful in their stated commitments? Are referee letters reliable? Are selection panels diligent and impartial? Does the ranking system match the stated intention of the scholarship programme? Are programmes in host countries suited to training candidates according to their aspirations?

GOVERNMENT AGENCIES USE STANDARD REPORTING METHODS

A fully accountable scholarship programme would have a clear purpose, well-defined responsibilities and indicators, and a responsive audience. This profile is especially significant for governments, which are answerable for both short-term results related to efficiency and use of public resources according to rules, and long-term results related to effectiveness and use of public resources for the intended purposes. Accountability reporting for expenditure is often enshrined in legislation, but reports need to be transparent, clearly written and publicly available for debate and follow-up.

The UK government disbursed GBP 90 million on its three scholarship programmes in 2015/6, GBP 73 million of which was public money, mainly to fund international students at British universities. The Commonwealth Scholarship Commission, which disbursed GBP 25 million to 1,607 graduate research students and professionals in 2014/5, reports annually to the Secretary of State for International Development and, through the secretary, to Parliament. Following a detailed framework that includes a financial memorandum, a three-year corporate plan and a one-year business plan, an annual report provides detailed information on each recipient's name, citizenship, university, field and level of study, along with completion rates, information by gender and even qualitative analysis of students' views on the scholarship programme (CSC, 2015).

The Chevening Scholarship programme supports United Kingdom foreign policy priorities and fosters lasting relationships with future global civic leaders and political decision-makers. It does not report separately to Parliament, although it is included in overall Foreign and Commonwealth Office accounts. In 2015/6, it disbursed GBP 44.6 million on 1,800 scholarships in aid-eligible countries (FCO, 2016).

In South Africa, the National Research Foundation offers a wide range of postgraduate scholarships. While the vast majority are for citizens and thus outside the spirit of target 4.b, 13% of scholarships are reserved for students from other countries, mainly in Africa (South Africa NRF, 2016b). The Department of Science and Technology prepares an annual report for Parliament, with details about selection criteria and selected characteristics of recipients (South Africa NRF, 2016b). In 2015/6, the foundation funded more than 13,000 students. In addition, the Department of Higher Education and Training reports on its role facilitating scholarships for South Africans from a variety of countries and multilateral organizations, such as the African Union and European Union. However, information on number of awards or fields of study is often missing (South Africa DHET, 2016).

Few countries publish evaluations of their scholarship programmes' effectiveness. An academic study in Australia used a tracer method to monitor career achievements after programme completion (Abimbola et al., 2016). Evaluations based on longitudinal surveys that compare distinct groups over time to identify shifts in programme impact are rare (Mawer, 2014).

Most tracking methods focus on recipient satisfaction with scholarship programmes; others focus on programmes' influence on students' post-scholarship careers. Each year, the Commonwealth Scholarship Commission asks award holders to complete an anonymous questionnaire about their experience of studying and living in the United Kingdom and the administration of the scholarship. Responses inform future programme design and implementation. Campus-level monitoring data also help host universities plan around shifts in enrolment, programme popularity and best practices in programme management.

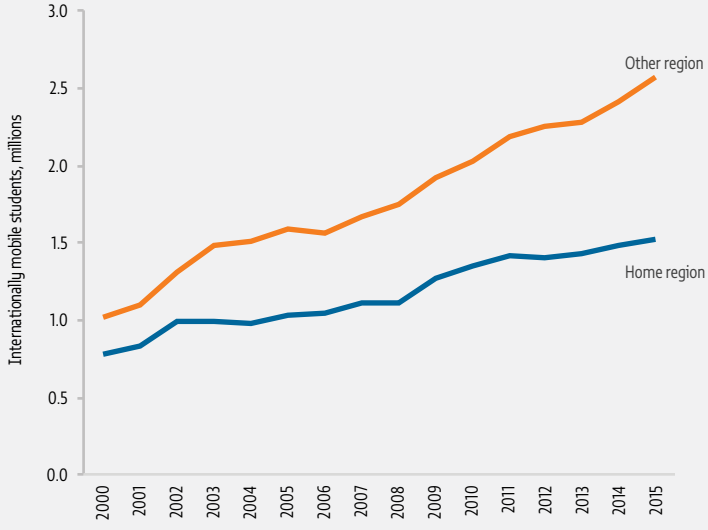
CONCLUSION

International scholarship programmes have multiple beneficiaries and aims, many of which only materialize in the long term, making it difficult to develop accountability mechanisms to improve efficiency and effectiveness. Nevertheless, it is essential to establish robust, regular and transparent reporting mechanisms, not least to satisfy information needs for monitoring the global commitment to developing countries.

POLICY FOCUS 17.2: INTERNATIONALLY MOBILE STUDENTS NEED PROTECTION

In 2015, 4.6 million people pursued higher education studies abroad, about 2% of the 213 million enrolled worldwide. This rate has remained fairly constant for 40 years, but there is a recent upward trend in international students leaving their home region, from 57% in 2000 to 63% in 2015 (**Figure 17.2**). Project Atlas estimates that students from sub-Saharan Africa and Southern Asia are most likely to leave their region of origin. Three students leave for every one who arrives for study (IIE, 2016b).

FIGURE 17.2:
International students study increasingly outside their home region
Internationally mobile students, by region of study, 2000–2015



Source: UIS database.

Students who leave their home region to study abroad typically face multiple challenges in completing college admission and visa processes, understanding degree requirements and ensuring that their foreign degrees are validated upon return (Owens and Lane, 2014). Information students need to make informed decisions about their academic careers is sometimes lacking, often resulting in excessive, frustrating paperwork. In the worst cases, students mistakenly enrol with fraudulent providers for bogus degrees (Eaton and Uvalic-Trumbic, 2008).

Some students use placement agents to help navigate the challenges and risks. About one in three international students surveyed in Australia, the United Kingdom and the United States reported using an agent. In 2013, nearly 1,200 agents, representing countries on every continent, reported having helped place about 326,000 students in international academic programmes, which is likely an underestimate (OBHE, 2014). Younger students and those whose parents had little education were more likely to use agents to assist with applications because of a lack of clear, accessible information (Hagedorn and Zhang, 2011). There are concerns that some agents, rather than acting in students' best interests, may push them towards commission-paying institutions (Huang et al., 2016).

COUNTRIES NEED TO PUT MORE EFFORT INTO PROTECTING INTERNATIONAL STUDENTS

To protect students from potential rights violations, UNESCO and the OECD coordinated a multilateral collaborative process to develop the Guidelines for Quality Provision in Cross-border Higher Education, which established basic principles for the international activities of students, faculty and academic campuses (UNESCO and OECD, 2005). The guidelines emphasized six key areas of action: (a) inclusion of cross-border higher education in countries' regulatory frameworks, (b) comprehensive coverage of all forms of cross-border higher education, (c) student and customer protection, (d) transparency in procedures (for providers), (e) information access and dissemination (for potential international students) and (f) collaboration among four stakeholder groups responsible for ensuring that international education is of good quality: governments, higher education institutions, student bodies, and quality assurance and accreditation bodies (Vincent-Lancrin et al., 2015).

A study of 42 countries, including 32 OECD member countries, found that a majority had largely met 4 of these objectives by 2015. They had established regulatory frameworks, covered all forms of cross-border higher education comprehensively, were transparent in their procedures, and had engaged in national and international collaboration (Vincent-Lancrin et al., 2015). Most countries still lacked easy access to information and a good level of student and customer protection.

The OECD developed a compliance index to monitor implementation of guideline recommendations. Regarding student and customer protection, the index measures whether institutions (a) provide comparable higher education at home and abroad, (b) acknowledge local quality assurance systems, (c) use agents responsibly and (d) provide complete and easily accessible information about their programmes, qualifications, academic and professional recognition of qualifications, and internal quality assurance processes. It also measures whether governments, quality assurance bodies and student bodies make easily accessible information on providers available to students and families (Vincent-Lancrin et al., 2015).

> “An OECD compliance index that monitored the implementation of guidelines on cross-border higher education showed that more efforts were needed to support students”

Only 12 of the 42 countries provided information about how they work to protect students and families. By comparison, 40 provided information about their regulatory frameworks to facilitate international collaboration. The difference shows that countries focus their efforts more on support to institutions than to students, where key gaps remain. Many countries, including Austria, the Czech Republic and the United Kingdom, lack capacity to identify and raise awareness of potentially disreputable providers. Student bodies, a likely access point for international students, seldom offer information on good-quality providers, including in Australia, Italy and New Zealand (Vincent-Lancrin et al., 2015). To address normative recommendations on student protection, countries must focus on the increasingly diverse pool of international student applicants, find ways to better identify fraudulent international education providers and practices, and circulate this information widely.

ENDNOTES

1. This section draws extensively on Balfour (2017).

A teacher at a high school in Kabul, Afghanistan, collects textbooks and prepares his class for the end of year assessment.

CREDIT: Ivan Armando Flores/ Arete/GEM Report

KEY MESSAGES

Globally, 86% of primary school teachers are trained, but the proportion is lower in Southern Asia (77%), the Caribbean (70%) and sub-Saharan Africa (62%).

Major difficulties remain in finding a universal definition of what makes a trained teacher. There are undocumented differences in minimum requirements to qualify as a trained teacher, including admission criteria, course duration, induction period length, curriculum content, delivery modality, extent of school-based training and quality assurance mechanisms.

Two approaches could improve information. First, improve administrative data on pathways to becoming a trained teacher and develop an international standard classification of teacher education. Second, collect data directly from teachers.

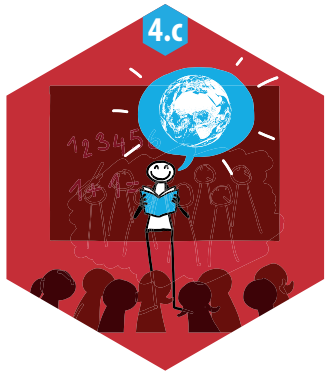
Information on teacher salaries and attrition rates is scarce. In OECD countries, primary school teachers earn 81% of what other full-time working professionals with tertiary education earn.

Among lower secondary teachers participating in an OECD survey of 34 education systems, 88% reported having attended at least one professional development course during the previous year. Of those, 71% participated in at least one course or workshop, 44% attended an education conference or seminar and 37% participated in a teacher network.

In high income countries, there is a clear trend towards greater school-level autonomy and an explicit demand to account for performance. Teachers and head teachers are asked to carry out ever more complex instruction and management tasks, often combined with more reporting requirements. This increased workload depresses their motivation.

Many teachers lack the skills to interpret, analyse and act on data to improve teaching and learning.

CHAPTER 18



TARGET 4.C

Teachers

GLOBAL INDICATOR

4.c.1 *Proportion of teachers in: (a) pre-primary education; (b) primary education; (c) lower secondary education; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country*

THEMATIC INDICATORS

4.c.2 *Pupil-trained teacher ratio by education level*

4.c.3 *Percentage of teachers qualified according to national standards by level and type of institution*

4.c.4 *Pupil-qualified teacher ratio by education level*

4.c.5 *Average teacher salary relative to other professions requiring a comparable level of qualification*

4.c.6 *Teacher attrition rate by education level*

4.c.7 *Percentage of teachers who received in-service training in the last 12 months by type of training*

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OVERVIEW

The addition of target 4.c to the 2030 Agenda for Sustainable Development spotlights teachers as the cornerstone of progress in education and learning. Monitoring of qualified and trained teacher supply, while present in the Education for All agenda, was missing from the Millennium Development Goals. The global indicator on target 4.c offers an opportunity to look more closely at how many teachers receive the minimum pedagogical training according to national standards.

This closer look highlights two challenges. First, there is a long way to go until a meaningful measure of trained teachers can be developed. In this respect, the Inter-agency and Expert Group on SDG Indicators' tier I classification of global indicator 4.c.1 as 'conceptually clear' and with 'an internationally established methodology and standards' is misleading, potentially causing complacency (**Data focus 18.1**). Even the concept of a common definition of training requirements seems too ambitious, given the varied challenges teachers face worldwide. For example, in some countries, teachers require specific skills to cope with the pressures of accountability systems (**Policy focus 18.1**).

The second challenge is the paucity of data. Again, tier I status, whereby 'data are regularly produced ... for at least 50 per cent of countries', is misleading. A global average is available only for primary education. Regional averages are available for only four of eight regions at the pre-primary and primary levels and for only two regions and two subregions at the secondary level.

Overall, the limited data suggest that large numbers of teachers are inadequately trained in several parts of the world. Globally, 86% of teachers are trained at the primary level, but the proportion is lower in Southern Asia (77%), the Caribbean (70%) and sub-Saharan Africa (62%). In sub-Saharan Africa, even fewer teachers are trained at the pre-primary level (36%) and secondary level (45%) (**Table 18.1**). Strikingly, while there has been a positive trend of increased numbers of trained teachers in many countries, in others, including Eritrea, Ghana and Niger, the percentage has decreased since 2000 (**Figure 18.1**).

> "Globally, 86% of teachers are trained at the primary level"

As the 2016 *Global Education Monitoring Report* indicated, the disconnect between the target formulation (which refers to 'qualified') and the global indicator (which refers to 'trained') perpetuates confusion about what it means to be a qualified teacher. Conventionally, qualified teachers are those with at least the minimum academic qualifications expected for the education level to be taught (i.e. the level of education a teacher has completed, regardless of domain of study), while trained teachers are those with professional qualifications (i.e. successful completion of a training course fulfilling the minimum requirements to enter teaching) (UNESCO, 2016b) (see also the **Accountability Annex** of this report).

A teacher may possess one set of qualifications but not the other; the pattern varies by country. In some countries, teacher training is part of teacher academic preparation, which most teachers follow; in others, the two pathways are separate. If academic training and qualification systems are separate or if countries do not require both, discrepancies in availability arise between trained and qualified teachers. The widest discrepancies

are observed in low and lower middle income countries. Only 15% of secondary school teachers in Jamaica are qualified, while as many as 85% are trained. By contrast, 79% of teachers are qualified in Vanuatu, while only about 21% are trained (**Figure 18.2**). These discrepancies are important, as both qualifications affect teaching quality (Darling-Hammond, 2000).

Pupil/teacher ratios are higher in poorer countries. While worldwide averages remained stagnant for pre-primary and secondary education, the ratio in primary decreased, from 26 in 2000 to 23 in 2015 (**Table 18.2**). Different mechanisms were at play in the two regions with the largest declines: Eastern and South-eastern Asia (from 24 to 17) and Southern Asia (from 39 to 33). In Eastern Asia, the pupil cohort size fell by 29% while the number of teachers remained constant. In South-eastern Asia, the pupil cohort size remained the same while the supply of teachers increased by 31%. In Southern Asia, the teacher supply grew more (by 49%) than enrolment (28%). These ratios do not reflect the training or qualification of the teachers.

Low coverage plagues the other thematic indicators related to teacher professional development: salaries relative to other professionals, and attrition rates.

Personnel databases are not organized to collect a consistent set of information on in-service training, turnover and the full remuneration package within or among countries.

With respect to salaries, the only systematic cross-country approach is undertaken by the Organisation for Economic Co-operation and Development (OECD). In most OECD countries, teacher salaries increase with the level of education at which they teach. However, teachers tend to earn less than other workers with similar qualifications. On average across OECD countries, pre-primary teachers earn 74%, primary teachers 81%, lower secondary teachers 85% and upper secondary teachers 89% as much as other full-time working professionals aged 25 to 64 with tertiary education. Even in the OECD, recent data are available for only 21 of 35 countries at the pre-primary level and 24 at the primary and secondary levels (OECD, 2016a).

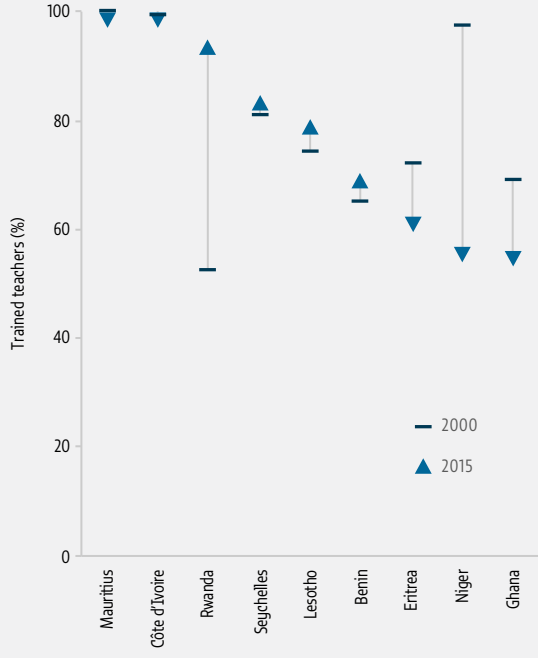
Concerning teacher attrition, primary education has the best coverage in the UNESCO Institute for Statistics (UIS) database, but only 26 countries report. Even then, it is unclear whether reporting countries distinguish between temporary and permanent exit from the profession.

TABLE 18.1:
Percentage of trained teachers, by education level, 2015

	Pre-primary education	Primary education	Secondary education
World	**...**	**86**	**...**
Caucasus and Central Asia	93	97	...
Eastern and South-eastern Asia	...	...	...
Eastern Asia	...	...	...
South-eastern Asia	89	96	97
Europe and Northern America	...	...	...
Latin America and the Caribbean	...	...	...
Caribbean	78	70	88
Latin America	...	...	...
Northern Africa and Western Asia	81	85	79
Pacific	...	...	...
Southern Asia	78	77	...
Sub-Saharan Africa	36	62	45
Low income	40	68	49
Lower middle income	...	79	...
Upper middle income	...	85	...
High income	...	...	...

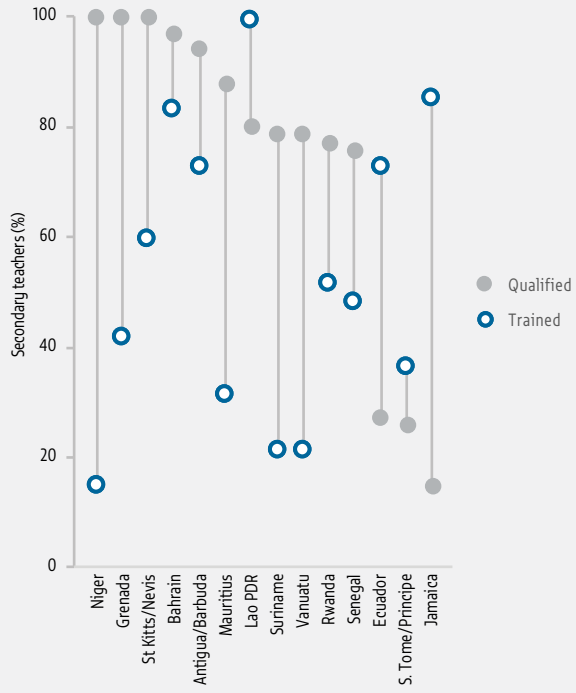
Source: UIS database.

FIGURE 18.1:
The percentage of trained teachers in some sub-Saharan African countries has fallen since 2000
Percentage of trained primary school teachers, selected countries, 2000–2015



Source: UIS database.

FIGURE 18.2:
In many countries, there are wide discrepancies in availability between qualified and trained teachers
Percentage of qualified and trained secondary school teachers, selected countries, 2015



Source: UIS database.

TABLE 18.2:
Pupil/teacher ratios, by education level, 2000–2015

	Pre-primary education		Primary education		Secondary education	
	2000	2015	2000	2015	2000	2015
World	**18**	**18**	**26**	**23**	**18**	**18**
Caucasus and Central Asia	10	11	21	17	10	10
Eastern and South-eastern Asia	25	19	24	17	18	15
Europe and Northern America	14	12	15	14	12	12
Latin America and Caribbean	21	20	26	22	18	16
Northern Africa and Western Asia	19	20	22	20	17	16
Pacific	21	...	20	...	...	...
Southern Asia	12	20	39	33	32	30
Sub-Saharan Africa	30	30	43	39	26	21
Low income	28	28	45	41	24	23
Lower middle income	14	20	34	28	24	23
Upper middle income	20	18	24	19	16	15
High income	18	14	16	14	14	13

Source: UIS database.

The largest available and consistent collection of data on professional development is based on the OECD Teaching and Learning International Survey (TALIS). The 2013 TALIS asked about the extent to which teachers had engaged in professional development during the previous 12 months. Among lower secondary teachers in the 34 participating countries or regions, 88% reported having participated in at least one professional development course. Of those, 71% participated in at least one course or workshop, 44% attended an education conference or seminar and 37% participated in a teacher network (OECD, 2014).

DATA FOCUS 18.1: CAN A DEFINITION OF TRAINED TEACHERS BE REACHED THAT IS COMPARABLE ACROSS COUNTRIES?

The global indicator to monitor progress towards target 4.c, the percentage of teachers with at least the minimum training required to teach a given level, aims to capture a key quality dimension of education. Yet it is deceptively simple, and it remains difficult to base meaningful cross-national comparisons on it.

In practice, 'trained teachers' are a very heterogeneous group. There are major differences in the minimum requirements to qualify as a trained teacher on a range of dimensions: admission criteria for teacher education programmes, programme duration, length of induction period, curriculum content, delivery modality, the extent to which school-based training is part of the course, and quality assurance mechanisms. These differences among countries are not well documented.

OBSTACLES REMAIN IN DEVELOPING A TAXONOMY OF TEACHER EDUCATION

Current UIS data provide little or no qualitative information concerning how countries define qualified or trained teachers.[1] Many countries do not even distinguish between the minimum academic qualification (qualified teacher) and the pedagogical training (trained teacher) required to teach at a given level. This is the case for 31 of 81 reporting countries at the primary level and 15 of 61 at the secondary level.

Required academic qualifications for the education levels vary. For example, the minimum academic qualification to be a primary school teacher, using the International Standard Classification of Education (ISCED) levels, ranged from lower secondary school completion (ISCED 3, 11% of all reporting countries) to master's

> Among lower secondary teachers in 34 countries or regions in the 2013 TALIS, 88% reported having participated in at least one professional development course

degree (ISCED 7, 2%). A bachelor's degree, ISCED 6, was the most common requirement at 32%.

Academic qualification is only one element of comparison. Producing a teacher training taxonomy requires standardizing the various dimension of training programmes. While, inevitably, not all dimensions can be captured, two approaches to such an inventory can be singled out (UIS, 2017c).

As part of the Multi-Site Teacher Education Research project in the late 1990s, the first approach identified four pathways to becoming a trained teacher, considering duration, entry, curriculum, teaching practice, teaching style and certification requirements (Lewin, 1999):

- Type 1 is pre-career, full-time residential training, where the teacher training institution is isolated from the school. It includes full-time certificate/diploma/undergraduate college or university-based training in purpose-built institutions (e.g. teacher training colleges) lasting one to four years, with or without subsequent internships or probationary years.
- Type 2 resembles Type 1 but involves full-time postgraduate training in tertiary education institutions.
- Type 3 captures in-service teacher training, with periods spent in teacher training institutions and in school- or job-based study and in-service practice.
- Type 4 is direct entry into teaching without formal training, often with some form of subsequent certification related to experience and course attendance, which can eventually provide the minimum qualification to teach.

The second approach, which was introduced by the UIS, codified four key dimensions of pre-service teacher training: level of the course (e.g. tertiary), location, duration of practice teaching and timing of practice teaching (UIS, 2010) (**Table 18.3**). Additional metadata are needed on the target group (e.g. pre-service/in-service teachers), modality (e.g. full time/part time, use of open and distance education), teaching experience requirement, types of providers and time given to content areas (e.g. subject matter, education foundations, pedagogical methods). Neither approach has been used at the global level.

A simple and operational global taxonomy would require detailed descriptions of teacher training programmes, organized in a comparative framework. Even if information were collected on teachers entering the profession, distribution would change over time, as teachers from different programmes may have different attrition rates. Personnel data would need to record the entry route of each teacher and any changes over their career. Ensuring appropriate data collection and validation will be a challenge. The operational costs and capacity to provide the information required are substantial.

The approach used to revise ISCED could serve as a model. ISCED was recently revised on the basis of a global technical advisory panel comprising international education and statistics experts, including from international organizations such as Eurostat and the OECD. The panel recommendation was followed by extensive review through regional expert meetings and a formal global consultation, coordinated by the UIS, with all UNESCO Member States invited to take part (UIS, 2014). A robust global teacher education programme taxonomy would require a similar process.

TABLE 18.3:
Proposed standard classification of teacher training programmes

ISCED programme level	Programme location	Duration of teaching practice	Timing of teaching practice
3: upper secondary 4: post-secondary, non-tertiary 5: short-cycle tertiary 6: tertiary 7: postgraduate	Predominantly (over 80%) school-based Predominantly (over 80%) institution-based Mixed (20% to 80% in institution)	No practice teaching 1 to 4 weeks 5 to 12 weeks 13 weeks >36 weeks	No practice teaching Interspersed with studies At end of formal studies

Source: UIS (2017).

Beyond initial training, teachers' professional development is increasingly seen in terms of lifelong learning: Minimum requirements for entry into the profession are just one point in a continuum. Another difficulty in developing a comprehensive framework is that formal systems data might not account for alternative pathways to teaching, which are becoming more common.

Data collected directly from teachers can help monitor progress

A teacher education programme taxonomy will take several years to develop. Collecting information directly from teachers as part of student assessments or teacher surveys could be an alternative.

Cross-national learning assessment surveys often record information on teacher characteristics. For example, the Trends in International Mathematics and Science Study (TIMSS) asks grade 4 and 8 mathematics and science teachers questions related to academic qualifications, subject-specific background and professional development, e.g. whether mathematics teachers graduated with a degree in education and a major (or specialization) in mathematics. The percentage of grade 4 students who were taught by such teachers fell between 2003 and 2015 from 50% to 15% in the Islamic Republic of Iran and from 89% to 54% in Kazakhstan but increased between 2007 and 2015 from 18% to 38% in Denmark and from 42% to 70% in Sweden.

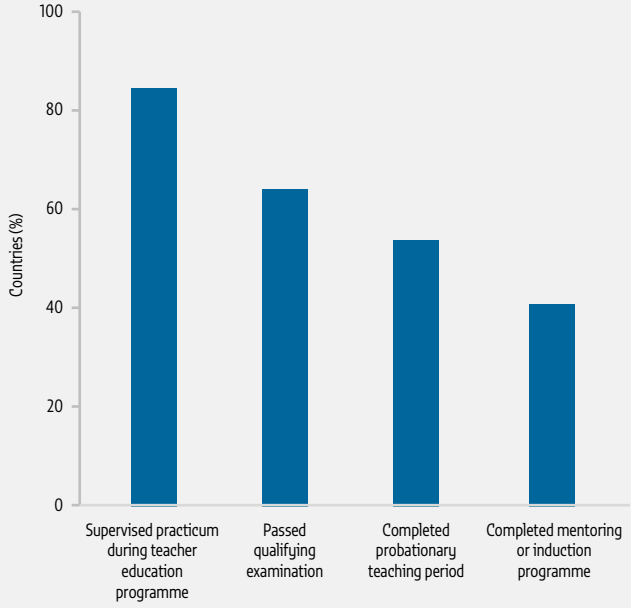
> "The percentage of grade 4 students who were taught by teachers with a degree and a major in mathematics increased between 2007 and 2015 from 42% to 70% in Sweden"

Such changes may simply reflect long-term fluctuations in initial teacher education policy and not necessarily convey whether requirements are becoming more stringent. For example, the content and structure of initial teacher education in Denmark favoured subject specialization until recently, but a reform introduced in 2012 concluded that pedagogical content had been neglected in favour of subject content. This may change the percentage of primary school teachers with subject specialization in the future (Nusche et al., 2016).

TIMSS collects additional qualitative information on teacher preparation policies and stringency of requirements. A supervised practicum was required for grade 8 mathematics teachers in 33 of 39 countries participating in the 2015 TIMSS, but a probationary teaching period was required in only 16 (**Figure 18.3**). More than one-third of participating countries reported strengthening requirements to become a grade 4 or 8 teacher by instituting tougher criteria for admission to the profession, such as increased years of university study, additional certification requirements and minimum university grade point averages (Mullis et al., 2016).

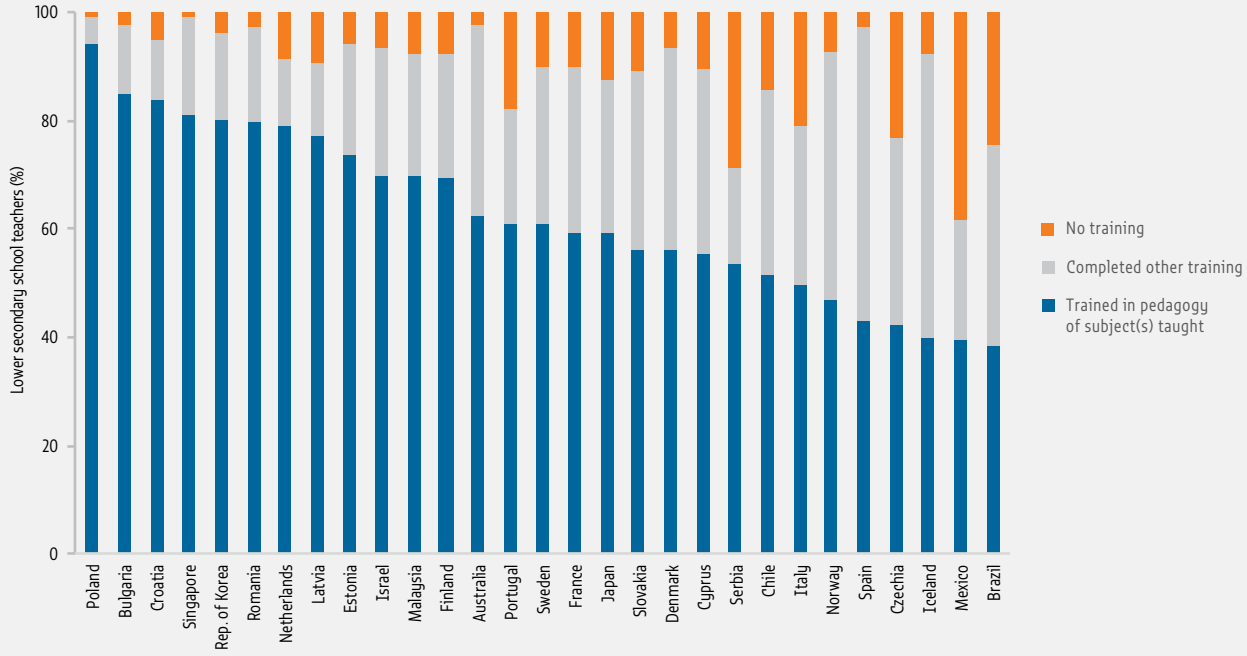
Teacher surveys are another source of information on teacher education. The 2013 TALIS asked lower secondary school teachers about elements of their initial education. Many teachers had received no teacher training. Of those who were trained, a large share lacked training in content, pedagogy or practice of the subjects they taught. For instance, out of about 62% of teachers in Mexico who had completed teacher education programmes, about two-thirds, or 40% of the total, had received training in the pedagogy of the subjects they taught. The share in Poland was 94% (**Figure 18.4**) (OECD, 2014).

FIGURE 18.3:
Initial teacher education programme requirements vary by country
Percentage of countries imposing selected initial education programme requirements for grade 8 mathematics teachers, 2015



Note: Analysis of 39 countries.
Source: GEM Report team analysis based on Mullis et al. (2016).

FIGURE 18.4:
Many lower secondary school teachers have not received training in the pedagogy of the subject they teach
Distribution of lower secondary school teachers by incidence and content of teacher education, 2013



Source: OECD (2014).

POLICY FOCUS 18.1: ACCOUNTABILITY PRESSURES HAVE IMPLICATIONS FOR TEACHER EDUCATION IN HIGH INCOME COUNTRIES

In recent years, high income countries have given schools increasing responsibility over their own instruction and management. In countries participating in the 2006 OECD Programme for International Student Assessment (PISA), principals reported that they, alongside teachers, already had 'considerable responsibility' for tasks at their schools related to certain decisions. They have since acquired even more responsibility for some decisions, such as course content and teacher hiring, though a reverse trend towards centralization has been seen in a few instances (**Figure 18.5**).

ACCOUNTABILITY SYSTEMS INCREASE WORKLOAD AND DISSATISFACTION

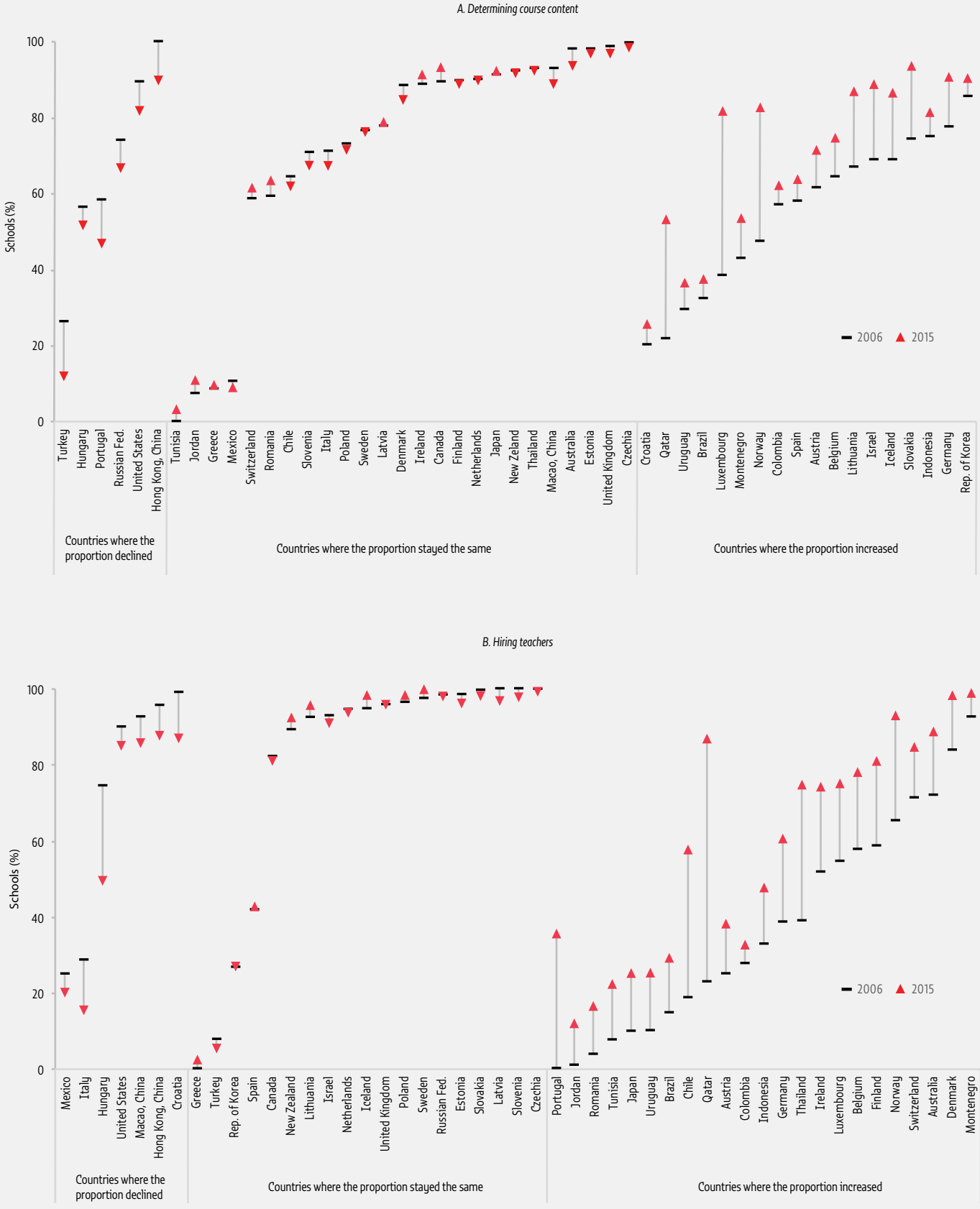
Decentralization and greater school autonomy are associated with more requests for accounts and reports. They also increase reliance on data for education decision-making (Marsh et al., 2006; Ozga, 2009; Schildkamp and Kuiper, 2010).

These requests increase educators' workloads, complicate their tasks and necessitate additional skills (Møller, 2009; OECD, 2013b). About 75% of Finnish and 95% of Swedish teachers reported increased documentation responsibilities (Müller and Hernández, 2010). In England, 56% of teachers reported that data collection and data management constituted unnecessary workload (UK Department for Education, 2016). Teachers believed these reporting pressures also reflected low confidence in their professionalism (MacBeath, 2012). The more widely held such negative perceptions of workload are, the greater the risk of talented young people being deterred from the profession.

FIGURE 18.5:

More responsibilities are being shifted to teachers and head teachers

Percentage of schools where teachers or head teachers had considerable responsibility for selected tasks, selected countries, 2006–2015



Source: GEM Report team analysis of the 2006 and 2015 PISA school principal questionnaires.

> The 2016 UK Teacher Workload Survey found that 92% of principals viewed their workload as a 'very' or 'fairly' serious problem

Accountability requirements put pressure on school leaders to build their managerial and data-related skills. In Hong Kong, China, assignment performance and quiz management indices are updated regularly online and used to track student progress and teacher performance (Quong, 2013). In systems with market-based pressures, principals are responsible for making their schools more attractive to parents (Caldwell et al., 2002).

Reporting and performance accountability pressures increase school leaders' workload and reduce job satisfaction. The 2016 United Kingdom Teacher Workload Survey found that 93% of teachers and school leaders in England viewed their workload as a 'very' or 'fairly' serious problem (UK Department for Education, 2017). Studies in Australia, Canada, New Zealand, the United Kingdom and the United States found that the pressures and resulting stress of accountability systems reduced the pool of candidates for school leadership positions (Caldwell et al., 2002).

To address these risks, policy-makers need to pursue two approaches. First and foremost, they need to minimize teacher and principal workload by critically examining current practice. In the United Kingdom, an independent group reviewing teacher workload urged government, school leaders and teachers always to consider the purpose for which data is gathered, collect only the minimum required and adhere to the 'collect once, use many times' rule (UK Department for Education, 2016).

Second, policy-makers need to provide supports to mitigate added workload and stress, including teacher preparation, especially in transitioning to head positions. Appropriate teacher preparation needs to accompany increased demand for accountability reporting (Mandinach and Gummer, 2013). Teachers transitioning to school leadership need additional support to deal with pressures to report on school performance.

ACCOUNTABILITY SYSTEMS REQUIRE TEACHERS TO DEVELOP DATA LITERACY SKILLS

Teacher data literacy is the ability to interpret and use data to improve teaching and learning. The Data Quality Campaign in the United States defines 'data literate' educators as those who "continuously, effectively, and ethically access, interpret, act on, and communicate multiple types of data from state, local, classroom, and other sources to improve outcomes for students in a manner appropriate to educators' professional roles and responsibilities" (Data Quality Campaign, 2014).

The National Council on Teacher Quality in the United States defines three types of skills teacher candidates need to develop (NCTQ, 2012): assessment literacy skills, to measure student performance using assessments (DeLuca and Johnson, 2016; Xu and Brown, 2016); analytical skills, to analyse student performance data; and instructional decision-making skills, to use data to inform instruction (Dunn et al., 2013; Schifter et al., 2014). Relevant data include information on assessment, attendance, engagement, demographics and school climate.

Many teachers report being ill-prepared to use data in these ways (Datnow and Hubbard, 2016; U.S. Department of Education, 2011). In Ontario, Canada, preparedness in the use of education research and data analysis received some of the lowest ratings in self-assessments by primary and secondary teachers in their first year (Ontario College of Teachers, 2016). Two in three teachers in the United States were unsatisfied with their ability to use data to improve instruction, often citing an excessive amount of data (Bill and Melinda Gates Foundation, 2015).

A study of teacher pedagogical knowledge in five OECD countries showed that assessment, including data use and research, was the least emphasized part of pre-service education, behind instructional process and learning process. In four of the five countries, teachers and teacher candidates reported having learned less than 60% of assessment-related topics (OECD, 2017a). A survey of teachers and school leaders in Germany, Lithuania, the Netherlands, Poland and the United Kingdom found that most used data superficially to monitor rather than improve instruction. Among challenges, teachers mentioned a lack of collaboration or professional development opportunities (Schildkamp et al., 2014). An expert group in the United Kingdom recommended including data use training in initial teacher preparation to help reduce unnecessary workload (UK Department for Education, 2016).

Preparing teachers to use data through initial training

Data literacy is increasingly part of teacher preparation in many high income countries. In the United States, 41 of the 50 states reported providing training on using data to inform instruction, and 42 reported providing training on understanding data, such as those found in early warning reports (Data Quality Campaign, 2014). The National Council on Teacher Quality framework defines strongly designed teacher preparation programmes as including a core data literacy course and one or more courses on subject-specific pedagogical data literacy (NCTQ, 2016). Yet a review of teacher preparation programmes in 2013 found that few offered opportunities to practise data use for instruction (NCTQ, 2013). Further work is needed in developing curricula that instruct teacher candidates in using data for self-assessment and tracking student progress (Worrell et al., 2014).

Some studies, though mostly small in scale, have found that the method of data literacy training matters. In the United States, participation in teaching inquiry or teacher research courses, where teachers gather and analyse data to inform their instruction, was associated with subsequent use of student assessment data (Reeves, 2017). In Norway, teacher candidates required to base their research on relevant data found the process useful for their professional development (Ulvik, 2014).

In the case of head teachers, many leadership preparation programmes in the United Kingdom and United States are strengthening their focus on instructional leadership and assessment literacy training (Ylimaki and Jacobson, 2013). School leadership preparation in Latin America and the Caribbean has been undergoing similar changes. In Chile, the Marco para la Buena Dirección y el Liderazgo Escolar (Good Management and School Leadership Framework), revised in 2015, includes curriculum and resource management based on student assessment results, as well as staff selection, evaluation and development (Chile Centro de Desarrollo de Liderazgo Educativo, 2016).

Continuous professional development provides another route to prepare teachers to use data

Teachers already in the workforce facing increased reporting requirements cannot benefit from advances in pre-service training. Data literacy has thus become a component of continuous professional development, for example through collaborative work and professional learning communities. A project in Utrecht province of the Netherlands, involving teachers and researchers jointly analysing school data to better understand learning, resulted in greater attention to professional development in data literacy. Utrecht University's Graduate School of Teaching later introduced a 'Data in the School' course to prepare teachers to coach their peers on data use (Universiteit Utrecht, 2016).

Other interventions involve external trainers. Another training course in the Netherlands, consisting of seven meetings and four individual sessions with coaches in the classroom, had strong effects on teacher efficacy in terms of using data to improve instruction. These were still present a year later (van der Scheer and Visscher, 2016).

Sweden has made continuous professional development compulsory for head teachers, whose management power increased under the 2010 Education Act (Leo, 2015). In Flanders, Belgium, where principals struggled with interpreting data to reform their schools, training on school premises using school-specific data proved more effective than external training (Vanhoof et al., 2012). A trial in Texas, United States, providing principals with 300 hours of training in lesson planning, data-driven instruction and teacher observation, resulted in greater student learning gains than at non-participants' schools (Fryer Jr, 2017).

> A study of teacher pedagogical knowledge in five OECD countries showed that assessment, including data use and research, was the least emphasized part of pre-service education

Developing teacher data literacy should be linked to improved learning

The trend of using data to improve instruction and education management raises questions about the practice's effectiveness. A review of training programmes in the United States found that they tended to focus on data management systems and software, paying more attention to technology than to data literacy. The review suggested the push for data use did not help improve teaching. Teachers continued to feel unable to use data to inform instruction (Datnow and Hubbard, 2016). If data are not timely or useful and the feedback system is faulty, teachers' skills do not matter.

A fundamental question is whether technology used to process learning data (and to design professional development courses) is based on sound theory that links the data collected to better teaching and learning outcomes. Two concerns arise. First, data collected are uninformative of important social and cultural influences on learning (Williamson, 2016a). Second, the emphasis on learning outcomes that can be monitored entails political decisions that are not neutral. The approach may in fact use a very narrow set of learning outcomes to hold schools and teachers accountable, without paying adequate attention to larger learning processes. Therefore, despite their usefulness, it is important to guard against taking data at face value when applying them for accountability purposes (Selwyn, 2016). There should be more emphasis on diagnostic use of data.

> "There should be more emphasis on diagnostic use of data"

A related concern is the extent to which increased use of data and digital technology is influenced by and serves the private companies that build, promote and teach the technology producing the data governments use to evaluate education system effectiveness. Stressing data use risks giving private companies undue influence over education systems and pedagogic practices, undermining their democratic foundations (Williamson, 2016b).

CONCLUSION

In most high income countries, there is a clear trend towards greater school-level autonomy and an explicit demand to account for performance. Teachers and head teachers are asked to carry out ever more complex instruction and management tasks, often combined with more reporting requirements. This increased workload depresses their motivation. At the same time, central government's need to manage decentralized education provision forces it to focus increasingly on monitoring results through growing amounts of data.

Analysing data can help improve instruction, but teacher education and professional development programmes need to embrace a wider range of evidence on student learning and equip teachers with the skills to analyse, interpret and act on it. The programmes should place less emphasis on processing the type of standardized data generally linked to accountability demands.

ENDNOTES

1. This section is based on a background note by UIS (2017).

Children holding toothbrushes and toothpaste laugh while learning about health and hygiene.

CREDIT: Muhd Khalifah Sani Bin Abd Latif/UNESCO

KEY MESSAGES

Tobacco is a leading cause of preventable deaths worldwide – 6.4 million in 2015 – and education is the strongest predictor of some types of tobacco use.

In lower middle income countries people lacking formal education were 6.5 times likelier to smoke than those with at least secondary education. In Indonesia, which has one of the world's highest smoking rates, 81% of adults with less than primary education smoked, compared to 50% of adults with tertiary education.

Informal education can also affect smoking habits. In Bangladesh and Norway, anti-tobacco campaigns increased attempts to quit. But unless carefully designed, media campaigns can increase inequality in smoking prevalence by disproportionately benefiting the more educated.

The global action plan for non-communicable diseases highlights the importance of raising awareness to reduce factors leading to obesity. Australia's LiveLighter campaign increased public awareness of health challenges and the value of eating well.

The World Health Organization put the global shortage of healthcare workers at 17.4 million, including 2.6 million doctors and 9 million nurses and midwives, in 2013. Global expenditure on health professional education was estimated at US$100 billion per year, or less than 2% of total health expenditure – a very low proportion for a highly labour-intensive and talent-driven industry.

Water sector professionals need to go beyond traditional water treatment and operational skills to broaden their expertise in biodiversity, synergies and information technology. However, less than 15% of 94 countries surveyed reviewed human resource strategies at least every two years.

CHAPTER

19

Education in the other SDGs: a focus on health, nutrition and water

Education influences behaviour to prevent non-communicable diseases ..256
Education helps build capacity to implement national SDG strategies 259

Education is key to achieving the Sustainable Development Goals (SDGs). Yet it is reflected in only five global indicators besides SDG 4. The relative absence of education in other indicators suggests that its importance for meeting the SDG goals is not sufficiently recognized. This chapter discusses issues in monitoring the education components of SDG 2 (hunger, food security and nutrition), SDG 3 (health) and SDG 6 (water and sanitation), and the role of education in their achievement through its impact on behaviour and national capacity.

EDUCATION INFLUENCES BEHAVIOUR TO PREVENT NON-COMMUNICABLE DISEASES

From the perspective of preventing, detecting and treating diseases in low and middle income countries, the reciprocal links between education, health, nutrition, and water and sanitation outcomes are well documented. Water-related diseases and malnutrition have long-term effects on brain development, to the detriment of both health and education outcomes (Smith and Haddad, 2015). Better-educated mothers improve children's survival, health and well-being as they are likelier to provide nutritious food, rehydration, deworming, malaria protection, vaccinations and healthier water and sanitation practices (UNESCO, 2013b).

While the number of preventable communicable disease deaths remains unacceptably large, attention is turning as well to non-communicable diseases. In 2012, cancer, diabetes, chronic respiratory and cardiovascular diseases, along with those caused by alcohol, tobacco, excessive sodium and insufficient physical activity, accounted for 68% of deaths worldwide, three-quarters of which occurred in low and middle income countries (WHO, 2014).

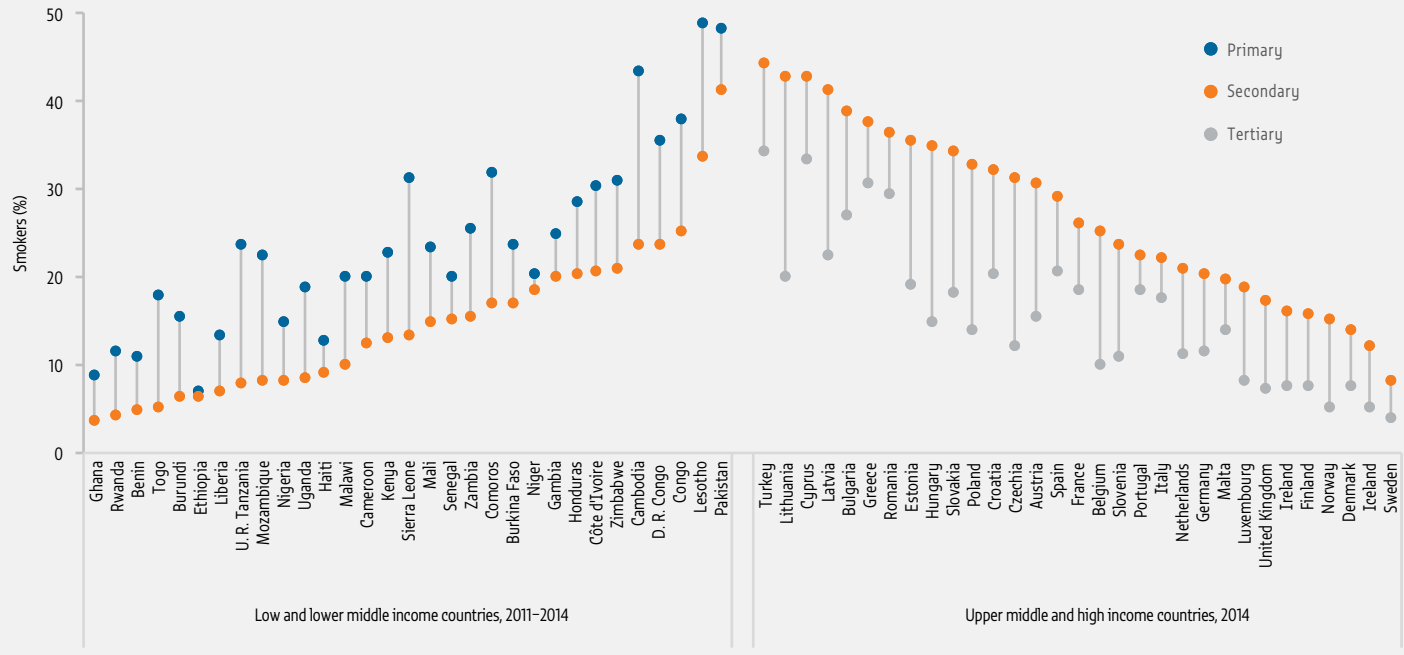
The mediating influence of education on non-communicable diseases is not straightforward. Education affects behaviour through cognitive and psychological benefits, wealth and status, and empowerment. Initially, education may negatively affect health behaviour, as a better-educated population can afford unhealthy lifestyles. As availability of accurate health information increases, the relationship between education and healthy behaviour becomes positive.

EDUCATION IS LINKED WITH LOWER TOBACCO USE

Tobacco is a leading cause of preventable deaths worldwide – 6.4 million in 2015. Globally, 21% of adults smoke: 36% of men and 7% of women. Disaggregating tobacco use by education level shows that men with more education are less likely to use tobacco, in poor and rich countries alike (**Figure 19.1**). A systematic review found that education was the strongest predictor of some types of tobacco use, with those lacking formal education 1.75 times likelier to smoke than those with at least secondary education in low income countries and 6.50 times likelier in lower middle income countries (Allen et al., 2017). In the Organisation for Economic Co-operation Development (OECD), 23 countries had data on smoking, showing that 44% of men with less than upper secondary education smoked, compared to 24% of those with tertiary education. The impact of education remains strong even after controlling for age and income effects (OECD, 2013a).

In the United States, 4% of adults with tertiary degrees were smokers, compared to 34% of adults with secondary school diplomas (Jamal et al., 2015). Controlling for other factors, high school dropouts were nearly three times more likely to smoke than college graduates (Pampel et al., 2010). In India, after accounting for wealth and occupation, less educated people were more likely to smoke, especially affordable tobacco products other than cigarettes (Singh et al., 2015). The 2011 Global Adult Tobacco Survey showed that levels of tobacco consumption in Indonesia, which had one of the world's highest smoking rates, fell by education level: 81% of adults with less than primary education smoked, compared to 50% of adults with tertiary education (WHO, 2012).

FIGURE 19.1:
More education is linked to less tobacco consumption
Percentage of men who smoke, by education level, selected countries, 2011–2014



Sources: Eurostat for upper middle and high income countries, DHS StatCompiler for low and middle income countries.

While tobacco consumption correlated negatively with education, analyses showed that this relationship was dynamic over age cohorts. In France, in the oldest cohort, the more educated women were twice as likely to smoke as the less educated women; in the youngest cohort, the less educated women were 3.7 times as likely to smoke as the more educated women (Pampel et al., 2015).

Informal education can also affect smoking habits. Hard-hitting health warnings are among the most effective deterrents. In Bangladesh and Norway, anti-tobacco campaigns have increased attempts to quit. Such campaigns can also be cost-effective: The cost per person, per attempt to quit, was US$0.07 in India, US$0.21 in China and US$0.56 in Viet Nam (WHO, 2015). Between January 2009 and June 2014, the number of countries running comprehensive national mass media campaigns lasting at least three weeks rose from 23 to 39 (**Figure 19.2**).

Viet Nam's Ministry of Health launched a multipronged anti-smoking campaign, including a hard-hitting mass media campaign, in 2009. A subsequent survey showed that 70% of respondents recalled seeing the campaign, of whom 77% said it made them more likely to quit and 80% said it made them stop exposing others to their smoking (Bloomberg Philanthropies, 2011).

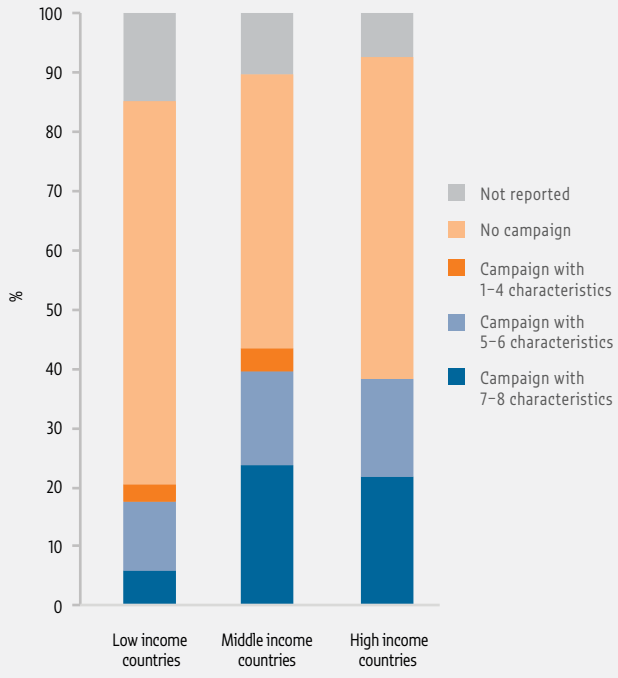
However, media campaigns can increase socio-economic inequality in smoking prevalence by disproportionately benefiting the more advantaged (Lorenc et al., 2013). A review of studies on mass media campaigns in Australia, Canada, the United States and western Europe showed that most were more effective for populations with higher socio-economic status, thus widening or maintaining disparity in smoking cessation (Niederdeppe et al., 2008). The 2015 Global Adult Tobacco Survey found that, between 2010 and 2015, tobacco use declined by 5.3% on average but by 15% among urban residents and college-educated adults (Van Minh et al., 2017). This gap underscores both the importance of formal education and the need for better-designed campaigns targeting vulnerable populations.

FORMAL AND NON-FORMAL EDUCATION CAN HELP PREVENT OBESITY

Obesity worldwide more than doubled between 1980 and 2014. A systematic analysis of 91 countries showed that the relationship between educational attainment and obesity varies by country income level and the prevalence of the condition (Cohen et al., 2013).

In low income countries with a low prevalence of obesity (with a few exceptions, such as Cambodia), the most educated women are likeliest to be obese or overweight.

FIGURE 19.2:
Anti-tobacco campaigns are an informal education mechanism in many countries
Percentage of countries with national mass media anti-tobacco campaigns, by country income level and campaign characteristics, 2013/4



Notes: The following campaign characteristics were assessed: (a) the campaign was part of a comprehensive tobacco control programme; (b) research was undertaken or reviewed before the campaign to understand the target audience; (c) campaign communication materials were pre-tested; (d) the campaign adopted a thorough media planning and buying process; (e) the implementing agency worked with journalists to gain publicity or news coverage; (f) there were process evaluations to understand implementation; (g) there was an outcome evaluation; and (h) the campaign was aired on television and/or radio.
Source: WHO (2015).

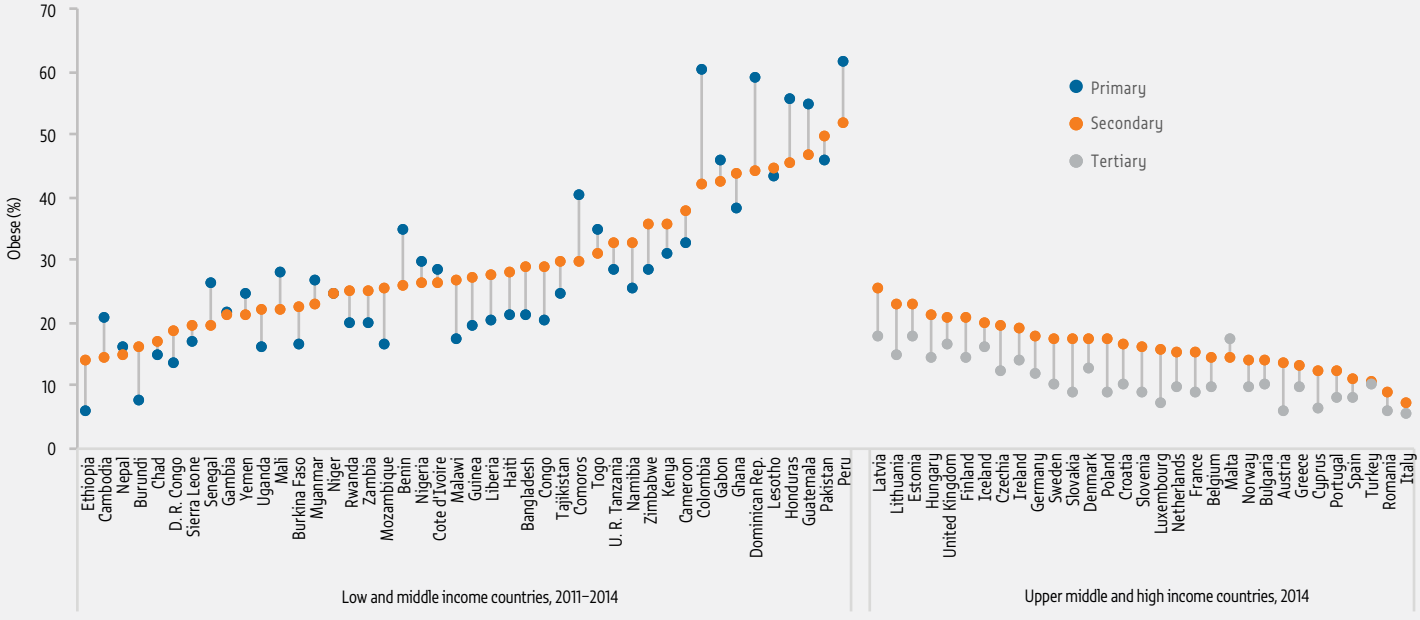
> “In 24 OECD countries, 28% of women with less than upper secondary education were obese, compared to 12% of women with tertiary education”

In middle income countries with a higher prevalence of obesity, such as Colombia, the Dominican Republic and Peru, the pattern changes to the disadvantage of less educated populations (**Figure 19.3**).

In high income countries, tertiary education is linked to a lower probability of obesity among women. In 24 OECD countries, 28% of women with less than upper secondary education were obese, compared to 12% of women with tertiary education. In Australia, an additional year in school, linked to a change in the minimum school leaving age, had a sizeable effect on later health habits, such as diet and exercise, with larger effects for women and people from poorer backgrounds (Li and Powdthavee, 2015). An analysis of longitudinal data on identical twins in Australia found that education also reduced the probability of being overweight among men (Webbink et al., 2010). In the Republic of Korea, in 2014, less educated women were six times likelier to be overweight than those with more education (OECD, 2017b).

Parental education strongly influences childhood obesity, but, again, the effect depends on the country’s level of economic

FIGURE 19.3:
The effect of education on obesity evolves from poorer to richer countries
Percentage of women who are obese, by education level, selected countries, 2011–2014



Source: DHS StatCompiler for low and middle income countries; Eurostat for upper middle and high income countries.

development. In Kenya, a lower middle income country, children had five times higher odds of being overweight if their mothers and fathers had at least some college education. By contrast, children in Brazil, an upper middle income country, had 45% lower odds of being overweight if their fathers had higher education (Muthuri et al., 2016).

While it is difficult to disentangle the impact of mass media awareness campaigns from other simultaneous and formal education interventions, the global action plan for non-communicable diseases highlights the importance of raising awareness to reduce factors leading to obesity (WHO, 2013). Australia's LiveLighter campaign, for example, increased public awareness of health challenges and the value of eating well (Morley et al., 2016).

Encouraging people to adopt healthy diets or increase physical activity requires a supporting environment and promotion of better nutrition in schools, where children often acquire lifelong habits. As with tobacco control, obesity prevention needs greater targeting to poorer families. In Germany, school-based interventions reduced obesity among richer students. In Sweden and the United States, schools with poorer children needed more community-based approaches (Hoelscher et al., 2010; Magnusson et al., 2011).

In the city of Seinäjoki, Finland, 17% of 5-year-olds were reportedly overweight or obese in 2009. The municipal health department worked with the child care, education, nutrition, recreation and urban planning departments to ensure that day care centres and schools provided higher-quality service. The drop to a 10% overweight rate by 2015 was attributed to the integration of health in all policies. Schools provide free lunches according to the national nutrition council dietary guidelines, along with health education, physical education, and nutrition and cooking lessons(City of Seinäjoki, 2015). Municipalities ensure that nurses provide free annual health examinations and personalized advice on mental health, healthy eating and physical fitness in every school.

EDUCATION HELPS BUILD CAPACITY TO IMPLEMENT NATIONAL SDG STRATEGIES

Every sector needs enough qualified professionals to ensure service delivery. The SDG targets and indicators vary in their appreciation of capacity-building needs.

...IN THE HEALTH SECTOR

Under SDG 3, the proportion of births attended by skilled health personnel will be monitored, in recognition of the link between well-prepared health workers and reduced maternal mortality. There has been significant progress: Births attended by skilled personnel have increased by more than 20 percentage points in 21 of 124 countries since 2000. In Bhutan, the percentage increased from 24% in 2000 to 75% in 2012; in Rwanda, it rose from 27% in 2000 to 91% in 2015. Over a similar period, however, it fell from 31% to 23% in Burkina Faso and from 42% to 38% in Nigeria.

Target 3.c aims to increase health financing and the recruitment, development, training and retention of the health workforce in poorer countries, especially in the least developed countries and small island developing states. Using a minimum SDG index threshold of 4.45 doctors, nurses and midwives per 1,000 people, the World Health Organization estimated that there was a global shortage of 17.4 million healthcare workers, including 2.6 million doctors and 9 million nurses and midwives, in 2013. On current growth rates, with some modelling assumptions, the number of professionals is forecast to grow by 55% between 2013 and 2030. However, the global shortage of healthcare workers is still projected to be more than 14.5 million in 2030, with a growing needs-based shortage in the poorest sub-Saharan African countries. The 22 countries facing the most challenging workforce needs would have to increase the number of professionals by 10% annually for at least 15 years to meet the minimum threshold (WHO, 2016).

> "The global shortage of healthcare workers is still projected to be more than 14.5 million in 2030"

Human resources are one of 13 capacities that form an index on the International Health Regulations capacity and health emergency preparedness indicator (3.d.1). Countries are expected to apply mechanisms to monitor the development of human resource capacity for emergency preparedness, i.e. to prepare workforce development plans and strategies, provide training, and monitor progress (Ijaz et al., 2012).

Challenges to improving the health workforce include institutional and instructional shortcomings, which affect competence acquisition (Frenk et al., 2010), and systemic challenges affecting equitable distribution. The first mapping of global professional health education institutions found that 26 countries in sub-Saharan Africa had one or no medical schools, which aligns poorly with national disease burdens.

Increased private investment in professional health education raises concerns about its quality and social

> To improve and expand the health workforce, human resource planning could be better linked to technical and vocational education institutions

purpose. In India, 71% of the 287 medical schools established between 1980 and 2015 were private and concentrated in large cities and wealthier states. By contrast, the expansion of medical schools in China has been publicly funded. Nevertheless, the urban bias is strong, leaving substantial rural populations underserved or with poor-quality provision. China has about 1 million village doctors and India has about 1 million rural medical practitioners who are not graduates of accredited schools.

Network-based knowledge-exchange strategies are an innovative way to expand capacity and remedy distribution inequality. Brazil's Mais Medicos (More Doctors) programme, established by the government in 2013 to improve retention in remote and rural areas, offered physicians incentives to enrol and serve in high-poverty priority areas, and it provided funding to upgrade infrastructure and tailor medical training. An early implementation study found that primary healthcare coverage in remote and deprived areas increased from 78% to 86% in 2012–2015. More than half the medical schools established since 2013 were in more deprived regions, reducing regional variation (Santos et al., 2017).

Global expenditure on health professional education in around 2010 was estimated at US$100 billion per year, or less than 2% of total health expenditure – a very low proportion for a highly labour-intensive and talent-driven industry. The high international mobility of African, Asian and Caribbean doctors and nurses, facilitated by strong recruitment drives and improved recognition of qualifications, can lead to low income countries losing key health professionals. To ease the financial burden on sending countries, richer countries need to cover the costs of all physicians serving their populations, irrespective of where they are trained.

To improve and expand the health workforce, human resource planning could be better linked to technical and vocational education institutions to facilitate school-to-work transition, youth apprenticeships and continuing professional development, shifting away from a predominant emphasis on hospital- and university-based training (Fisher et al., 2017).

Indeed, overemphasis on specific types of technical proficiency without adequate local contextual understanding, emphasis on hospital care and favouring of specialization over primary care are among the challenges professionals face. The growth of internet-based data systems also requires health practitioners to focus less on memorizing and transmitting facts and more on developing reasoning and communication skills.

Social accountability initiatives hold promise for improving citizen-centred health care. One of them, THEnet, emphasizes achieving distributional equity and local relevance by working on community engagement and with local institutions. The online open-source tool for health professionals has been adopted by workforce education institutions in about a dozen countries. Similarly, the Ateneo de Zamboanga University School of Medicine in Mindanao, the Philippines, structured the curriculum around competence- and problem-based instruction, with experiential learning in the community, to provide people-centred and integrated health service. Recruiting locally has proved helpful in retaining professionals in underserved locations (TheNET, 2017).

...IN THE WATER AND SANITATION SECTOR

Under SDG 6, expertise is required to provide water and sanitation services, develop integrated water resource management, build and manage water and sanitation infrastructure, and engage with local communities. Water sector professionals need to go beyond traditionally recognized water treatment and operational skills and broaden their expertise to include areas such as biodiversity, synergies, information technology and engagement with policy-makers (WWAP, 2016).

Human capacity is implicitly recognized in target 6.5 on integrated water management to help manage limited water resources and in target 6.b on participation of local communities in improving water and sanitation management. However, currently no specific indicators address professional requirements.

> There are currently no specific indicators addressing professional requirements for target 6.5 on integrated water management

To prioritize capacity-building in SDG monitoring and reporting, UNESCO and the OECD are discussing adding a subindicator on capacity-building under target 6.a.

Despite the lack of specific SDG indicators, there has long been strong recognition of human capacity issues in water and sanitation, especially in poorer countries where the sanitation sector is more stigmatized. However, less than 15% of 94 countries surveyed reviewed human resource strategies at least every two years. Countries identified three bottlenecks to human resource development: lack of funding, reluctance of skilled workers to be placed in rural areas, and lack of adequately skilled graduates (WHO and UN Water, 2014). Global analysis from 2016 found that over 80% of countries reported insufficient financing to meet national drinking water, sanitation and water quality targets for urban areas, rising to 90% for rural areas (WHO and UN Water, 2017).

...AND IN THE AGRICULTURE SECTOR

Under SDG 2, education and capacity-building are essential to double the output and incomes of small-scale food producers (target 2.3); ensure sustainable, resilient food production systems (target 2.4); and maintain the genetic diversity of seeds, plants and animals through traditional knowledge (target 2.5). However, the indicators measure progress by final outcomes rather than the processes required to achieve them.

More educated farmers are more likely to be more productive, take measures to mitigate climate change effects and adopt new technology. In Pakistan, such farmers were more likely to adopt irrigation pumps powered by alternative energy sources because they could get access to the information and were more aware of the options. Use of the pumps was associated with higher yields, higher household income and lower poverty (Ali and Behera, 2016). Similarly, households that adapted agricultural practices to climate change effects were more educated and had better access to weather-related information (Abid et al., 2015).

In a meta-analysis of 442 studies between 1984 and 2013, 48% of estimates identified education as a major driver of production efficiency in African agriculture, making it the most frequently cited factor. One-third of studies identified extension services as a critical driver, underscoring their importance for disseminating technology and innovation to farmers (Ogundari, 2014). Family farms accounted for 98% of the over 500 million farms and at least 53% of the agricultural land. Inclusive rural advisory services that focus on innovation capacity through education and smallholder farmer research and development are needed (Graeub et al., 2016; Smith and Haddad, 2015).

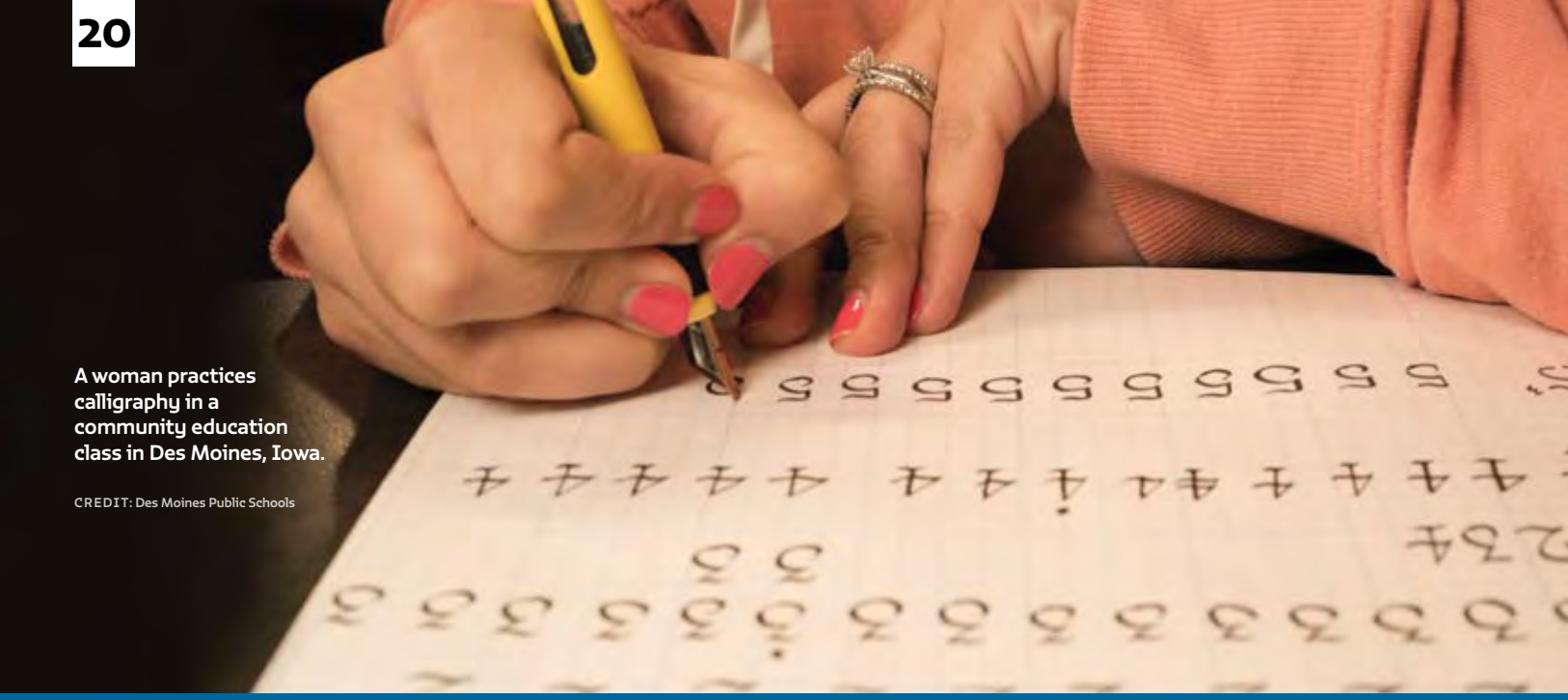
“In a meta-analysis of 442 studies between 1984 and 2013, education was the most frequently cited factor behind production efficiency in African agriculture”

In some promising initiatives in poorer countries, education is critical to empowering smallholders to preserve rapidly diminishing agricultural biodiversity and to changing mainstream practices dominated by agribusiness. In India, Navdanya (Nine Seeds) is a network of 18 states that seeks to conserve seeds by preserving knowledge about them and their use. It has trained over 500,000 farmers in seed sovereignty and sustainable agriculture over the past two decades. In Uttarakhand state, it has helped record folk knowledge of medicinal and other herbs and has documented farming patterns to provide advice that routinely goes against government policy, which favours use of chemicals. In Kheti Virasat (Heritage of Farming) in Punjab state, India, extension workers use documentaries and educational films instead of written material to educate farmers about the environmental and health problems of conventional farming, the geopolitics of agriculture and organic farming practices (Nicolaysen, 2012).

CONCLUSION

Education throughout life is key to achieving the SDGs. The health, agriculture, water and sanitation sectors must emphasize education completion as a strategy for achieving their objectives. The evolving relationship between education and some desirable outcomes calls for disseminating accurate information and creating enabling environments for healthy behaviour. Capacity development also needs to be at the centre of the 2030 Agenda for Sustainable Development.

Crucially, progress on the SDGs requires targeted action prioritizing equity concerns. Trends in health outcomes and workforce capacity suggest the widening gaps for underserved populations need to be better understood. The distribution challenges within and between countries in the health and water workforces should be adequately monitored, and awareness campaigns should be adequately targeted, contextualized and made relevant to the most vulnerable.



A woman practices calligraphy in a community education class in Des Moines, Iowa.

CREDIT: Des Moines Public Schools

KEY MESSAGES

Public education expenditure was 4.7% of GDP and 14.1% of total public expenditure in 2015. One in four countries spent less than 4% of GDP and allocated less than 15% of total public expenditure to education.

Calls for more spending are countered by calls for checks and balances to fight corruption. Education was more exposed to corruption risk than even construction in the European Union in 2009–2014.

Anti-corruption approaches emphasize deterrence, detection and investigation. Clear rules and regulations must be accompanied by stronger management capacity, independent audit institutions, open information systems and a facilitating environment for media oversight and involvement of non-governmental organizations.

Aid to education in 2015 was 4% below 2010 levels. The education share of total aid fell for six consecutive years, from 10% in 2009 to 6.9% in 2015.

Payment by results, a relatively new aid delivery modality, aims to help recipients pay closer attention to results and move towards a monitoring and evaluation culture.

There is little indication that accountability dynamics are changing for governments whose need for aid to build robust institutions remains strong. Questions arise about the accountability of donors using results-based aid to shift risk onto aid recipients little prepared to bear it.

New estimates put the share of education expenditure borne by households at 18% in high income, 25% in middle income and 33% in low income countries. In Cambodia, it was 69% in 2011.

National education accounts can reveal the amount that households are contributing. But education should learn from the rollout of national health accounts, now used in 112 countries, which took decades of development.

CHAPTER

20

Finance

(selected finance-related thematic indicators from target 4.5)

4.5.3 *Extent to which explicit formula-based policies reallocate education resources to disadvantaged populations*

4.5.4 *Education expenditure per student by level of education and source of funding*

4.5.5 *Percentage of total aid to education allocated to least developed countries*

EDUCATION 2030 FRAMEWORK FOR ACTION INDICATORS

Public education expenditure as a share of GDP

Public education expenditure as a share of total public expenditure

Public expenditure 264
Policy focus 20.1: Corruption in education – robbing education systems of their potential 267
Aid expenditure 271
Policy focus 20.2: Experimenting with results-based payments for effectiveness and accountability in aid 275
Household expenditure 282
Policy focus 20.3: Drawing lessons from the health sector to introduce national education accounts 285

All international declarations stress the importance of increasing financing to achieve the 2030 Agenda for Sustainable Development, including in education. There is consensus that current levels of funding are inadequate to meet the ambitious SDG 4 goals; views differ on various actors' responsibility and relative contribution. Commitment to the idea that financing education should not simply help achieve targets but do so equitably is often missing from these discussions. The *Global Education Monitoring Report* (GEM Report) aims to take an integrated view of all financing flows. This chapter looks at the three main sources: governments, donors and households.

PUBLIC EXPENDITURE

Two key targets for public financing of education appear in the Education 2030 Framework for Action (UNESCO, 2015a):

- allocating at least 4% to 6% of gross domestic product (GDP) to education; and/or
- allocating at least 15% to 20% of public expenditure to education.

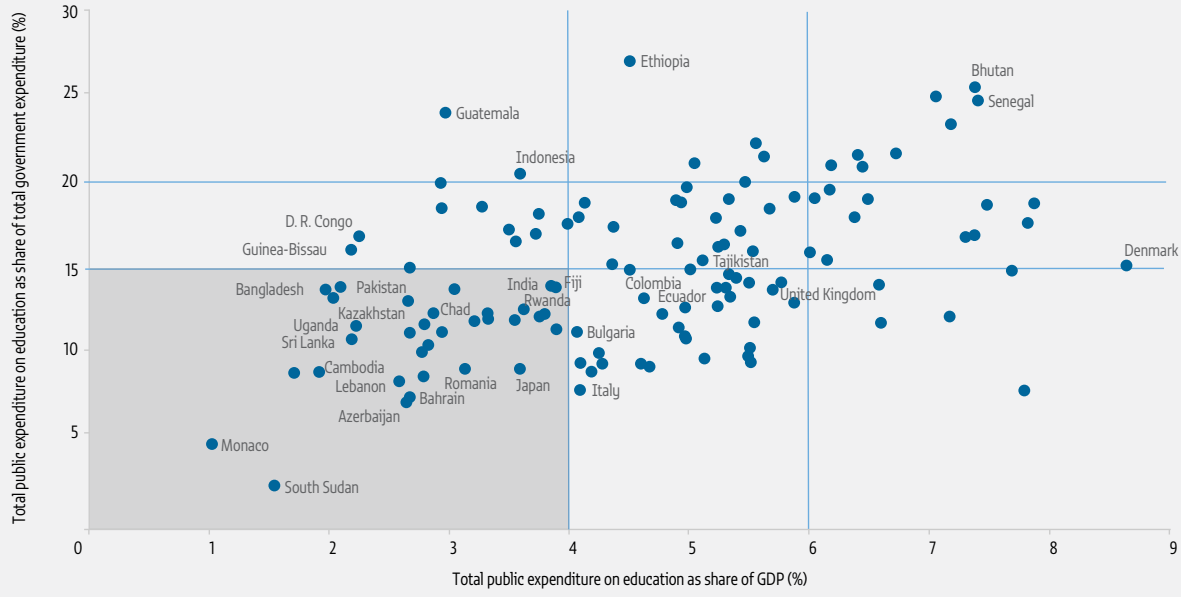
As the 2016 GEM Report argued, the formulation is unclear because there can only be one threshold and because 'and/or' allows for two interpretations. The GEM Report takes the view that achieving one of the two targets should be a minimum condition, implicitly recognizing that poorer countries may collect limited taxes but commit a higher share of expenditure to education that reflects their needs, whereas richer countries have higher tax-raising capacity but need to spend less, as population ageing means fewer school-age children. Although the targets are non-binding, failing to meet both may signify education receives inadequate attention.

In 2015, median global public education expenditure was 4.7% of GDP (within the proposed range). Regional expenditure varied from 2.8% in Caucasus and Central Asia to 5.1% in Europe and Northern America. By country income group, expenditure ranged from 3.7% in low income countries to 5.1% in high income countries. In all, 49 countries with data spent less than 4% of GDP on education, including 14 of 25 low income and 14 of 30 lower middle income countries (**Table 20.1**).

Public education expenditure was 14.1% of total public expenditure in 2015 (below the proposed range). The share varied from 11.8% in Europe and Northern America to 16.9% in sub-Saharan Africa. Overall, 71 countries with data allocated less than 15% of public expenditure to education, including 8 of 25 low income and 13 of 29 lower middle income countries.

Among 128 of 209 countries with data on both indicators, 33 spent less than 4% of GDP on education and allocated less than 15% of total public expenditure to education.

FIGURE 20.1:
At least 33 countries did not meet either education financing benchmark
Public education expenditure as a share of GDP and of total public expenditure, 2015 or most recent year



Source: UIS database.

> In 2013–16 one in four countries spent less than 4% of GDP on education and allocated less than 15% of total public expenditure to education

These include low income countries, such as Gambia and Guinea, as well as high income countries, such as Japan and Qatar. However, there are also middle income countries, such as Azerbaijan, which spent 2.6% of GDP and 7.4% of total public expenditure on education, and Lebanon, which spent 2.6% and 8.6%, respectively (**Figure 20.1**).

It should be noted that 81 countries lack recent data, and only 31% of reporting countries provided data for 2015, so the international community can monitor annual changes only with a considerable lag. Alternatives are being sought to improve the timeliness while maintaining the quality of public education financing data (**Box 20.1**).

TABLE 20.1:
Public education expenditure, by country income group and region, 2015 or most recent year

	As share of GDP	As share of total public expenditure	Per capita		
			Primary education	Secondary education	Post-secondary education
	%	%	Constant 2014 PPP US$	Constant 2014 PPP US$	Constant 2014 PPP US$
World	**4.7**	**14.1**	**1,848**	**2,636**	**4,075**
Caucasus and Central Asia	2.8	11.9	...	...	833
Eastern and South-eastern Asia	3.6	16.0	3,627	7,122	9,591
Europe and Northern America	5.1	11.8	8,186	8,303	7,682
Latin America and the Caribbean	5.0	...	1,729	2,287	...
Northern Africa and Western Asia	...	...	...	...	...
Pacific	...	...	...	...	...
Southern Asia	3.3	13.8	488	699	2,458
Sub-Saharan Africa	4.1	16.9	246	310	2,094
Low income	3.7	17.0	170	262	1,667
Lower middle income	5.0	16.4	773	...	...
Upper middle income	4.2	14.0	...	...	...
High income	5.1	12.5	8,053	8,452	10,000

Notes: PPP = purchasing power parity. Estimates are medians reported only if at least 50% of countries in a group have data. Medians do not account for size of countries and their economies.
Source: GEM Report team calculations based on UIS data.

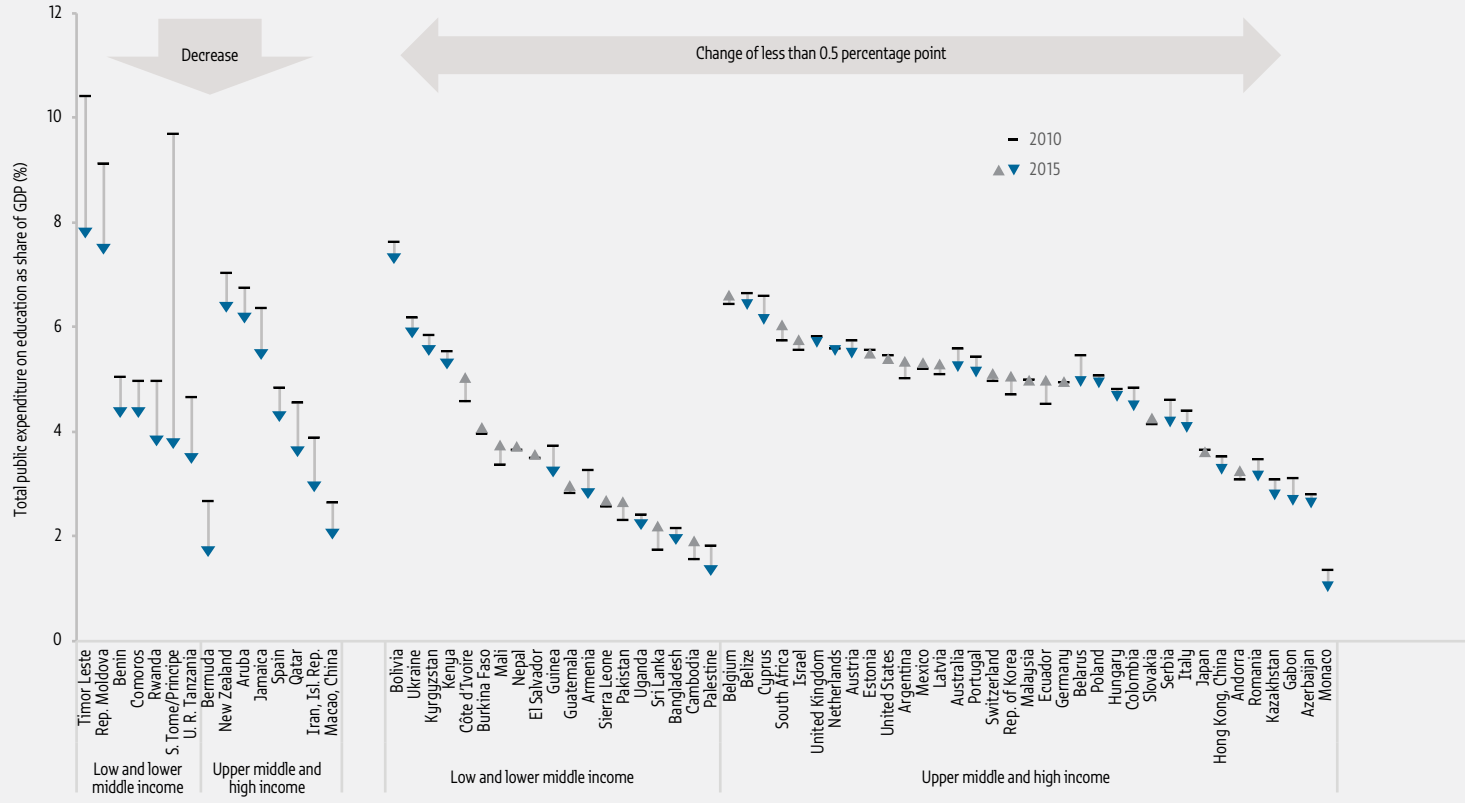
Between 2010 and 2015, at least 24 countries, or about one in four of those with data, increased education expenditure as a share of GDP by more than half a percentage point. Six did so by at least two percentage points, including Bhutan, Malawi, Niger and Zimbabwe. By contrast, 15 countries, or about one in six of those with data, decreased spending by more than half a percentage point, and two, Sao Tome and Principle and Timor-Leste, did so by at least two percentage points. Rwanda and the United Republic of Tanzania, which also reduced spending, have fallen below the 4% threshold (**Figure 20.2**).

> “Between 2010 and 2015, about one in four increased education expenditure as a share of GDP by more than half a percentage point”

Per-student spending increases with the levels of education and of income per capita. Rwanda spends less than US$100 (in purchasing power parity terms) per primary school student, while the Republic of Korea spends US$10,000. Côte d’Ivoire spends US$500 per primary school student but US$4,400 per post-secondary student. The Islamic Republic of Iran is among the exceptions, spending about as much per primary student as Indonesia, whose per capita income is one-third lower, and less per post-secondary student than Pakistan, whose per capita income is more than two-thirds lower. El Salvador, Guatemala and Nepal spend more per primary than per secondary student. Malaysia spends US$13,500 per post-secondary student, which is three times more than Chile, despite similar income per capita. In part, this reflects their contrasting approaches to private spending on higher education (**Figure 20.3**).

Clearly, spending amount cannot be the only measure of success. If spending is inefficient or does not reach intended beneficiaries, more of it will not help reach

FIGURE 20.2:
One in four countries have increased public education expenditure by at least 0.5% of national income since 2010
Public education expenditure as a share of GDP, 2010 and 2015 or most recent year



Source: UIS database.

BOX 20.1

Accountability can improve public expenditure reporting – the Global Partnership for Education

The absence of timely, consistent public education expenditure data not only impedes sector planning responsiveness but also makes it more difficult to hold international partners to account for their commitments and evaluate the success of their efforts.

A key objective of the Global Partnership for Education (GPE) has been to increase public expenditure on education. Indicator 10 of the GPE results framework tracks whether partner countries spend at least 20% of total public expenditure on education or sustain their spending above this level. However, as of December 2016, data on the indicator were available in only 12 of the 65 countries for 2015 and in only 10 for both 2014 and 2015, making it impossible to assess whether the GPE's objective to catalyse more public expenditure on education was being met.

Data come from the annual survey the UNESCO Institute for Statistics (UIS) sends to governments. While the UIS network of focal points in almost 200 countries provides the global education community with more regular data than any other institution, the regularity with which countries report to the UIS varies, with a typical response lag of two to three years.

In 2016, the GPE Secretariat assessed the viability of accelerating the process of collecting and validating publicly available official budget documents and integrating them into the UIS process. This exercise yielded information for 49 of the 65 countries. Following a formal agreement of collaboration between the GPE and the UIS, as of 2018, UIS data on government education expenditure will inform both the GPE indicator and those published by the UIS. The UIS has also started collecting actual expenditure data, which will be used to estimate expenditure for more recent years based on past execution rates.

In calculating public education expenditure as a share of total public expenditure, while both the UIS and the GPE will use the same numerator (total education expenditure), they will differ in the denominator: The UIS will continue to use the International Monetary Fund definition of total public expenditure, while the GPE will exclude debt servicing payments.

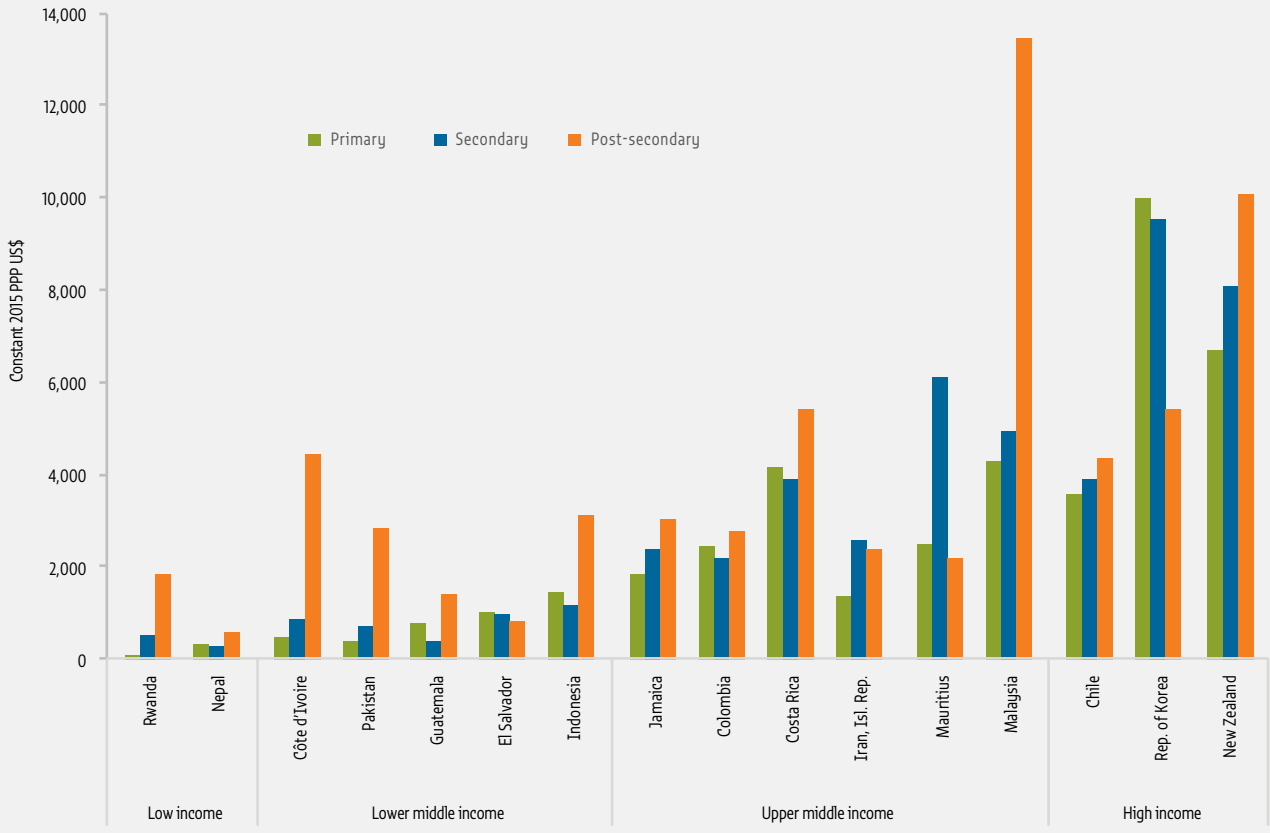
The agreement facilitates faster publication of data for countries that do not respond to the UIS survey by the stipulated deadline. In these instances, figures collected from public documents will be used in the UIS database, in addition to survey data, subject to validation by country focal points.

education targets. Corruption and leakage affect several education systems and need to be addressed in a coordinated way (**Policy focus 20.1**).

POLICY FOCUS 20.1: CORRUPTION IN EDUCATION – ROBBING EDUCATION SYSTEMS OF THEIR POTENTIAL

A common counter to calls for more education spending is calls for better spending. Inefficient government spending at least partly results from weak capacity to set and abide by clear rules and to put in place appropriate organizational and administrative checks and balances. A lack of will to improve these structures also has political motivations and may reflect tolerance of corruption. Defined as an 'abuse of entrusted power for private gain', corruption applies to a range of activities affecting education systems (Transparency International, 2017a). While the public imagination often seizes on high-level cases involving large-scale resource misallocation, petty corruption by low- and mid-level officials in routine interactions continues to affect the daily lives of students and parents, particularly the marginalized.

FIGURE 20.3:
There are exceptions to the rule that public expenditure per student increases by level of education and by income per capita
Public education expenditure per student, by level of education, in constant 2015 PPP US$, 2015



Source: GEM Report team calculations based on UIS database and World Bank International Comparison Program database.

The repercussions extend well beyond direct accounting losses, which are quantifiable to a greater or lesser degree. Access to education and the quality and equity of education services are also negatively affected (Transparency International, 2013). Corruption distorts government resource allocation decisions, reducing public and civil service productivity and negatively affecting public revenue (OECD, 2016e). It also undermines efforts to develop civic attitudes and values, a major aim of education.

This report includes a range of examples from both public and private provision. Fraud in non-government professional skills development programmes, school-level cheating on public examinations, conflicts of interest when public teachers act as private tutors – such cases, when exposed, undermine public confidence in education systems. Systematic efforts to document and classify corruption in education have shed light on its diverse manifestations (Hallak and Poisson, 2007) (**Table 20.2**).

The media and non-government organizations (NGOs) play a crucial role in uncovering corruption in education. Policy-oriented research and diagnostics or evaluation by international development organizations have also been instrumental, complementing the work of public institutions or replacing them if they fail their mandates. This section draws attention to recent cases which highlight the need for vigorous accountability mechanisms to curb corruption's occurrence.

TABLE 20.2:
A classification of corrupt practices in education

Area	Corrupt practices
Finance	• Violation of rules and procedures • Inflation of costs and activities • Embezzlement and bribes
Allowances, fellowships and subsidies	• Favouritism, nepotism and discrimination • Unclear criteria or bypassing of criteria
School infrastructure (construction, maintenance and repairs) **School services (transport, boarding, textbooks, canteens and meals)**	• Fraud in public tendering • Supplier collusion • Embezzlement and bribes • Cost overruns and overpricing • Ghost deliveries and siphoning school supplies • Purchase of unnecessary or inferior equipment and materials • Unequal distribution and lack of distribution monitoring system • Textbook black markets
Teacher management (appointment, transfer, promotion, payment and training)	• Fraud in appointment and deployment • Discrimination • Falsification of credentials/use of fake diplomas • Bypassing of criteria (e.g. unbalanced distribution of teachers) • Pay delay/unauthorized deductions • Ghost teachers
Teacher behaviour (professional misconduct)	• Absenteeism • Charging of illegal fees (e.g. for school entrance, examinations) • Gift acceptance • Private tutoring (including use of schools for private purposes)
Examinations, access to universities and award of diplomas	• Selling of information • Fraud in examinations (e.g. impersonation, cheating, favouritism and gifts) • Bribes (e.g. for high marks, diplomas and admissions) • Diploma mills and false credentials
Institutional accreditation	• Fraud in designation (e.g. via favouritism, bribes and gifts)
Research and textbook writing	• Fraud in research/plagiarism • Fraud in textbook author selection • Bypassing of copyright law • Compulsory purchase of textbooks

Source: Hallak and Poisson (2007).

THE EDUCATION CORRUPTION HYDRA HAS MULTIPLE HEADS

Governments usually detect financial corruption in education via violations of rules and procedures. An audit by Kenya's Ministry of Finance reported the loss of US$48 million intended for the Kenya Education Sector Support Programme. Of that, US$22 million had been transferred to illegitimate bank accounts or unregistered institutions. The rest involved financial monitoring report data that were irreconcilable with Ministry of Education accounts or bank balances (Ratemo, 2011).

In Pakistan, the auditor general's office reported to the Public Accounts Committee of the National Assembly that US$7.5 million of Basic Education Community Schools programme funding had been illegally diverted, as a ministerial inquiry committee established. The project director transferred the amount to a private account instead of a prescribed bank. The National Database and Registration Authority also detected over 2,000 fake teacher employee identity cards, and auditors tracked 349 'ghost' schools (Asad, 2016).

In Brazil, federal, state and municipal governments make financial contributions to the basic education equalization fund. With no systematic monitoring mechanism, leakage became pervasive, including cases of misreporting of the number of pupils enrolled, funds unaccounted for, destruction of archives and diversion of teacher salaries and bonuses (Ferraz et al., 2012).

When the programme, now known as FUNDEB, extended its coverage to pre-primary and secondary education, a municipal accountability system was put in place to monitor use of the account. The system comprised an internal municipal audit, the city council and a new Social Monitoring and Control Council (Conselho de Acompanhamento e Controle Social [CACS]), (Bliacheriene et al., 2017).

However, an evaluation by the Comptroller General of the Union found that problems continued. Of the 124 state and municipal governments inspected, 49 had irregular bidding processes, 28 had irregular contract executions, 21 had 'cash withdrawals' from the account and 27 had no CACS. Among units with no violations, only one in three CACS had received training or used school censuses for verification, raising concerns about their supervisory capacity (Brazil CGU, 2013). The government provided guidelines to CACS members and created a website listing all council members to improve transparency (Brazil FNDE, 2017; Brazil INEP, 2015). However, four out of nine members represent students and parents who lack accounting expertise. Given the level of responsibility of these positions, there are calls for professionalizing councils (Brazil Ministry of Education, 2013).

Coordinated engagement of the audit, police and justice authorities thus remains critical. In 2015, a federal police operation uncovered a scheme in more than 20 municipalities of Bahia state in which FUNDEB funds were diverted through inflated invoicing and fraudulent bids. In 2017, the Public Prosecutor's Office charged a dozen people with setting up a criminal organization and requested the return of US$3 million as compensation for fraud totalling US$14 million (Globo, 2017).

A lot of work in this area developed out of World Bank studies on leakage in fund transfers from central to local government and to schools in countries including Uganda and Zambia in the late 1990s and early 2000s (Reinikka and Svensson, 2006). The studies were based on a first generation of public expenditure tracking surveys, which mapped public resource flows and tried to match allocations with receipt at service delivery points (Koziol and Tolmie, 2010). However, this approach is limited when allocation rules are unclear or the necessary information systems are absent. An attempt to track resources for schools in Nigeria's Kaduna and Enugu states revealed there were no allocation rules for the most basic inputs, including maintenance, textbooks and in-service training (World Bank, 2008).

Ghost teachers, who appear on payrolls but have transferred, retired or died, or never taught in the first place, are a complex and contested facet of education corruption (CMI, 2006). Discrepancies are difficult to detect when payroll data are not linked to other information sources, such as the school census. If governments lack commitment to tackle the issue, surveys may be stopgap measures that do not help deal with root causes. The problems these surveys uncover are usually entrenched politically (CMI, 2008).

Some countries, motivated by external pressure or genuine desire to reform, have taken steps to address this issue. In Guyana, an inquiry discovered payments and transfers to nonexistent teachers and schools (Guyana Chronicle, 2017). An NGO in Honduras used the Transparency Act to obtain official data revealing irregularities in the teacher recruitment competition but also obtained teacher testimonials alleging posts were assigned through bribes and political relations (Transformemos Honduras, 2010). Sierra Leone realized savings following biometric teacher registration, which led to the elimination of ghost teachers (Pôle de Dakar, 2013).

Revelation of irregularity is not sufficient. In Nigeria, in the first half of 2016 alone, allegations of ghost teachers or teachers collecting more than their official salary were made in 8,000 cases in 4 of the 37 states. In 8 other states, allegations were levied against more than 70,000 ghost workers in local governments, which are responsible for education (Adeniyi, 2016).

Often, egregious practices are not perceptible to outside observers, and their scale is difficult to verify. Challenging circumstances, such as conflict settings, can be a contributor. About 80% of the 740 schools in Ghor province, Afghanistan, were not operating but the education department was paying teacher salaries (IWPR, 2012). The Independent Joint Anti-Corruption Monitoring and Evaluation Committee concluded that teacher recruitment nationwide was highly vulnerable to corruption, bribery and nepotism. Officials were accused of colluding to steal money from accounts designated for teacher salaries. Members of parliament allegedly traded their education budget votes for allotments of teacher positions in their constituencies (Afghanistan MEC, 2015). This is despite the education ministry developing a teacher registration database, which by 2008 had removed 38,000 ghost teachers from 183,000 personnel files (Afghanistan Education Joint Sector Review, 2012).

Large-scale corruption may also remain undetected where corrupt practices are too entrenched to be challenged. In a public expenditure tracking survey in Bangladesh, about 40% of district and subdistrict primary education officers admitted to making 'speed payments' to accounts officers to be repaid for certain types of expenditure. These illicit payments were not visible in expenditure records or identifiable in institution audits. Regardless of bill type, roughly half of speed payments exacted a flat fee of US$4 and half exacted 5% of the bill. These payments may not involve direct leakage from the public purse, but they encourage education officials to make up such costs through other forms of corruption or leakage (FMRP, 2006).

Corruption in higher education takes a variety of forms (IIEP-UNESCO and CHEA, 2016). India has issues of fraud and unprofessional practice in medical training. Government and court records showed that, between 2010 and 2015, at least 69 of the 398 medical colleges and teaching hospitals had been accused of rigging entrance examinations or accepting bribes to admit students. The

> "Nigeria had 8,000 allegations of ghost teachers or teachers collecting more than their official salary in the first half of 2016 alone"

regulator recommended closing 24 of the colleges. In 1980, India had 100 public and 11 private medical schools; by 2015, the respective figures were 183 and 215. Accreditation of private institutions was suspect; many were set up by businessmen and politicians with no experience operating medical or educational institutions. The Medical Council of India found private colleges hiring people to pose as full-time faculty members and healthy people to pose as patients in order to pass inspections (Clark, 2015).

In Romania, the 2010 baccalaureate examination was marred by many teachers and school principals being investigated for taking bribes from students for passing or raising their grades. They were accused of collusion to grade these papers higher or to partly change or entirely replace answers before sending them to the evaluation centre. The higher than expected increase in pass rates were associated with the fact that, a month before the examination, government had passed austerity measures, including a 25% wage cut for public school teachers, which may have led to teachers seeking bribes. Some cases went to court and prison sentences were handed down in 2011 and 2012 (Borcan et al., 2014).

To tackle the issue, a campaign launched in 2011 threatened dismissal and imprisonment for teachers caught taking bribes, and suspension from exam retakes for over a year for students caught giving them. Closed-circuit camera monitoring of examination centres was introduced, although only half of counties had it in time for the 2011 examination. The campaign lowered the probability of passing by 9.5 percentage points, with a stronger effect in monitored centres (Borcan et al., 2017).

Tracing corruption in contracting is often difficult, as it takes many forms and those involved cover their activity carefully. The availability of large databases and use of advanced statistical techniques offer new opportunities to design accountability-enhancing interventions. These capture unjustified restriction of competition, such as single-bidder tenders on competitive markets, very short periods between tender announcements and submission deadlines, and the use of emergency procedures (Fazekas and Tóth, 2014).

Research using such objective corruption proxies reveals that, contrary to popular perception, education and training services were among the sectors most exposed to corruption risk in the European Union in 2009–2014, surpassing even the construction sector (Fazekas and Kocsis, 2017). This result is underpinned by theories of government accountability stating that corruption risk tends to be high when the quality of public service outcomes cannot be easily measured by citizens or be attributed to the efforts of particular government actors (World Bank, 2016f).

An analysis of public procurement data in Paraguay showed that public institutions and private firms with repeated large transactions systematically used an exceptional purchase mechanism that bypassed transparency and competition standards. After an NGO released a report highlighting abuse of this procurement channel, its use decreased rapidly (Auriol et al., 2016).

CONCLUSION

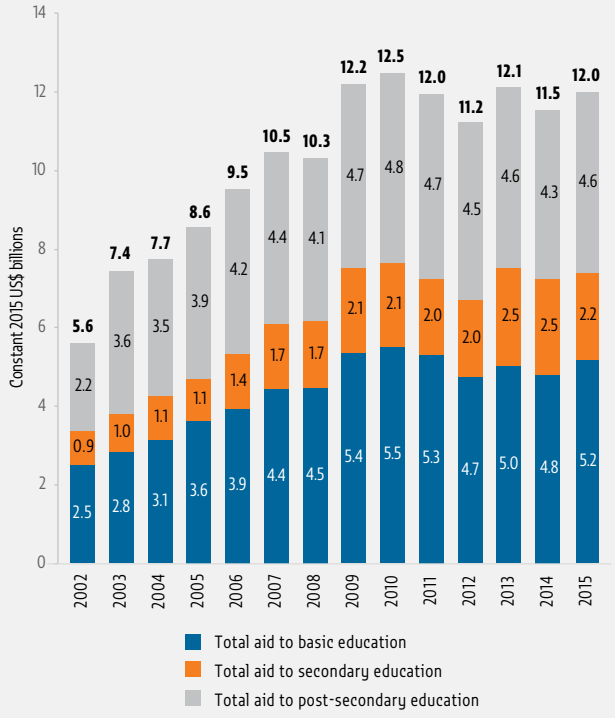
Who is to blame? Transparency International posed this question in its account of a Mexican nursery fire killing 49 children that was caused by fire safety regulatory violations (Transparency International, 2017b). What should be done to prevent the corruption behind violations throughout the education system is an equally relevant question if disastrous consequences are to be avoided.

Anti-corruption approaches emphasize deterrence, detection and investigation. Clear rules and regulations that do not create perverse incentives, codes of ethics for public officials and academic staff, and a commitment to transparency can play important roles in preventing fraud and emphasizing integrity. However, legal norms and structures must be accompanied by stronger management capacity in areas related to information and control systems; adequate monitoring mechanisms, including strong and independent audit institutions; open information systems; and a facilitating environment for media oversight and NGO involvement. Finally, when corruption is uncovered, the role of the police and courts is crucial in following up, enforcing the law, restoring trust in public institutions and protecting those who expose corruption.

AID EXPENDITURE

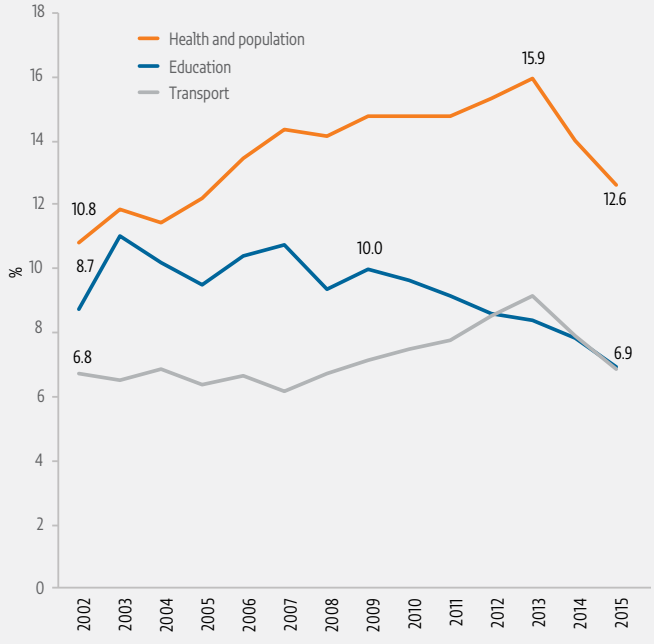
The *2015 Education for All Global Monitoring Report* estimated that low and lower middle income countries faced an annual financing gap of US$39 billion over 2015–2030. In low income countries, this is equivalent to 42% of the total education cost to achieve key SDG 4 targets (UNESCO, 2015b). Aid to education in low and lower middle income countries needs to be six times the 2012 levels, an estimate confirmed by the International Commission on Financing Global Education Opportunity (Education Commission, 2016). Instead, donors continue

FIGURE 20.4:
Aid to education continues to stagnate
Aid to education disbursement, by level of education, 2002–2015



Source: GEM Report team analysis based on OECD CRS (2017).

FIGURE 20.5:
Donors continue to give lower priority to education aid
Education, health and population, and transport share of total global aid, 2002–2015



Source: GEM Report team analysis based on OECD CRS (2017).

to give aid to education lower priority, and aid often does not go to countries most in need.

From 2014 to 2015, aid to education globally grew by US$428 million, or 4%, to US$12 billion (**Figure 20.4**). But it is still 4% below 2010 levels. In contrast, total global official development assistance (ODA) has risen by 24% since 2010. While the European migration and refugee crisis partly explains the ODA increase, there is little to suggest that the stagnation in education aid is linked to that crisis (OECD, 2017d).

> "The education share of total aid has fallen for six years in a row"

Rather, donors are shifting their priorities away from education. The education share of total aid (excluding debt relief) fell six years in a row, from 10% in 2009 to 6.9% in 2015, while the share of aid to the health and population sector increased from 11.4% in 2004 to 15.9% in 2013, followed by a sharp fall in the following two years. The transport share, which was two-thirds that of education in the mid-2000s, has been equal to it or higher since 2012 (**Figure 20.5**). This conclusion would not change even if one were to take into account aid which is education-related but disbursed to other sectors and therefore often overlooked (**Box 20.2**).

Education aid efficiency and targeting are also important. Growing experimentation with results-based aid is one attempt to improve efficiency and realize the principle of mutual accountability (**Policy focus 20.2**).

There are various ways to monitor equity, a concern captured in a thematic indicator for SDG target 4.5. The main approach is to focus on the 32 low income countries, all but 5 of which are in sub-Saharan Africa. After remaining constant for 10 years, total aid to education fell from 21% to 19% and aid to basic education fell from 29% to 23% between 2014 and 2015, representing a 13% decrease in total aid to education and a 16% decrease in aid to basic education in low income countries (**Figure 20.7**).

An alternative approach is to focus on the United Nations least developed countries classification, which changes less frequently. In December 2016, the group consisted of 48 countries, of which only Equatorial Guinea and Vanuatu are expected to exit by 2020. In 2015, least developed countries received 27% of total aid to education and 32% of aid to basic education, down from 29% and 37% in 2014, respectively.

BOX 20.2

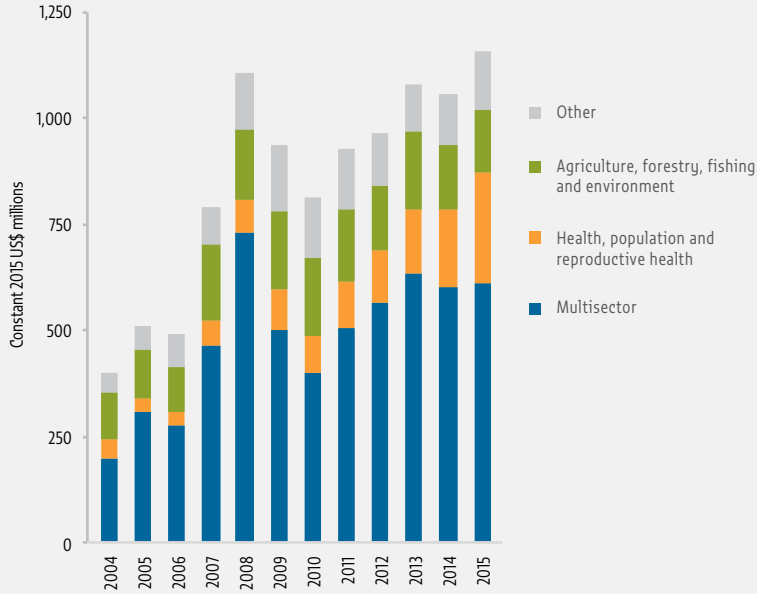
More than US$ 1 billion of aid supports education, training and research in other sectors

Aid to post-secondary education amounted to US$4.6 billion in 2015, including for scholarships and imputed student costs (see **Chapter 17**), which has been stable in recent years. However, education aid is also disbursed to develop professional capacity in sectors as diverse as health, forestry and transport, and has not been featured in previous editions of this report. Such aid, essentially for lifelong learning, has increased faster than aid to education since 2004, reaching US$1.15 billion in 2015. If it were added to total aid to education, it would represent 9% of the total. Half of this going to other sectors is not assigned to any particular sector (**Figure 20.6**).

A considerable amount of aid is also disbursed for research. For example, aid to agricultural research, extension and technology development is an important aspect of efforts to raise productive capacity. In 2015, US$543 million was allocated to agricultural research. It is reasonable to assume part of that funding supports higher education institutions in recipient countries.

The report recognizes the importance of tracking, quantifying, and monitoring education-related aid allocated outside the education sector and will continue doing so in coming years.

FIGURE 20.6:
More than US$1 billion per year supports education and training in other sectors
Aid for education and training in sectors outside education, 2004–2015



Notes: Aid for 'education and training' in sectors other than education includes, for example, 'environmental education/training' (code 41081 in the OECD CRS). The category 'Other' above includes water supply and sanitation, energy, transport and storage, banking and financial services, and trade.
Source: GEM Report team analysis based on OECD CRS (2017).

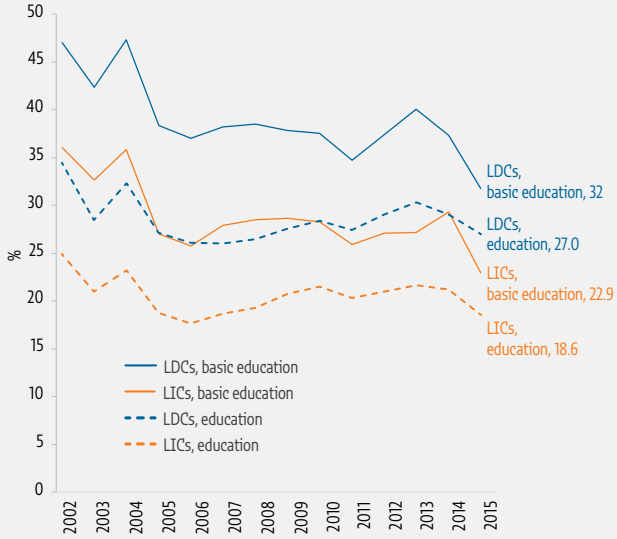
A third approach is to examine the distribution of aid to basic education by region. Sub-Saharan Africa, with over half of the world's out-of-school children, remains the largest recipient of aid to basic education, but its share of the total in 2015 (26%) represents not even half the level received in 2002. Northern Africa and Western Asia, with 9% of out-of-school children, received a disproportionately high share, rising from 5% in 2002 to 22% in 2015, with notable increases for Jordan, Lebanon and Palestine, which are affected by conflict.

> "About 77% of GPE aid has been directed to sub-Saharan Africa"

The proportion of aid to basic education that is not explicitly assigned to specific countries has also increased, from 4% in 2002 to 13% in 2015. To a large extent, this reflects the emergence of the GPE. Its disbursements made up 12% of basic and secondary education ODA in its partner countries in 2015, compared to 6% in 2010, and reached US$446 million in 2015. Its allocations are based on the income level and the education sector needs of the country: As a result, about 77% of GPE aid has been directed to sub-Saharan Africa. In February 2017, the GPE amended its allocation formula to further strengthen the link with needs on the ground.

Income status and region are only proxies of need. A more direct approach to monitoring the targeting of basic education aid allocation would examine whether aid is allocated to countries in proportion to the cost of reaching their out-of-school populations. This is not straightforward, but a plausible, if approximate, option would be using three pieces of information: the country's expenditure per primary school student multiplied by its number of out-of-school children (to provide a hypothetical gap of educating these children) and compared with the volume of aid to basic education disbursed to the country that year.

FIGURE 20.7:
The share of aid to basic education to low income countries fell sharply in 2015
Share of low income countries (LICs) and least developed countries (LDCs), by total aid to education and aid to basic education, 2002–2015



Source: GEM Report team analysis based on OECD CRS (2017).

While not ideal, the comparison has value. For example, the cost of schooling the 49% of children who are out of school in Burkina Faso would be close to US$182 million, but the country received only US$17 million in 2012. By contrast, the cost of schooling the 2% of children who are out of school in Zimbabwe would be US$11 million, yet the country received US$31 million in 2012. There is scope for donors to further rationalize aid allocations to better account for countries' level of need.

HUMANITARIAN AID TO EDUCATION INCREASED BY MORE THAN HALF IN 2016

In the past five years, funding requests for education in emergencies have increased by 21%, as a result of both long-standing and new humanitarian crises. At the end of 2015, there were 65 million forcibly displaced people, the highest number since the Second World War. Disbursements for education in emergencies reached a peak of US$245 million in 2010 and fell by two-thirds in 2011–2012. Funding recovered as of 2013 and increased by a further 55% in 2016 to reach a historic high of US$303 million (**Figure 20.8a**). However, funding for education in emergencies remains below the 4% target: Education in emergencies received 2.7% of a total US$19.7 billion in humanitarian aid (**Figure 20.8b**).

THE AID TO EDUCATION LANDSCAPE IS CHANGING

Current levels of aid to education fall well short of the amount needed to achieve key SDG 4 targets. Faced with a chronic funding gap, the education sector must urgently seize opportunities. As well as existing programmes, some emerging schemes have potential to redress the shortfall.

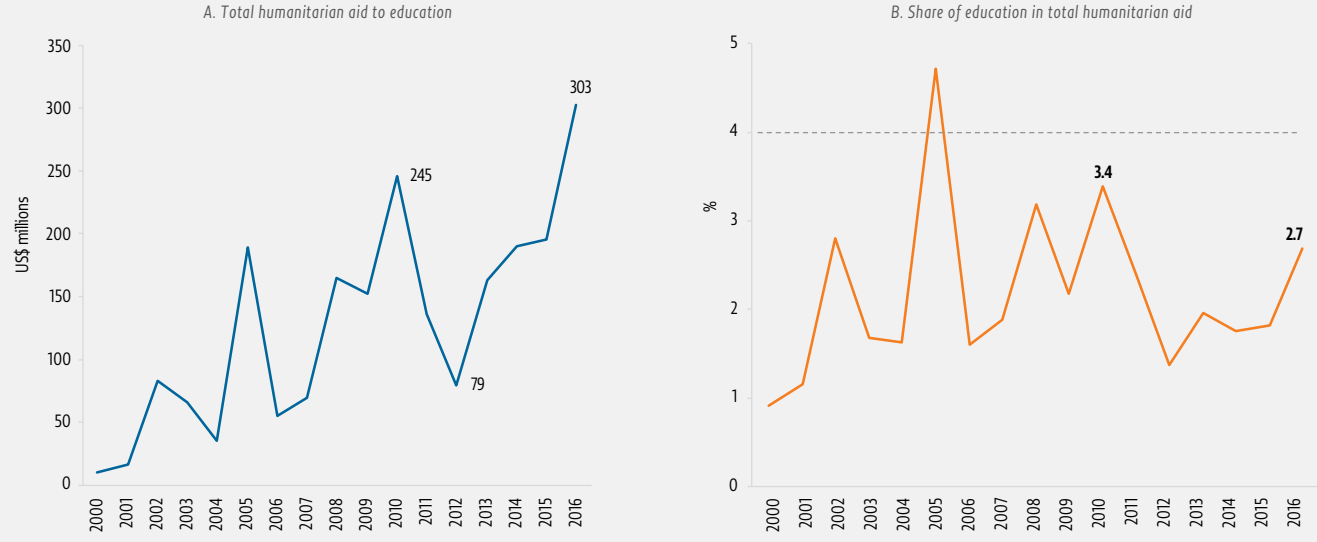
First, the GPE launched a replenishment campaign, to be completed by early 2018. It seeks to raise US$3.1 billion for 2018–2020 to implement its Financing and Funding Framework, adopted in early 2017. The framework is meant to enable the GPE to provide funding to up to 89 countries with the highest education poverty. Combined with other plans to leverage additional funds, the GPE hopes to disburse US$2 billion annually by 2020, four times the current amount (GPE, 2017). The last replenishment in 2014 raised only 60% of the targeted amount.

Second, the International Commission on Financing Global Education Opportunity has proposed establishing an International Finance Facility for Education (IFFEd). It would resemble the Heavily Indebted Poor Countries Initiative, which offered US$100 billion in debt relief to 38 of the world's poorest countries in the early 2000s, and the International Finance Facility for Immunisation initiative, which mobilized more than US$5 billion. IFFEd's chances of being established were boosted by a reference in the G20 Leaders' Declaration at their July 2017 summit in Hamburg.

IFFEd would work at two levels. It would use donor guarantees as quasi-capital to expand the lending capacity of development banks, and it would blend grants with development bank loans (in other words, it would 'buy down' the loans) to make the terms similar to those of concessional loans. By using about US$2 billion in guarantees and about US$2.5 billion in buy-downs, IFFEd could leverage around US$10 billion per year in additional concessional financing by 2020. The focus would be on lower middle income countries, for which the interest on loans from development banks (3.5%) and capital markets (8%) is perceived to be too high (Education Commission, 2017).

Last, the Education Cannot Wait (ECW) fund was established after the World Humanitarian Summit in 2016 to transform the delivery of education in emergencies. It is provisionally hosted by UNICEF, which acts as

FIGURE 20.8:
Humanitarian aid to education reached a historic high in 2016
Selected statistics on consolidated and flash appeal requests and funding for the education sector, 2000–2016



Source: OCHA (2017).

fund manager, provides a support office and houses the secretariat. ECW offers three types of support: an 'acceleration facility' to invest in global public goods, such as awareness, coordination and crisis preparedness, as well as new approaches and tools; a 'first response window' to rapidly deploy funds at the onset of a crisis (already used to fund US$20 million in interventions in Afghanistan, the Central African Republic, Madagascar, Peru, Somalia, Uganda and Ukraine); and a 'multi-year support window' to help bridge the divide between humanitarian and development efforts. It aims to raise US$3.85 billion by 2020. As of April 2017, it had raised US$113 million of its first-year target of US$153 million (ECW, 2017).

> "Donors must ensure that GPE, ECW and the IFFEd complement each other and do not add unnecessary administration costs or lead to duplication of effort"

Donors will need to coordinate to ensure these three initiatives complement each other and do not add unnecessary administration costs or lead to duplication of effort. That said, new financing facilities are not enough. Donors must turn around the continued insufficiency of aid to education with two critical steps: (a) live up to commitments and allocate at least 0.7% of gross national income to aid, with 10% of that going to education, and (b) ensure allocations are proportional to the financing gap countries face so that, in the effort to meet SDG 4, aid to education goes where it is needed most.

POLICY FOCUS 20.2: EXPERIMENTING WITH RESULTS-BASED PAYMENTS FOR EFFECTIVENESS AND ACCOUNTABILITY IN AID

Aid to education is seen to have had a positive impact on increasing access to school in poor countries (Birchler and Michaelowa, 2016). However, aid overall has come under heavy criticism as being of questionable effectiveness in many other areas and because the incentives it offers recipient governments can have a negative impact. For example, governments may be less accountable to citizens when much of service delivery is funded externally (Deaton, 2013).

The aid effectiveness agenda, expressed in the 2005 Paris Declaration, was an attempt to respond to such criticism, including the need to enhance the accountability

> The 2005 Paris Declaration aimed to enhance the accountability of donors and partner countries to citizens and legislatures

of donors and partner countries to citizens and legislatures for 'their development policies, strategies and performance' (OECD, 2008b). 'Managing for results', defined as 'managing and implementing aid in a way that focuses on the desired results and uses information to improve decision-making', was one of five declaration commitments. Partner countries committed to improve links between their strategies and budgets, introduce performance indicators and report on progress. Donors committed to link their programmes and resources to results identified in national development strategies and reporting frameworks.

Including results-based management in the declaration crowned a push for a stronger results orientation in aid that dates to the 1990s. 'Payment by results' describes any programme that rewards delivery of verified outputs, outcomes or impact with a financial or other incentive. The reward recipients may be governments (results-based aid), service providers (results-based financing) or beneficiaries (e.g. conditional cash transfers). Many such approaches have emerged, varying by level of result targeted and type of reward offered.

Rewriting the aid contract was expected to have the following advantages in motivating positive change in donor and recipient behaviour. First, recognizing that aid recipients know better what works to achieve the desired results, the contract increases recipient autonomy and is less prescriptive. Second, the addition of incentives motivates recipients to achieve results and shifts most risk from donors. Third, by making contracts results based and mobilizing improved result measurement, the approach orients partnerships towards achieving their ultimate purpose.

Results-based aid could also strengthen accountability. Donor countries could more clearly demonstrate to citizens what their taxes fund. Recipient governments could commit beyond building schools to ensuring that children complete school and learn. This section reviews the logic of results-based aid and underlying assumptions. As the assumptions are often not borne out in practice, doubts arise about the sustainable impact of results-based approaches on aid relationships and education systems.

AID CONTINGENT ON RESULTS COMES IN VARIOUS FORMS AND GUISES

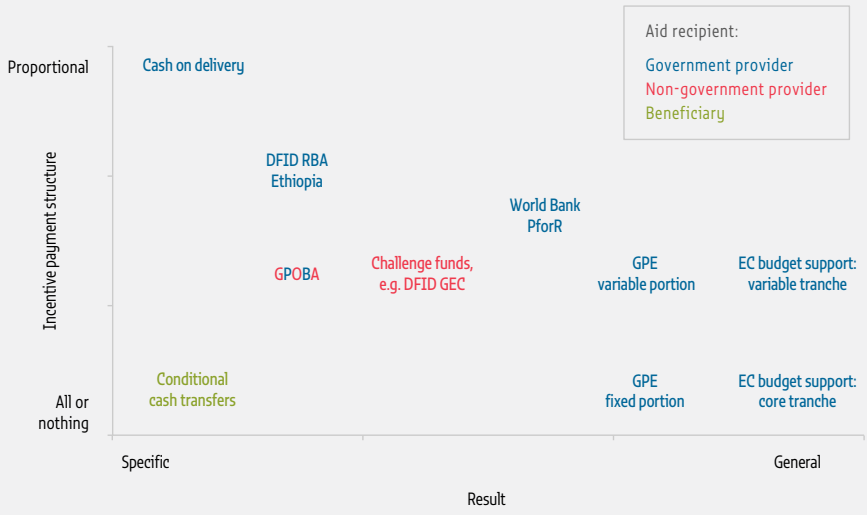
'Payment by results' is a recent buzzword, but it emerged from earlier attempts to attach conditions to aid disbursement. Making aid conditional on the promise of policy reforms was discredited in the 1990s. Governments resented the conditions, did not own the reforms and were reluctant to adopt them. Donors experimented with conditionality based on actual adoption of particular policies. Governments would choose the policy mix; donors would provide rewards when policies were adopted. However, not disbursing aid when targets were not met proved difficult (Adam and Gunning, 2002). Subsequent innovations in linking aid to results have seen changes to the results targeted, the recipients contracted and/or the incentives offered.

Results of development interventions are tiered. Developed capacity and delivered goods and services (outputs, e.g. school construction, teachers trained) have short- to medium-term effects (outcomes, e.g. improved completion or learning achievement), leading to long-term effects (impact, e.g. increased productivity or sustainable behaviours). The further along in this process the result is, the lower the control over its achievement. Increasingly, results-based aid targets these less predictable results. Education aid is a relative latecomer to this approach, already used in sectors such as health, water and forestry. This may be due to the less mechanistic chain from inputs to outcomes, which increases the risk of recipients not achieving the desired results.

Result-based approaches have prompted experiments in partnering with recipients other than governments, such as NGOs providing education services, despite often unfavourable contract terms for small organizations. Aid payments have also been made to individual and community beneficiaries.

Payment by results assumes that financial incentives are key to aligning donor and recipient goals, but how interventions link payment to achievement differs. Some donors disburse only if a result is achieved. Others split payment: one disbursement is made regardless of achievement (or is based on evidence of effort) and one

FIGURE 20.9:
There is a large variety of payment by results models in education aid
Examples of payment by results, by specificity of result, incentive payment structure and aid recipient



Notes: DFID = UK Department for International Development; EC = European Commission; GEC = Girls' Education Challenge; GPE = Global Partnership for Education; GPOBA = World Bank Global Partnership for Output Based Aid (which targets both government and non-government providers); PforR = World Bank Program-for-Results; RBA = results-based aid.
Source: Based on Figure 9 in Pearson et al. (2010).

is conditional on achievement. Some pay an amount proportional to the extent of achievement, based on a cost-per-unit measure of the result.

One typology places results-based aid contracts on a two dimensional scale, shown in **Figure 20.9**, which maps programmes discussed in this section. The x-axis represents the type of expected result, which ranges from specific to general. The y-axis represents the incentive payment structure, which ranges from absolute to proportional payment for achievement. A third dimension is represented by a colour code distinguishing government, non-government and individual recipients.

Some budget support programmes have been attached to results

Certain budget support programmes, which disburse aid directly into government treasury accounts, are examples of results-based aid focused on general results. For example, since 1999, the European Commission has operated a budget support programme promoting aid accountability, among other aims. Countries receive a fixed tranche when they meet general conditions, such as macroeconomic stability and sound public financial management, and variable tranches linked to progress in meeting development result targets. These have typically included education results, such as completion rates. Scores attached to indicators make amounts released proportional to performance measures. On average, programme design allots 40% of total payment to variable tranches. About 71% of variable tranches were released in earlier programmes (European Commission, 2005). New guidelines were issued in 2012 following a review (European Commission, 2012; European Court of Auditors, 2010).

The GPE adopted a similar approach in 2014 as part of its new funding model, allocating a fixed 70% to requirements and a variable 30% to results. As of January 2017, Education Sector Program Implementation Grants including a variable part had been awarded to five countries. Variable disbursement is contingent upon achieving targets in country Education Sector Plans and verified results in equity, learning and system efficiency (GPE, 2015). For example, Malawi must increase the female to male teacher ratio in grades 6 to 8 in the eight most disadvantaged districts by 10%. Congo must reduce out of pocket education fees by 20% for the poorest fifth of households (Martinez, 2016).

> "To receive funding from GPE, Malawi must increase the female to male teacher ratio in grades 6 to 8 in the eight most disadvantaged districts by 10%"

Development banks introduce results-focused modalities

About half of World Bank lending is considered results focused, but the share varies among its three lending

> About half of World Bank lending is considered results focused

instruments. Development Policy Financing, the budget support modality, is contingent upon policy adoption and has the weakest result focus. Investment Project Financing, the traditional modality, has a stronger result focus, which increasingly includes disbursement-linked indicators (DLIs) on education outputs. For example, as part of the sector-wide approach in the Third Primary Education Development Program in Bangladesh, half the disbursement was subject to an annual review of output-level DLIs ranging from percentage of primary schools providing pre-primary education to percentage of sub-districts with education plans. As of November 2016, 43 of the 54 DLI targets scheduled for the first five years had been met (World Bank, 2016a).

The third instrument, Program-for-Results (PforR), is newer (adopted in 2012) and most reflects this focus, linking disbursement to defined results. It is slated to expand to 15% of the World Bank's total lending portfolio. Education appears in programmes supporting local government capacity to deliver basic services, e.g. Morocco National Initiative for Human Development and Ethiopia Protection of Basic Services Project, though few cases focus explicitly on education.

The United Republic of Tanzania's Big Results Now in Education programme, begun in 2014, is one that does. The loan includes DLIs on processes, outputs and outcomes. For example, reaching acceptable pupil/teacher ratios will release 17% of the funds. Meeting a reading speed target, according to a national sample-based assessment, will release 13%, proportional to rate of improvement. The baseline was 18 words per minute and the target is 22, or an annual average improvement of one word per minute (World Bank, 2014d).

Other PforR projects are being developed. India's Enhancing Teacher Effectiveness in Bihar Operation aims to develop training institutions and management systems. Third parties will verify results including DLIs on teacher attendance rates (expected to increase by five percentage points in five years to 86%) and teacher performance scores in reading and mathematics (World Bank, 2015). In Lebanon, Reaching All Children with Education is a multidonor project targeting Syrian refugees. The World Bank component attaches US$95 million, or 42% of the total, to a DLI related to pre-primary through upper secondary enrolment and retention (World Bank, 2016d).

The World Bank committed at the World Education Forum in 2015 to doubling results-based education lending to US$5 billion between 2015 and 2020. Other multilateral banks having introduced similar DLI-based programmes include the Asian Development Bank. In 2013, it introduced a Results-Based Lending modality in which 46% of funding is dedicated to education projects (ADB, 2016). However, these mainly target institutional results. For example, alongside examination pass rates, DLIs for Sri Lanka's Education Sector Development Program are linked to introducing particular secondary school streams and strengthening institutional capacity, which may be difficult to verify independently (ADB, 2013).

Contracting services through output-based aid is a recent innovation in education

Output-based aid involves contracts with mostly non-government education service providers. Donors aim to cover per-student service delivery costs but may also provide a variable incentive payment. Payments may release the full amount upon achievement of results, be proportional on units of improvement, or combine the two (R4D, 2015).

The Global Partnership on Output-Based Aid was established in 2003 to develop such approaches across sectors. In education, the Viet Nam Upper Secondary Education Enhancement Project aimed to increase poor students' access to upper secondary education (grades 10 to 12) in private and professional secondary schools in 11 provinces. It provided output-based subsidies to schools, reimbursing tuition for 7,500 students in 2010–2013. Upper secondary schools received US$90 per student per year, which covered 55% of their school-related costs (mainly tuition); professional upper secondary schools received US$160 per student per year, which covered 84% of their costs. The school and a foundation, which doubled as the grant recipient and implementing partner, covered the rest (GPOBA, 2016).

Challenge funds make organizations compete for aid (Pompa, 2013). The largest in recent years is the UK DFID Girls' Education Challenge, launched in 2012. It has funded 37 projects, 15 of which have a payment by results component based on achieving outcomes, which represents on average 10% of total disbursement. The key outcome for most relates to learning. The rationale for introducing incentives was to strengthen accountability among NGO and private providers (Coffey, 2016; ICAI, 2016).

DFID carried out results-based pilot programmes in Ethiopia and Rwanda. In Ethiopia, the target was to increase the number students sitting and passing the grade 10 General Secondary Education Certificate Examination, especially in the four poorest regions. For every additional boy sitting the examination over the previous year in those regions, the government received £75; the incentive per girl was £100. The same sums followed every additional pass. Slightly less was offered in the other regions. The total reward was up to £10 million per year for three years (Cambridge Education, 2015). The design in Rwanda was similar.

These two projects come the closest to Cash on Delivery aid, championed by the Center for Global Development, a think tank. The approach links cash payment to a single development outcome. Recipients have discretion over the means of achievement (Birdsall and Savedoff, 2010). An offshoot idea is the Outcome Fund, which envisions distributing US$1 billion among countries committed to introducing or maintaining a valid learning assessment (Savedoff, 2016).

EVALUATIONS ARE FEW AND DIFFICULT TO DESIGN

Because payment by results in education aid is a recent phenomenon and the number of completed interventions is small, it is not surprising there are few evaluations.

Process evaluations of new results-based lending tools are beginning to emerge. The World Bank Independent Evaluation Group assessed PforR and noted that, contrary to expectations, most targeted results were achieved at the institution, not outcome, level (IEG, 2016). Similarly, a mid-term review of the Asian Development Bank instrument recommended more DLIs linked to institutional rather than outcome results (ADB, 2016).

An evaluation of the Girls' Education Challenge process appreciated the results orientation of a diverse set of projects but found that most providers faced monitoring and evaluation capacity challenges and that a push towards reaching more girls sooner diluted the aim of reaching the most marginalized (Coffey, 2016). The Independent Commission for Aid Impact's evaluation praised the fund's innovative features but questioned whether interventions could be sustainably linked to public systems (ICAI, 2016).

Impact evaluations have design issues they need to address to be informative. First, many evaluations, which have taken place mainly in the health sector, could not attribute observed changes to the payment by results contract. Evaluations need to focus more on identifying the 'mechanisms and sets of circumstances under which' payment by results approaches 'can most likely result in behavioural change leading to long-term impact' (Perrin, 2013).

Most interventions target a broad set of results, making it complicated to draw evaluation conclusions. Indonesia's National Community Empowerment Programme, Generasi, offered communities block grants to improve health and education outcomes, such as school attendance. Communities used the funds to hire teachers, open branch schools or subsidize transport, among other options. A competition component allocated part of the grant to the communities with the best performance. Enrolment rates increased but there was no evidence that this was due to the incentive (Olken et al., 2014).

Second, payment by results is rarely used in isolation, so the incentive's additional effect is hard to discern. This is especially so when a payment by results contract is a small addition to a larger aid programme with the same targets. The DFID pilot project in Rwanda offered up to £9 million as part of the UK government's overall £75 million contribution, which itself was part of a sector-wide approach by multiple donors. Evaluation showed no consistent results attributable to the pilot. Observed above-trend increases were linked to earlier government decisions to extend basic education to 9 and 12 years (Upper Quartile, 2015).

In DFID's Ethiopia pilot, the financial rewards were not competitive enough against other donor-funded projects. None of the estimated impact on the change

> "An evaluation of the Girls' Education Challenge found that a push towards reaching more girls sooner diluted the aim of reaching the most marginalized"

in numbers of boys or girls sitting the examination was statistically significant or reasonably attributable to the pilot. Regional education bureaus and schools found the financial rewards of the pilot to be comparatively small, and thus inadequate for substantial change (Cambridge Education, 2015).

Third, the duration of intervention, the speed with which data can be made available and the lag before results materialize complicate the evaluation process.

Investments are being made to address some of these concerns and improve the evidence base. The Girls' Education Challenge has introduced solid monitoring and evaluation frameworks, its fund manager has set consistent evaluation standards, and providers are obliged to dedicate more than average resources to commission an external evaluation (around 15% of their budgets and exceeding 20% for some smaller projects). However, an evaluation of its payment by results component highlighted weaknesses in design and communication. It also suggested that financial incentives were not necessary to maintain focus on results (Holden and Patch, 2017).

Results in Education for All Children, a World Bank-managed multidonor trust fund supported by Germany, Norway and the United States, aims to help prepare systems to roll out results-based approaches and to strengthen the evidence base. Some of the 19 projects that received its Knowledge, Learning and Innovation grants in 2015 explored governments' capacity to administer results-based contracts. A grant helped the National Institute of Open Schooling in India, which manages second-chance education opportunities, to introduce performance-based contracts for service providers (World Bank, 2016c). In Jakarta, Indonesia, a project supported school grants linked to performance indicators related to national education standards. While such projects are expected to enrich the evidence base, they are mostly small and conclusions about whether they can be scaled up should be drawn with caution.

MANY ASSUMPTIONS BEHIND PAYMENT BY RESULTS MAY NOT HOLD

While evaluation evidence remains thin, some recent contributions draw attention to gaps in the assumptions underpinning results-based approaches to aid contracting.

Shifting risk to providers reduces value for money

It is reasonable to assume that actors in education are primarily motivated by the intrinsic incentive of providing good education. Superimposing external incentives may undermine intrinsic motivation (Gneezy et al., 2011). If minimum performance is set low, actors with high intrinsic motivation may reduce their efforts, perceiving such controls as questioning their commitment. Moreover, being deprived of resources for not achieving the result despite appropriate effort may be demoralizing (Clist and Dercon, 2014).

Even if a results-based aid contract does provide incentive for improved progress towards an outcome, its design influences the kind of providers it attracts. The uncertainty of contingent disbursement may deter those more averse to risk and loss. The Girls' Education Challenge found that smaller NGOs were less likely to bid for contracts (Bond, 2014; Holden and Patch, 2017).

Providers that do bid are more likely to overestimate their chance of achieving the results and/or underestimate costs. The financial reward would have to increase to overcome risk aversion (Clist, 2016), and bidders may have better information about how to deliver the outcome with less effort and cost than the results-based allotment assumed. In both cases, value for money, a key rationale of paying for results, is reduced.

Ultimately, shifting much of the risk to providers can cancel out the promise of innovation that payment by results approaches hold. Development aid's effectiveness is likely to increase when providers innovate to achieve education results. However, they may be reluctant to risk innovation in delivery if payment depends on certain success.

> “Shifting risk to education providers can cancel out the promise of innovation that payment by results approaches hold”

Identifying good indicators of results is challenging

Estimating and achieving results in education are not straightforward, not only because effort may not be a good predictor of outcomes but also because the measurement may be uncertain. There are diverse ways to look at the latter challenge, as learning outcome indicators illustrate.

First, indicators must be measurable. There must be, for example, an accepted definition of the desired learning outcome and corresponding tools to measure it. Donors may be able to use national statistics, but parallel monitoring and evaluation systems are generally put in place. This increases costs substantially, often without building a country's monitoring capacity. This runs contrary to the goals of institutionalizing measurement systems, a key objective of payment by results proponents (World Bank, 2017a).

Second, indicators must be verifiable at reasonable cost. Precise, independent third-party verification is important, as measurements trigger contract payments that cannot be legally contested. In practice, many outcome indicators are measured by sample survey, introducing error. This is especially an issue because learning outcome results tend to change incrementally, making it even more difficult to assess progress with any certainty.

Third, indicators play simultaneous but not necessarily compatible roles as criteria for disbursement decisions and measures of long-term development outcomes that donors desire and support (Holzapfel and Janus, 2015). For example, learning outcome measures that are too narrow relative to overall system objectives may lead to distortions in service provision, e.g. when indicators that ignore equity lead providers to focus on the easiest to reach students. Such unintended consequences detract from the potential positive incentive effects of payment by results.

Moving towards one principle of aid effectiveness may undermine others

The approaches under discussion aim to fulfil the Paris Declaration principle of managing for results. A closer look suggests this may be inconsistent with other declaration objectives.

Results-based aid may not fulfil the principle of country ownership. Donors say countries are increasingly enthusiastic about adopting results-based approaches, but the concept originates with donors. Recipient countries are not using results-based approaches to manage domestic resource allocation, aside from block grants to local governments, which themselves result from donor programmes (UNCDF, 2010). Non-aid budget allocation in recipient countries rarely displays such flexibility and willingness to introduce risk (Paul, 2015).

> “Results-based aid may not fulfil the principle of country ownership”

This apparent lack of ownership also explains difficulties in communicating how payment by results works. A review of the PforR project on teacher education in Viet Nam showed that the national team struggled to understand the mechanism, as well as the fact that 'although country systems are used, the Bank will impose certain diligence requirements regardless' (World Bank, 2016b). The DFID Rwanda project benefited from a strong relationship between central and local authorities, but the project was not known or understood at the local level (Holzapfel and Janus, 2015).

The principle of alignment with country systems is inconsistently applied. Donors often favour channelling resources through non-government providers, supporting private management of public schools, voucher programmes and school construction (R4D, 2015). Yet investment to strengthen public institutions' capacity must not be neglected. In addition, there is evidence, e.g. from the Girls' Education Challenge, that most projects have no plan for scaling up or making their approach integral and sustainable within the public education system (ICAI, 2016).

Basing disbursements on uncertain outcomes also fails to resolve the unpredictability of aid flows, a long-standing criticism of current donor practices. The approach seems to dismiss outright the idea of upfront and predictable funding to alleviate financing gaps in development.

CONCLUSION

Payment by results has been praised for helping increase awareness of the need to pay closer attention to the results ultimately sought. It can also help accelerate a move towards a culture of monitoring and evaluating results. To the extent that these results are part of the national strategy, the approach can propel a virtuous cycle of alignment.

> Ignoring the share families spend out of pocket misses a big part of the financial picture

Care must be taken in addressing dilemmas. Are results-based contracts necessary to instil an overall result orientation in government, or can that be better achieved by building the capacity of national statistical systems? Do defined but narrow outcomes risk diverting energy to short-term results that are potentially incompatible with, or come at the expense of, long-term development? Payment by results may supplant traditional aid models only when it meets fairly restrictive conditions. The approach may work best where it is needed least, i.e. in education systems with a clear sense of purpose and objectives aligned with donors that can afford to take risks.

Payment by results may be just another attempt to impose conditionality on aid, and one that does not completely address issues that have obstructed aid conditionality in the past. A key conclusion of the a high-profile review of aid conditionality in the early 2000s thus remains relevant: '[Donors] should approach the design of conditionality with a degree of humility, recognizing that the problems faced by developing countries are complex in nature and often do not lend themselves to a single solution' (Koeberle et al., 2005).

With respect to strengthening accountability, payment by results seems to pressure non-government providers to perform. However, there is little indication the dynamics of accountability are changing for governments whose need for aid to build robust institutions remains as strong as ever, and there is a question of the accountability of donors keen to shift risk onto the aid recipients least prepared to bear it.

HOUSEHOLD EXPENDITURE

Estimating household education expenditure is essential for planning and for monitoring whether policies are effective and equitable. Yet, its key role in ensuring no one is left behind is underappreciated. The cost of education is a major barrier to school participation for households in low and middle income countries. Ignoring the share families spend out of pocket misses a big part of the financial picture. The new SDG 4 monitoring framework indicator to capture expenditure by source of funding is meant precisely to draw planners' attention to this potential threat to equity in education.

Neglect of this aspect is not due to lack of data. As reported in the 2016 GEM Report, practically every country has tools to measure household spending on education via, for example, household income and expenditure surveys conducted by national statistics offices to capture essential macroeconomic indicators, such as inflation rate.

The real challenge is twofold. First, many education ministries struggle to look at education challenges in an integrated way. Their planning activities exclusively concern their budgets, and they do not look at constraints faced by the populations served. For example, education authorities in a number of countries have tolerated the expansion of shadow education systems, or private supplementary tutoring, despite its impact on equity. In practice, many education ministries do not reach out to their statistics offices to put the two pieces together, namely public and private spending.

Second, despite relatively abundant data, household expenditure surveys are not standardized. Each has its own definition of education expenditure and includes different questionnaire items. Estimates may therefore under- or over-represent the cost of education to households in some cases.

However, such a standard exists. UNESCO, the OECD and Eurostat (collectively, UOE) have defined two broad categories of household education expenditure:

- Household payments made to education institutions, which comprise tuition fees; other fees for education services (e.g. registration, laboratory, examination); fees paid for ancillary services (e.g. boarding, meals, health services); and any school fund or parent contribution fund paid to the school, including

through parent–teacher associations or school-management committees.

- Household payments for education goods and services purchased outside education institutions, covering both payments required for school attendance (e.g. uniforms and required clothing, textbooks, other required purchases) and those not required for attendance (private lessons, transport costs, canteen fees, additional books, home computer equipment and services).

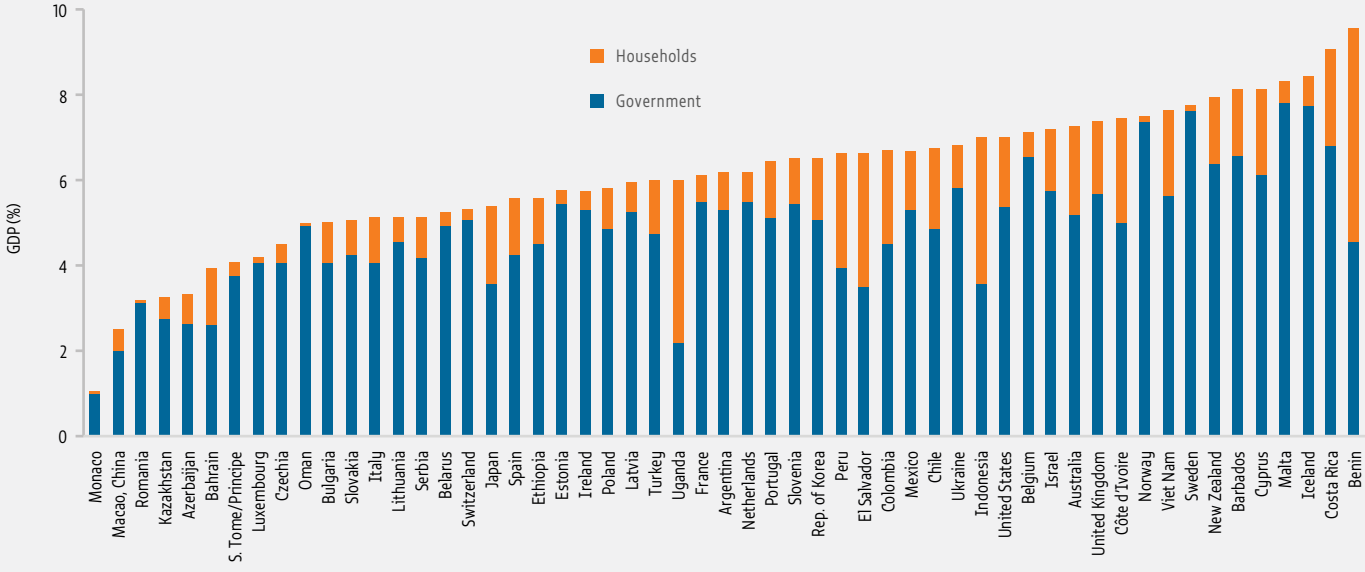
This standard is the basis of the national education accounts, which aims to provide a consistent framework for reporting all education-related expenditure in a country (**Policy focus 20.3**). However, the standard has not yet sufficiently influenced the design of relevant sections of household questionnaires.

The UIS analysed the questionnaires of 99 household surveys and set three criteria to evaluate the quality of the information: the number of UOE expenditure items listed; the date of the survey; and the level of information gathered (i.e. ability to distinguish expenditure for each household member by education level and by type of education institution). This last criterion is important, as household income and expenditure surveys typically include only one or two questions on education spending, eliciting little granular information. No survey fully met all three criteria, and only 26 met them to a satisfactory degree, i.e. covering the essential expenditure items, being relatively recent and containing data on level of education attended (UIS, 2017a).

In 2017, the UIS developed a protocol to estimate household education expenditure in as comparable a manner as possible. While such data have been published routinely for OECD countries, which still provide the vast majority of recent information, this is the first time comparable data have been published for low and middle income countries. Priority has been given to countries for which survey microdata are publicly accessible, but more data will be added once agreements are reached with owners of the data.

A key finding is that the inclusion of household expenditure can change the way countries' efforts on education are understood. For example, El Salvador and Indonesia spent two percentage points of GDP less on education than did France and the Netherlands, but they spent more overall because households spent more than three percentage points of GDP on education (**Figure 20.10**). Likewise, among 55 countries with data

FIGURE 20.10:
Omitting household contributions misses a large part of total education expenditure
Education expenditure as percentage of GDP, by source of funds, selected countries, 2013–2015



Source: UIS database.

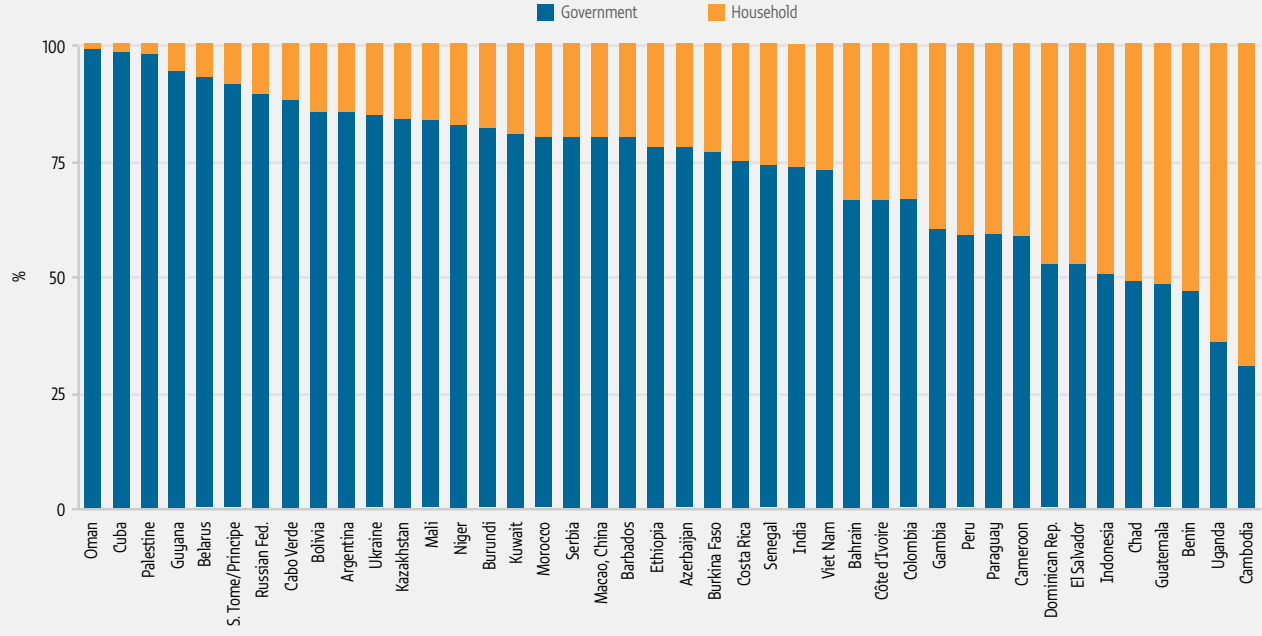
> Among countries with data since 2005, the share borne by households increased from 18% in high income countries to 33% in low income countries

in 2013–2015, Uganda had the lowest government expenditure, excluding the Special Administrative Region of Macao, China and Monaco. Yet, once household contributions are taken into account, Uganda's national expenditure was similar to that of Argentina or Turkey.

The findings also confirm the 2015 Education for All Global Monitoring Report contention that the share of education expenditure borne by households increases as country income level decreases. Although the number of countries is too small to allow for general conclusions, among countries with data since 2005, the share borne by households increased from 18% in high income countries to 25% and 33% in middle income and low income countries, respectively. The share of households in total education expenditure was at least one-third in one-third of low and middle income countries. In Cambodia, the share was 69% in 2011 (**Figure 20.11**).

Much work remains to ensure household budget survey questionnaires, as well as analyses by both institutions and researchers, use the UOE standard. Alternatively, wildly diverging estimates may lead to confusion. In an analysis of four Arab countries, data from the 2010/11 Harmonized Household Income and Expenditure Survey in Palestine suggested that 5.5% of household expenditure was allocated to education, driven by tertiary education. This would be equivalent to a much larger share than the

FIGURE 20.11:
Households contribute at least one-third of total education costs in one-third of countries
Distribution of total education expenditure, by source of funds, selected countries, 2005–2015



Note: The figure shows all countries with data for the period except EU and OECD countries.
Source: UIS database.

negligible 0.2% of GDP in the UIS database (Rizk and Abou-Ali, 2016). And a review of 12 Latin American and Caribbean countries put the contribution of households as a share of GDP at 3.6% in Costa Rica in 2013 and 1.9% in Mexico in 2014, while the respective figures in the UIS database are 2.2 % and 1.4% (Acerenza and Gandelman, 2017). Nevertheless, an important first step was made with the release of initial estimates on household expenditure. Now it is the turn of governments to take notice.

POLICY FOCUS 20.3: DRAWING LESSONS FROM THE HEALTH SECTOR TO INTRODUCE NATIONAL EDUCATION ACCOUNTS

The recent introduction of a national education account framework is an important step towards achieving a comprehensive, internally consistent picture of education expenditure. The UNESCO International Institute for Educational Planning and UIS, supported by the GPE, outlined an approach based on the System of National Accounts (which, broadly speaking, calculates GDP) and informed by decades of experience in the health sector. The framework defines and tracks financial flows from sources (governments, donors and households) to beneficiaries for multiple uses (e.g. recurrent and capital). It is potentially both a valuable planning tool for governments and an accountability tool allowing civil society to monitor bottlenecks and sources of inequality.

However, a framework is not sufficient to kick-start a systematic process of countries adopting the tool. This section recounts the experience of efforts to disseminate national health accounts and draws lessons from it for rolling out the education equivalent.

Proposing a way to account for all expenditure...

Attempts to develop health accounting can be traced back to the 1960s, with the publication of the first report that compiled comparable information on health expenditure and proposed the development of a standardized accounting framework for health planning (Abel-Smith, 1967). Not until 2000, however, with the publication of the System of Health Accounts by Eurostat, the OECD and the World Health Organization (WHO), was an accounting framework of health care expenditure agreed upon for the purpose of international comparison (OECD, 2000). Common concepts, definitions, classifications and accounting rules were applied to countries with different health systems.

The framework consists of three core dimensions: functions of care, service provider industries and sources of financing. This categorization enables analysis of how much is spent by sector (public and private), funder (social security, public budget and households), level (primary, secondary and tertiary care; pharmaceuticals; long-term care; and prevention), programme, services and beneficiary (by individual characteristics).

In 2005, experts from the three organizations formed the International Health Accounts Team to manage international data collection through the Joint OECD, Eurostat and WHO Health Accounts Questionnaire (Yazbeck, 2016). The team also involves other partners, including DFID, the UN Statistical Division, USAID and the World Bank, which help fund and build capacity to establish national health account teams within institutions in low and middle income countries. Institutionalization means governments mandate the production and use of a minimum set of globally agreed health expenditure data using a standard health accounting framework (World Bank, 2010). The fact that the work is government led ensures the financial, human and infrastructure capacity to produce and use the data routinely.

Following numerous consultations with countries, a revised System of Health Accounts manual was published in 2011 to clarify some concepts and respond to evolving organizational and financing challenges of health systems (e.g. long-term care issues related to chronic conditions and ageing, revenue of health financing programmes, transparent reflection of foreign assistance) (Morgan and Murakami, 2014; OECD, 2011).

> “By 2014, 112 countries had produced health accounts based on the 2011 System of Health Accounts framework and 21 were developing accounts”

By 2014, 112 countries had produced health accounts based on the 2011 System of Health Accounts framework and 21 were developing accounts (WHO, 2017a). Some countries have institutionalized the process. Afghanistan produced data for 2009, 2012 and 2014 (Hashimi et al., 2014; WHO, 2017a). The Democratic Republic of the Congo produced detailed health expenditure data for 2010–2013 by source of funds and by disease, focusing on reproductive health, HIV/AIDS and child subaccounts, reflecting the areas of disease burden

> The introduction of robust education expenditure accounting needs to be accompanied by sufficient resources to communicate its usefulness to policy-makers

in the country and the need to report to donors financing health interventions (WHO, 2017b).

Indeed, various organizations have been promoting the use of national health accounts, partly in an effort to improve mutual accountability and transparency. Since 2016, the European Union has legislated the submission of health expenditure data according to the System of Health Accounts framework among its member states (European Commission, 2015). Even if not obligatory, all OECD countries, including Chile, Mexico and Turkey, submit data annually. The Global Fund to Fight AIDS, Tuberculosis and Malaria introduced a Sustainability, Transition and Co-financing Policy that strongly encouraged applicant countries to institutionalize health account processes (Global Fund, 2016, 2017).

...is only the first step in ensuring that information is used effectively

Nearly two decades of experience with national health accounts can teach the education sector many valuable lessons. First and foremost, the framework must serve the needs of countries, not just those of donors and international comparative studies. In principle, a strong framework can generate an accurate picture of total financing flows within a sector to promote sustainable budget planning, strengthen accountability and improve equity among population groups, regions or programme areas. However, the System of Health Accounts has been criticized as a donor-driven approach, putting a wedge between donors' priorities and those of national policy-makers with respect to what information the latter can and want to use (Yazbeck, 2016).

In fact, some countries use other types of health accounts. While all methodologies can be linked back to the System of National Accounts, the alternatives are simpler. Satellite Health Accounts are a direct extension of national accounts, based on costs associated with production, instead of consumption as in the System of Health Accounts. Historically, countries in Latin America and the Caribbean have adopted this approach. WHO has led an effort for countries to produce Health Information Subaccounts on child and maternal health, HIV/AIDS and malaria within the national health account framework to accelerate availability of expenditure data on areas that most affect low and middle income countries.

This is not to suggest that the System of Health Accounts framework is inadequate per se. Rather, collection of expenditure data requires a good mechanism to avoid double-counting, omitting or misallocating costs. Due to weak capacity and insufficient in-country support, production of the accounts has concentrated on certain subsectors and sometimes relied on international consultants. This means the data may be partial and the process not country owned. Because of gaps, some data in the Global Health Expenditure Database are based on estimates using software developed by WHO rather than on annual country submissions (WHO, 2017c).

The second lesson is that, assuming the framework does serve, in principle, the needs of policy-makers, institutionalizing such accounting tools requires strong buy-in from key policy-makers. Yet insufficient understanding of its benefits can easily result in a lack of commitment and ownership, inadequate investment of financial and human resources and, ultimately, inability to build institutional knowledge (Van Der Gaag and Abetti, 2011). South Africa's Department of Health had detailed national health accounts in the 1990s but halted their production. The National Treasury and Department of Health are now working together to resume the effort.

The introduction of a robust expenditure accounting exercise needs to be accompanied by sufficient resources to communicate its usefulness to policy-makers. In Mali, national health account results were integrated into a sector plan in 2008 and a policy that aimed to shift health financing from the central to local levels (Maeda et al., 2012). In Turkey, the discovery of inequity in public spending allocation among health insurance programmes facilitated the 2003 introduction of the Health Transformation Programme, which harmonized various benefit programmes and reduced

> In Nepal and Uganda, households carried a disproportionately large share of total education expenditure

out-of-pocket spending among the poor (Pearson et al., 2016). In the United Republic of Tanzania, national health account data showed that a large percentage of aid bypassed government, with donors implementing programmes directly. This evidence was used to urge donors to transfer a larger share of aid through government systems.

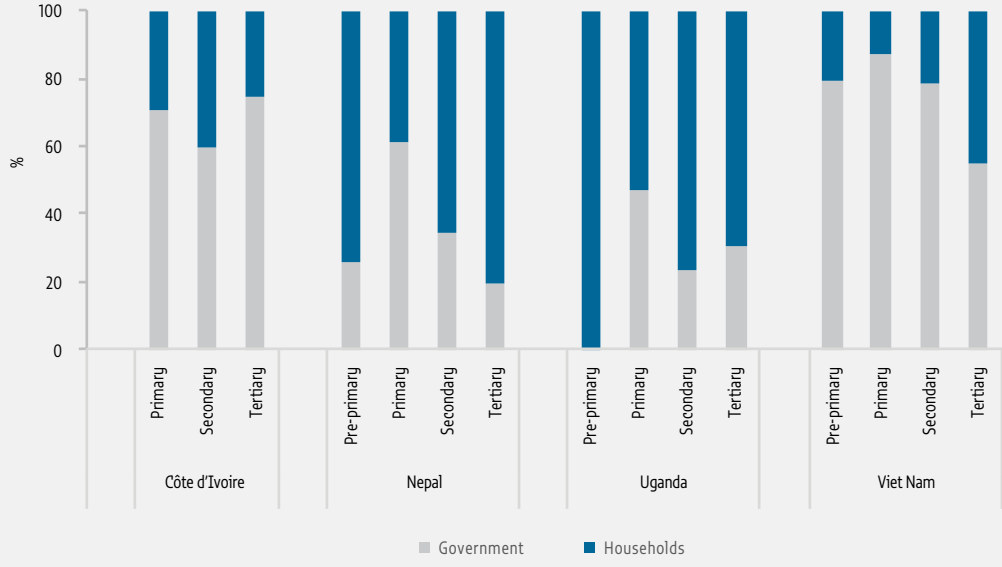
Grabbing the momentum in education

Regardless of the challenges, there is undoubtedly a lot to gain from consistent implementation of an overall expenditure accounting framework in education. The accounting rules are in line with the System of National Accounts, allowing consistency across sectors, and the methodology closely follows earlier UOE efforts to calculate education expenditure. To enable international comparability, the International Standard Classification of Education is applied.

The pilot study demonstrated great potential. A comparison of four countries – Côte d'Ivoire, Nepal, Uganda and Viet Nam – where full or partial national education accounts were estimated showed that households in the two poorest countries carried a disproportionately large share of total education expenditure. Households in Uganda paid 100% of costs for pre-primary education, 76% for secondary and 70% for tertiary. In Nepal, the share of households with students in tertiary education was 80%, and households paid almost 40% of the cost of primary education. By contrast, in Viet Nam, households paid 13% of the total cost of primary education, which is much closer to levels observed in high income countries (**Figure 20.12**).

The pilot study ended in 2016. The next step is to form an international task force on national education accounts

FIGURE 20.12:
In low income countries, such as Nepal and Uganda, households bear the largest share of total education expenditure
Share of education expenditure per student by education level and funding source, selected countries, 2013–2015



Note: In Nepal and Uganda, the contribution of aid to total expenditure is excluded.
Source: UIS (2016).

consisting of entities active in education expenditure data collection. Just as Eurostat, the OECD and WHO developed the standards for health accounting, Eurostat, the OECD and UIS could lead efforts to finalize a System of Education Accounts manual that expands on the final output of the pilot study. Such an international education accounting team should benefit from long-term financial and technical support by bilateral and multilateral agencies to ensure continuity and prevent the stop-gap effects of a project approach. The international task force should further review a set of accounting rules that will ensure a high level of compatibility of total education spending, including private spending.

Establishing a platform that allows countries to share knowledge and challenges is key for the sustainability of national education accounts. Such platforms exist among OECD countries: At an annual meeting, health account experts from OECD countries, as well as Eurostat, OECD and WHO representatives, discuss issues in data production and use. There is also an annual OECD/WHO Asia-Pacific meeting of health account experts.

Finally, more could be done to encourage cross-fertilization with national teams already working on health accounts. Because core techniques do not vary greatly between the two sectors, the national health account teams' experience could be used to develop education accounts at a relatively reduced cost, as a recent example from Kazakhstan shows (**Box 20.3**).

BOX 20.3

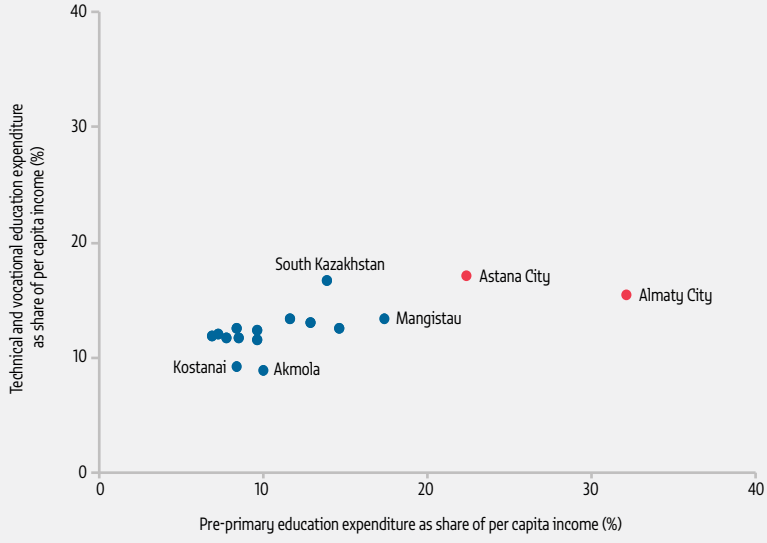
National education accounts help estimate regional disparities in Kazakhstan

Kazakhstan has witnessed rapid economic growth and poverty reduction in recent years. A project sponsored by the Soros Foundation took expertise from years of using national health accounts and transferred it to education.

Total education spending fell three years in a row, from 4.7% of GDP in 2012 to 3.9% in 2015. Government accounted for 83.5% of total expenditure; of this, it allocated 14% to capital spending, twice the OECD average. The share of private expenditure fell from a high of 19% in 2011 to 16.5% in 2015 but remained above the OECD average of 12%. Primary and secondary education are free in Kazakhstan, but households spend a lot out of pocket on other levels of education. For example, households cover 25% of total spending on pre-primary education.

The availability of regional education accounts, a special feature of the project, highlighted areas of inequity, especially between rural areas and the two main urban centres. For example, in the city of Almaty, households spent 32% of per capita income on pre-primary education and 15% on vocational education, compared to about 10% for other regions (**Figure 20.13**).

FIGURE 20.13:
In Kazakhstan, urban households spend a large share of their income on pre-primary and vocational education
Pre-primary and technical and vocational education expenditure as a share of per capita income, by region, 2015



Note: The red dots represent urban regions.
Source: Nurgozhayev (2016).

CONCLUSION

The development of a methodology of national education accounts provides a window of opportunity to address critical issues of efficiency and equity. This is only the beginning of a coordinated effort to disseminate and agree upon a methodology for further development and implementation among countries. Stakeholders need to study and reflect on the history and challenges of rolling out national health accounts, so that national education accounts become a tool to support policy.

Pupils from the Teach for Nigeria programme outside their school building.

CREDIT: GEM Report/Teach for Nigeria

CHAPTER

21

Conclusions and recommendations

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According to the Education 2030 Framework for Action, the Global Education Monitoring Report has a two-part mandate. First, to be 'the mechanism for monitoring and reporting on SDG 4 and on education in the other SDGs'. The first edition of the report in 2016 set out to map the challenges of monitoring the new agenda and the inter-relationships between education and the other SDGs.

Second, to 'report on the implementation of national and international strategies to help hold all relevant partners to account for their commitments as part of the overall SDG follow-up and review'. This second edition of the report set out, accordingly, to map the very concept of accountability in education. Instead of taking the concept for granted, the report has questioned its premises, potential and limits to understand whether accountability can work and, if so, under what circumstances.

Accountability was defined as a process, aimed at helping actors meet responsibilities and reach goals, whereby individuals or institutions are obliged, on the basis of a legal, political, social or moral justification, to provide an account of how they met clearly defined responsibilities.

While in many countries the very notion of accountability is unknown or unclear in linguistic and cultural terms, in others it has penetrated the national psyche to the extent that there is talk of an 'era of accountability' in education, the United States being a case in point.

In the context of SDG 4, in which education is understood as a shared responsibility, the question this report has tackled is how to use accountability in the best interest of building inclusive, equitable and good-quality education systems. The key message is that accountability is one of the foundations of education system quality but that its psychological assumptions on what motivates education actors need to be taken carefully into account to avoid introducing superficial quick fixes with potentially adverse consequences.

THERE ARE LARGE EDUCATION PROBLEMS THAT CALL FOR SOLUTIONS

This report has highlighted a range of serious problems in the delivery of education services and the skills and competences that children, youth and adults develop. Revisiting some salient facts, by SDG 4 target, from the monitoring section helps bring it all together.

> "The assumptions on what motivates education actors need to be taken carefully into account when designing accountability to avoid introducing superficial quick fixes"

In sub-Saharan Africa, 41% of children of primary school age do not complete primary school and 87% do not reach the minimum proficiency level in reading. Strong foundations are essential to ease children's entry into primary school, yet 79% of the world's countries have not made pre-primary education compulsory. Upper secondary school completion, which the international community has committed to making universal by 2030, ranges from 2% in Burkina Faso and Niger to over 95% in Georgia and Ukraine.

> "In sub-Saharan Africa, 87% of children do not reach the minimum proficiency level in reading"

With respect to the content of education, countries may be signing up to international conventions and agreements, for example committing themselves to inclusive education or to education for international understanding, but making limited or no efforts to change their systems accordingly. Despite increasing calls for home language to be the language of instruction throughout primary education, governments do not implement the necessary policies to reform curricula, textbooks, assessments and teacher education, with long-term consequences for the literacy skills of adults.

Countries struggle to deliver even the bare essentials. One in five countries cannot guarantee adequate sanitation in half of primary schools. One in six primary school teachers worldwide are not trained to do their job.

At the other end of the education spectrum, many countries make tertiary education free of charge but ignore the additional costs students face; moreover, when supplementary measures to improve affordability are lacking, it is young people from rich households who reap all the benefits. In some middle income countries, two-thirds of the richest fifth of young people complete four years of tertiary education while almost none of the poorest fifth do, despite pledges to making tertiary affordable for all. In skills development, governments under pressure to increase provision hastily contract out programmes, which often end up benefitting providers rather than the intended beneficiaries.

There are countries that serve as examples for having achieved rapid education development within a generation. It should be possible for other countries to do the same. What would it take? With calls for accountability topping the list of potential responses, four questions were posed in the introduction, which are addressed in the next four sections:

- How can accountability policies take into account the interdependence of actors working towards a shared aim?
- Which approaches to accountability are more likely to help countries accomplish the aim of ensuring inclusive, equitable, good-quality education?
- Under what conditions or circumstances are various approaches to accountability effective in meeting the aim of inclusive, equitable, good-quality education?
- What is the role of the enabling environment in ensuring effective accountability, and what is needed to foster such an environment for the actors involved?

ACCOUNTABILITY IS PART OF A SOLUTION BUT SHOULD BE DESIGNED WITH HUMILITY

Accountability is increasingly seen as an essential part of a solution package. The GEM Report welcomes this focus, for two reasons. First, the report was created to be an accountability tool. It collects evidence to help readers understand the extent of education problems, identify the parties responsible and prompt action by a range of actors, whether civil society organizations, governments or international organizations.

Second, fulfilling responsibilities takes effort. Hiding in anonymity and not being called to account is likely to prompt complacency even from those with the best intentions. And accountability is a minimum precondition of good governance, helping protect education systems from those abusing their positions for private gain, as numerous examples in this report, related to negligence and corruption, have attested.

> "People should be held accountable first and foremost for actions they can control"

Under certain circumstances, therefore, accountability holds considerable promise for regenerating education systems. But

> The legal and regulatory routes to accountability are the backbone of a well-functioning state

the review of the evidence in this report also makes clear the need to proceed with caution. People should be held accountable first and foremost for actions they can control.

It is not straightforward to design accountability mechanisms even for responsibilities that can seemingly be pinned down to a single individual or institution. For instance, schools may be responsible for providing supportive learning environments, but to deliver on this they rely on governments providing resources, teachers respecting professional norms and students behaving appropriately. Therefore, ensuring supportive learning environments requires various accountability mechanisms, including school licensing and accreditation standards, school inspections, teacher codes of ethics and school-wide codes of conduct for students.

Increasingly, however, voices originating mainly in high income countries call for holding people accountable for outcomes beyond their control. One challenge is that such outcomes involve shared responsibilities that require everyone to do their part. Individuals cannot be held accountable for an outcome that also depends on the actions of others. If accountability systems are to contribute to stronger education systems, they need to be designed and implemented with formative intentions. They need to provide targeted support for those most in need, build capacity within and throughout the system and provide timely, useful feedback as a basis for necessary modifications.

In the last chapter, a fitting quotation from an evaluation of conditionality in international aid suggested that donors 'should approach the design of conditionality with a degree of humility, recognizing that the problems faced by developing countries are complex in nature and often do not lend themselves to a single solution'. Similarly, this report suggests that all actors, but especially powerful ones, should approach the design of accountability with a degree of humility, recognizing that education problems are complex in nature and often do not lend themselves to a single solution.

ACCOUNTABILITY MECHANISMS WORK IN SPECIFIC CONTEXTS…

The report presented multiple approaches to accountability that may be effective with certain actors, in certain contexts, for certain ends.

The political mechanism of accountability has been powerful at times. Social movements, media scrutiny and the ballot box have spurred governments into action when there was sufficient space for the public to express their opinions.

The legal and regulatory routes to accountability are the backbone of a well-functioning state. Autonomous and independent public institutions, civil servants fulfilling their role with integrity, and empowered legislatures are examples of effective checks and balances that have scrutinized the activities of government and the private sector to ensure that standards are followed and malpractice is weeded out, as in corruption cases ranging from ghost schools to fraudulent contracting that can drain the public purse.

Performance-based approaches to accountability have followed from reforms in public management aiming to motivate government units. They have typically required transparency, a broad definition of performance, good information and decision-maker autonomy to operate effectively.

Social accountability has been promoted as a solution for more local control when government institutions are unable or unwilling to meet citizen needs. Social accountability mechanisms have been useful when they are well supported with training and financial resources and target easily observable behaviour. They have led to good practices empowering communities to raise their voice on issues of school quality.

Professional or internal accountability has increased motivation by promoting a culture of respect where shared norms and values are established. It has been formalized in codes of conduct and professional learning

communities. Where it has helped build a strong school culture, it has also resulted in external inspections and evaluations being more constructive.

...BUT CAN BE DETRIMENTAL IN OTHER CONTEXTS IF POORLY DESIGNED

At the same time, some of these accountability approaches have not been applied effectively and may even have led to the opposite of what was intended.

When the media lacks capacity and is politically biased, the level of public dialogue on education issues falls and audiences are exposed to sensationalism and the least common denominator. When standards are too ambitious and human or material resources are thin on the ground, countries overburden themselves with unrealistic regulations that are ignored in practice. Social accountability mechanisms are often captured by the elite, giving only a semblance of participation. Professional organizations may preach in favour of strict internal rules but not implement them.

But the main concerns this report has expressed refer to three areas. First, there is little evidence that performance-based accountability, which focuses on outcomes over inputs and uses narrow incentives, improves education systems. Incentives have often been limited to punishments to force compliance or modify behaviour. A blame-focused approach to accountability is associated with undesirable consequences, such as greater segregation in systems linking school closures to student test scores. Threatening to fine parents to induce student attendance punishes poor families. Even rewards, such as performance-related teacher pay, can have detrimental effects. In response to such incentives, peer collaboration can deteriorate, the curriculum is often narrowed and teaching to the test is emphasized. Incentives of this kind typically end up undermining trust and promoting competition, creating barriers between parents, teachers, schools and government.

Second, the market-based approach to accountability is based on a conception of education as a consumer good differentiated by quality and price. The approach is strongly contested by those who see education as a public good that needs to be provided equitably at uniform levels of quality. The evidence is that this approach creates competitive pressure that marginalizes disadvantaged parents and schools. While targeted vouchers in some countries have helped overcome constraints, in other cases schools simply increase their fees. Parents rely on information shortcuts to make decisions, which has negatively affected diversity among schools. Overall, school choice approaches have led to increased segregation, undermining efforts towards inclusive, equitable, high-quality education.

> “Many often externally funded approaches to accountability have not been designed in a sustainable way”

Third, many often externally funded approaches to accountability have not been designed in a sustainable way. Arrangements that depend on a temporary actor holding another accountable are not long-term solutions to the equity and quality challenges facing education. Systems relying on government to respond to donor demands are disappointed when funding disappears. Over-reliance on parents to monitor teachers and schools is misplaced if parents lack capacity. To be sustainable, approaches to accountability should support and work with structures already in place.

Most performance-based approaches to accountability are being applied in high income countries and are not yet global. However, they are often portrayed as good practice in dialogue with low and middle income countries that face very different challenges and constraints. More generally, it is often the case that different actors have different interpretations of accountability, which makes this dialogue difficult to follow. This report strongly supports accountability for commitments but urges extreme caution when it comes to accountability for outcomes.

HOW SHOULD GOVERNMENTS DESIGN AND IMPLEMENT ROBUST ACCOUNTABILITY SYSTEMS?

Clear accountability mechanisms should be in place to meet global common commitments to inclusive, equitable and high-quality education and lifelong learning for all. This report has shown the whole array of approaches, ranging from countries where the concept of accountability is unknown, and violations of the right to education go unchallenged, to countries where accountability has become an end in itself instead of a means to improve education.

Accountability in education starts with governments, which bear the primary duty to ensure the right to education. Every country in the world has ratified at least one international treaty illustrating their commitment to the right to education. However, in only 55% of countries is the right to education justiciable, meaning that there are laws allowing citizens to legally challenge failures in the education system. Civil society organizations and the international community should lobby for the right to education, including for making the right justiciable in national legal frameworks.

Of course, laws are only powerful if they are implemented. Effective accountability requires governments to build stronger systems to enforce the laws. This report therefore lays out the following recommendations to help governments – but also other actors with a stake in education – to design and implement robust accountability systems.

DESIGNING ROBUST ACCOUNTABILITY SYSTEMS

1. **Governments need to create space for meaningful and representative engagement to build trust and a shared understanding of respective responsibilities with all education actors** – all government tiers and departments, legislative and judicial authorities, autonomous institutions, schools, teachers, parents, students, civil society, teachers' unions, the private sector and international organizations. Steps in that direction would include:

    a. Providing formal space for meaningful dialogue among multiple stakeholders, especially those sitting outside government.

    b. Strengthening the role of legislatures' education committees by introducing regular review processes and building the capacity of their members.

    c. Publishing an annual education monitoring report that presents actions taken and the results to which they have contributed, across all levels of education, for the benefit of the public.

2. **Governments should develop credible education sector plans and transparent budgets with clear lines of responsibility and truly independent auditing mechanisms.** Fundamentally, government actors cannot be held accountable if there is no clarity on what they are accountable for. Budget document transparency can help clarify where and when funding is released, providing information necessary for critical review, especially in the legislature.

3. **Governments should develop credible and efficient regulations and monitoring mechanisms and adhere to follow-up actions and sanctions when standards are not met.** These regulations and mechanisms should cover both public and private providers of education and ancillary services. Processes, such as registration and accreditation or bidding and contracting, should be clear and transparent. Regulations should also address equity and quality.

4. **Governments should design school and teacher accountability mechanisms that are supportive and formative, and avoid punitive mechanisms, especially the types based on narrow performance measures.** Using student test scores to sanction schools or evaluate teachers can promote an unhealthy competition-based environment, narrow the curriculum, encourage teaching to the test, demotivate teachers and disadvantage weaker students, all of which undermine overall education quality and student learning.

5. **Governments need to allow for a democratic voice, protect media freedom to scrutinize education and set up independent institutions for citizens to voice complaints.** Free and fair elections increase citizen trust in the government and electoral competition can make incumbents more responsive to citizen demands. The media can provide a valuable source of easily comprehensible information, particularly for population groups that have limited access to it.

> "Accountability in education starts with governments, which bear the primary duty to ensure the right to education"

Ombudsman offices can provide an important outlet for citizen complaints, as long as political incentives are aligned with the need to respond to these grievances.

IMPLEMENTING ROBUST ACCOUNTABILITY SYSTEMS

Regardless of design, if governments and other key stakeholders lack genuine commitment and appropriate information, resources and capacity, accountability systems are hard to implement.

1. **Information: Transparent, relevant and timely data should be made available to decision-makers.**

    a. It is essential for governments to invest in information that improves understanding of the education system's strengths and weaknesses, and helps build an effective accountability system.

    b. At the same time, they need to be judicious in their use of this data. The information should be tailored to its intended use and the cost of collection should match the capacity of the country to process it.

    c. Reporting tasks for teachers and principals should not be merely procedural but should be linked to improved teaching.

2. **Resources: Adequate financial resources should be provided to fund the education system.**

    a. Governments should fulfil their commitment of spending at least 4% of GDP on education or allocating 15% of total government expenditure.

    b. Donor countries should keep to their pledge to provide 0.7% of national income to aid. Of that, 10% should be allocated to basic and secondary education. They should be careful in making aid available through results-based mechanisms that shift risk to countries that are least prepared to bear it.

3. **Capacity: Actors should be equipped with the skills and training needed to fulfil their responsibilities.**

    a. Governments should ensure strong institutions are in place, including those serving policing, judicial and auditing functions, with the capacity to help deter, detect and investigate corruption in education.

    b. Governments should treat teachers as professionals. They should help build their professionalism by investing in the necessary initial and in-service education programmes and providing teachers with autonomy. In turn, teachers' unions aiming to strengthen professionalism through codes of ethics should raise members' awareness and build the skills of those entrusted with following through on such internal accountability mechanisms.

    c. Governments need to ensure that teacher evaluators have the appropriate training so as to be able to focus their work on supporting teachers and enabling them to deliver equitable, high-quality and inclusive instruction.

    d. Governments should increase the capacity of their representatives to participate actively and monitor the work of international organizations. In turn, international organizations should be inclusive and transparent and report to their members.

A student, aged 8, raises his hand in his classroom in Giza, Egypt.

CREDIT: Magali Corouge/UNESCO

Statistical tables[1]

The statistical tables are organized by each of the seven SDG 4 targets and three means of implementation rather than by education level (from pre-primary to tertiary). In addition, **Table 1** presents basic demographic and education system information and **Table 14** presents domestic education finance, which, though not one of the SDG 4 targets, is a key means of implementation recognized in the Education 2030 Framework for Action.

The SDG 4 monitoring framework consists of 43 internationally comparable indicators.[2] Of these, 11 are considered global indicators and 32 are considered thematic indicators (see Table I.1).[3] While aligned with the SDG 4 monitoring framework, the statistical tables include additional indicators – such as repetition, dropout, and transition from primary to secondary education and from secondary to tertiary.

Table I.1 shows the agreed 43 SDG 4 indicators, identifying those to be reported in 2017 and those requiring further methodological development

TABLE I.1:
SDG 4 monitoring framework indicators

	Indicator	UIS to report in 2017	Requires further development
Target 4.1			
4.1.1	Proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	YES	YES
4.1.2	Administration of a nationally-representative learning assessment (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education	YES	
4.1.3	Gross intake ratio to the last grade (primary education, lower secondary education)	YES	
4.1.4	Completion rate (primary education, lower secondary education, upper secondary education)	YES	
4.1.5	Out-of-school rate (primary education, lower secondary education, upper secondary education)	YES	
4.1.6	Percentage of children over-age for grade (primary education, lower secondary education)	YES	
4.1.7	Number of years of (a) free and (b) compulsory primary and secondary education guaranteed in legal frameworks	YES	
Target 4.2			
4.2.1	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex	YES	YES
4.2.2	Participation rate in organized learning (one year before the official primary entry age), by sex	YES	
4.2.3	Percentage of children under 5 years experiencing positive and stimulating home learning environments	NO	YES
4.2.4	Gross early childhood education enrolment ratio in (a) pre-primary education and (b) and early childhood educational development	YES	
4.2.5	Number of years of (a) free and (b) compulsory pre-primary education guaranteed in legal frameworks	YES	
Target 4.3			
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	YES	YES
4.3.2	Gross enrolment ratio for tertiary education by sex	YES	
4.3.3	Participation rate in technical-vocational programmes (15- to 24-year-olds) by sex	YES	

	Indicator	UIS to report in 2017	Requires further development
Target 4.4			
4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	YES	YES
4.4.2	Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills	NO	YES
4.4.3	Youth/adult educational attainment rates by age group, economic activity status, levels of education and programme orientation	YES	YES to simplify
Target 4.5			
4.5.1	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated	YES	
4.5.2	Percentage of students in primary education whose first or home language is the language of instruction	NO	YES
4.5.3	Extent to which explicit formula-based policies reallocate education resources to disadvantaged populations	NO	YES
4.5.4	Education expenditure per student by level of education and source of funding	YES	
4.5.5	Percentage of total aid to education allocated to least developed countries	YES	
Target 4.6			
4.6.1	Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex	YES	YES
4.6.2	Youth/adult literacy rate	YES	
4.6.3	Participation rate of illiterate youth/adults in literacy programmes	NO	YES
Target 4.7			
4.7.1	Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment	YES	YES
4.7.2	Percentage of schools that provide life skills-based HIV and sexuality education	NO	YES
4.7.3	Extent to which the framework on the World Programme on Human Rights Education is implemented nationally (as per the UNGA Resolution 59/113)	NO	YES
4.7.4	Percentage of students by age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability	NO	YES
4.7.5	Percentage of 15-year-old students showing proficiency in knowledge of environmental science and geoscience	NO	YES
Target 4.a			
4.a.1	Proportion of schools with access to: (a) electricity; (b) Internet for pedagogical purposes; (c) computers for pedagogical purposes (d) adapted infrastructure and materials for students with disabilities (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)	YES	YES
4.a.2	Percentage of students experiencing bullying, corporal punishment, harassment, violence, sexual discrimination and abuse	NO	YES
4.a.3	Number of attacks on students, personnel and institutions	NO	YES
Target 4.b			
4.b.1	Volume of official development assistance flows for scholarships by sector and type of study	YES	
4.b.2	Number of higher education scholarships awarded by beneficiary country	NO	YES
Target 4.c			
4.c.1	Proportion of teachers in: (a) pre-primary education; (b) primary education; (c) lower secondary education; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g., pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country, by sex	YES	
4.c.2	Pupil-trained teacher ratio by education level	YES	
4.c.3	Proportion of teachers qualified according to national standards by education level and type of institution	YES	
4.c.4	Pupil-qualified teacher ratio by education level	YES	
4.c.5	Average teacher salary relative to other professions requiring a comparable level of qualification	NO	YES
4.c.6	Teacher attrition rate by education level	YES	
4.c.7	Percentage of teachers who received in-service training in the last 12 months by type of training	NO	YES

Note: Global indicators are highlighted in grey shading.
Source: UNESCO Institute for Statistics.

While most of the data are provided to the UIS by education ministries worldwide, the statistical tables also include from other sources, including national, regional and international learning assessments; national and international household surveys, such as the Demographic and Health Surveys and UNICEF's Multiple Indicator Cluster Surveys; and bodies including the Joint United Nations Programme on HIV/AIDS (UNAIDS), the Organisation for Economic Co-operation and Development (OECD), UNICEF, the United Nations Population Division (UNPD), the World Bank and the World Health Organization (WHO).

METHODOLOGICAL NOTES

The most recent UIS data on pupils, students, teachers and education expenditure presented in the tables are for the school year or financial year ending in 2015.[4] They are based on results reported to and processed by the UIS before the end of March 2017. A small number of countries[5] submitted data for the school year ending in 2016, presented in bold in the tables. These statistics refer to all formal education, both public and private, by level of education.

The statistical tables list 209 countries and territories, all of which are UNESCO member states or associate members. Most of them report their data using standard questionnaires issued by the UIS itself. For some countries, however, education data are collected by the UIS via surveys carried out jointly by the UIS, OECD and the statistical office of the European Union using the UIS/OECD/Eurostat (UOE) questionnaires.[6]

POPULATION DATA

The population-related indicators used in the statistical tables, including enrolment ratios, number of out-of-school children, adolescents and youth, and number of youth and adults, are based on the 2015 revision of population estimates produced by the UNPD. Because of possible differences between national population estimates and those of the United Nations, these indicators may differ from those published by individual countries or by other organizations.[7]

In the 2015 revision, the UNPD does not provide population data by single years of age for countries with total population of less than 90,000, including Andorra, Anguilla, Cayman Islands, Dominica, Monaco, Montserrat, Saint Martin, Sint Maarten and Turks and Caicos Islands. For Bermuda, Dominica, and Marshall Islands, the UIS decided to use population data from the previous UNPD revision (2012). Where no UNPD population estimates exist, national population figures, when available, or UIS estimates were used to calculate enrolment ratios. In the case of Brazil, due to inconsistencies between UNPD estimates and national enrolment data, the UIS has agreed with the country to temporarily use its national population estimates, derived from the PNAD household survey, until a solution is found.

ISCED CLASSIFICATION

Education data reported to the UIS are in conformity with the International Standard Classification of Education (ISCED), revised in 2011. Countries may have their own definitions of education levels that do not correspond to ISCED 2011. Differences between nationally and internationally reported education statistics may be due to the use of nationally defined education levels rather than the ISCED level, in addition to the population issue raised above.

LITERACY DATA

The literacy statistics presented in the statistic tables are often based on a definition of literacy as the ability to read and write, with understanding, a short simple statement related to one's daily life[8] and are largely based on data sources that use self-declaration or third party declaration methods, in which respondents are asked whether they and the members of their household are literate, as opposed to being asked a more comprehensive question or to demonstrate the skill.[9] Some countries assume that anyone who completes a certain level of education is literate.[10] As definitions and methodologies used for data collection differ by country, data need to be used with caution.

Literacy data presented in the statistical tables cover adults aged 15 and over as well as youth aged 15 to 24. They are for the 2010-2016 reference period, and include both national observed data from censuses and household surveys and UIS estimates. The latter are based on the most recent national observed data. They

were produced using the Global Age-specific Literacy Projections (GALP) model.[11] The reference years and literacy definitions for each country are presented in the table of metadata for literacy statistics posted on the GEM Report website (see footnote 1).

ESTIMATES AND MISSING DATA

Regarding UIS statistics produced by the UIS itself, both observed and estimated education data are presented throughout the statistical tables. Wherever possible, the UIS encourages countries to make their own estimates, which are presented as national estimates and marked with one asterisk (*). Where this does not happen, the UIS may make its own estimates if sufficient supplementary information is available. These estimates are marked with two asterisks (**). Gaps in the tables may arise where data submitted by a country are found to be inconsistent. The UIS makes every attempt to resolve such problems with the countries concerned, but reserves the final decision on omitting data it regards as problematic.

If information for the year ending in 2015 are not available, data for earlier or later years are used. Such cases are indicated by footnotes.

REGIONAL AND OTHER COUNTRY GROUPING AVERAGES

Regional figures for literacy and education rates and ratios (gross intakes rates, gross, net and adjusted net enrolment ratios, dropout rates, etc.) are weighted averages, taking into account the relative size of the relevant population of each country in each region. The figures for countries with larger populations have a proportionately greater influence on the regional aggregates. The averages are derived from both published data and imputed values, for countries for which no recent data or reliable publishable data are available. Weighted averages marked with two asterisks (**) in the tables are UIS partial imputations due to incomplete country coverage (between 33% and 60% of the population of a given region or country grouping). Where insufficient reliable data are available to produce an overall weighted mean, a median figure is calculated based only on countries with available data – at least half in a given region or country grouping.

SYMBOLS USED IN THE STATISTICAL TABLES

*	National estimate
**	UIS partial estimate
...	No data available
-	Magnitude nil or negligible
.	Category not applicable or does not exist

Footnotes to the tables, along with the glossary following the statistical tables, provide additional help in interpreting the data and information.

COMPOSITION OF THE GEM REPORT REGIONS AND OTHER COUNTRY GROUPS

With the adoption of the education agenda in the 2030 Agenda for Sustainable Development, the country classification in the statistical tables has shifted from the EFA regions to those used by the United Nations Statistical Division (UNSD) as of May 2015, with some adjustments. The UNSD classification includes all territories, whether independent national entities or parts of bigger entities; however, the list of countries presented in the statistical tables includes only full UNESCO member states and associate members, as well as Bermuda and Turks and Caicos Islands, non-member states that were included in the EFA statistical tables. To this list, a territory and a country, Hong Kong (China) and Liechtenstein, previously excluded, have been added. Other territories contained in the UNSD regional classification but not covered by UNESCO are excluded: American Samoa, the Channel Islands, the Falkland Islands (Malvinas), French Guiana, French Polynesia, Greenland, Guadeloupe, Guam, the Isle of Man, Martinique, Mayotte, New Caledonia, the Northern Mariana Islands, Réunion, Puerto Rico, the US Virgin Islands and Western Sahara. The UIS does not collect data for most of these territories. Nor does it collect data for the Faroe Islands, so this territory is not included in the GEM Report despite its status as UNESCO associate member.

GEM Report regions

- **Caucasus and Central Asia (8 countries)**
  Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan.

- **Eastern and South-eastern Asia (18 countries/territories)**
  Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Hong Kong (China), Indonesia, Japan, Lao People's Democratic Republic, Macao (China), Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste, Viet Nam.

  - *Eastern Asia (7 countries/territories)*
    China, Democratic People's Republic of Korea, Hong Kong (China), Japan, Macao (China), Mongolia, Republic of Korea.

  - *South-eastern Asia (11 countries)*
    Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam.

- **Europe and Northern America (46 countries)**
  Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Ukraine, United Kingdom, United States.

- **Latin America and the Caribbean (43 countries/territories)**
  Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Plurinational State of Bolivia, Brazil, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Sint Maarten, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Bolivarian Republic of Venezuela.

  - *Caribbean (24 countries/territories)*
    Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Curaçao, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Sint Maarten, Suriname, Trinidad and Tobago, Turks and Caicos Islands.

  - *Latin America (19 countries)*
    Argentina, Plurinational State of Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Bolivarian Republic of Venezuela.

- **Northern Africa and Western Asia (20 countries/territories)**
  Algeria, Bahrain, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, Turkey, United Arab Emirates, Yemen.

  - *Northern Africa (6 countries)*
    Algeria, Egypt, Libya, Morocco, Sudan, Tunisia.

  - *Western Asia (14 countries and territories)*
    Bahrain, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates, Yemen.

- **Pacific (17 countries/territories)**
  Australia, Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu.

- **Southern Asia (9 countries)**
  Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Maldives, Nepal, Pakistan, Sri Lanka.

- **Sub-Saharan Africa (48 countries)**
  Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

Income groups[12]

- **Low income (32 countries)**
  Afghanistan, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Democratic People's Republic of Korea, Democratic Republic of the Congo, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, Rwanda, Senegal, Sierra Leone, Somalia, South Sudan, Togo, Tokelau, Uganda, United Republic of Tanzania, Zimbabwe.

- **Lower middle income (51 countries)**
  Armenia, Bangladesh, Bhutan, Plurinational State of Bolivia, Cabo Verde, Cameroon, Cambodia, Congo, Côte d'Ivoire, Djibouti, Egypt, El Salvador, Ghana, Guatemala, Honduras, India, Indonesia, Kenya, Kiribati, Kyrgyzstan, Lao People's Democratic Republic, Lesotho, Mauritania, Micronesia (Federated States of), Mongolia, Morocco, Myanmar, Nicaragua, Nigeria, Pakistan, Palestine, Papua New Guinea, Philippines, Republic of Moldova, Samoa, Sao Tome and Principe, Solomon Islands, Sri Lanka, Sudan, Swaziland, Syrian Arab Republic, Tajikistan, Timor-Leste, Tonga, Tunisia, Ukraine, Uzbekistan, Vanuatu, Viet Nam, Yemen, Zambia.

- **Upper middle income (55 countries)**
  Albania, Algeria, Angola, Argentina, Azerbaijan, Belarus, Belize, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, China, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Georgia, Grenada, Guyana, Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kazakhstan, Lebanon, Libya, Malaysia, Maldives, Marshall Islands, Mauritius, Mexico, Montenegro, Montserrat, Namibia, Palau, Panama, Paraguay, Peru, Romania, Russian Federation ,Saint Lucia, Saint Vincent and the Grenadines, Serbia, South Africa, Suriname, Thailand, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Tuvalu, Venezuela (Bolivarian Republic of).

- **High income (71 countries/territories)**
  Andorra, Anguilla, Antigua and Barbuda, Aruba, Australia, Austria, Bahamas, Bahrain, Barbados, Belgium, Bermuda, British Virgin Islands, Brunei Darussalam, Canada, Cayman Islands, Chile, Cook Islands, Croatia, Curaçao, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong (China), Hungary, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao (China), Malta, Monaco, Nauru, Netherlands, New Zealand, Niue, Norway, Oman, Poland, Portugal, Qatar, Republic of Korea, Saint Kitts and Nevis, Saint Martin, San Marino, Saudi Arabia, Seychelles, Singapore, Sint Maarten, Slovakia, Slovenia, Spain, Sweden, Switzerland, Trinidad and Tobago, Turks and Caicos Islands, United Arab Emirates, United Kingdom, United States, Uruguay.

ENDNOTES

1. A full set of statistics and indicators related to this introduction is found in Excel tables on the GEM Report website at http://en.unesco.org/gem-report/statistics.
2. The 43 indicators were originally proposed by the Technical Advisory Group on post-2015 education indicators and subsequently endorsed with some changes by the Technical Cooperation Group (TCG), whose secretariat is based at the UNESCO Institute for Statistics (UIS) to monitor progress towards the SDG 4 targets. During its second meeting in Madrid in October 2016, the TCG reviewed the 43 indicators to monitor SDG 4 and identified 29 indicators on which the UIS will be able to report in 2017, while the other 14 will require further methodological development.
3. The 11 global indicators were proposed by the Inter-Agency and Expert Group on SDG Indicators, adopted in a resolution at the 48th session of the UN Statistical Commission in March 2017 and subsequently adopted by the United Nations Economic and Social Council in June 2017.
4. This means 2014/15 for countries with a school year that overlaps two calendar years, and 2015 for those with a calendar school year. The most recent reference year for education finance for the UOE countries (see below) is the year ending in 2014.
5. Bhutan, Botswana, Burkina Faso, Djibouti, Ecuador, Gambia, Ghana, Kazakhstan, Maldives, Mauritania, Nepal, Palau, Rwanda, Sao Tome and Principe, Tajikistan, Tokelau, and Uzbekistan.
6. The countries concerned are most European countries as well as Australia, Brazil, Canada, Chile, China, India, Indonesia, Israel, Japan, Mexico, New Zealand, Republic of Korea, Turkey and United States.
7. Where obvious inconsistencies exist between enrolment reported by countries and the United Nations population data, the UIS may decide not to calculate or publish enrolment ratios for some or all levels of education, This is the case, for instance, with Andorra, Armenia, Anguilla, Bosnia and Herzegovina, Cayman Islands, Hong Kong (China), Jamaica, Kuwait, Maldives, Oman, Saint Lucia, Singapore, Turks and Caicos Islands, and the United Arab Emirates.
8. That is the definition long used by UNESCO, but a parallel definition arose with the introduction in 1978 of the notion of functional literacy, which emphasizes the use of literacy skills. That year the UNESCO General Conference approved defining as functionally literate those who can engage in all activities in which literacy is required for the effective functioning of their group and community and for enabling them to continue to use reading, writing and calculation for their own and the community's development.
9. In the data released by the UIS, some literacy rates are based on direct tests rather than individuals' declarations. This is the case for Benin, Central African Republic, Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Egypt, Gabon, Guyana, Haiti, Jordan, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritania, Niger, Nigeria, Rwanda, Swaziland and Zimbabwe. Care should therefore be taken when analysing trends over time and when interpreting these results.

10. For reliability and consistency reasons, the UIS does not publish literacy data based on educational attainment proxies. Only data reported by countries based on self-declaration or household declaration are included in the statistical tables. However, in the absence of such data, educational attainment proxies for some countries, particularly developed ones, are used to compute regional weighted averages.

11. For a description of the GALP methodology, see UNESCO (2005, p. 261) and UIS (2006).

12. The country groupings by level of income are as defined by the World Bank but include only countries listed in the statistical tables. They are based on the list of countries by income group as revised in July 2016.

TABLE 1

Background demographic statistics, legal guarantee of compulsory and free education, and structure of national education system

Country or territory	DEMOGRAPHY[1]		GDP AND POVERTY[2]			LEGAL GUARANTEE OF COMPULSORY AND FREE EDUCATION[4]				
			GDP per capita		Population living on less than PPP US$1.90 a day (%)	PRE-PRIMARY EDUCATION		PRIMARY AND SECONDARY EDUCATION		
	Total population (000)	Average annual growth rate (%)	Current US$	Current PPP US$		Compulsory education (age group)	Free education (years)	Compulsory education (age group)	Free education (years)	
									Primary	Secondary
	2017	2017	2015	2015	2004–2014[3]					
Caucasus and Central Asia										
Armenia	3,032	0.1	3,489	8,419	2.3	.	.	6-16	4	7
Azerbaijan[6]	9,974	1.0	5,496	17,776	0.5	.	.	6-15	4	7
Georgia	3,973	-0.1	3,796	9,699	9.8	.	.	6-14	6	6
Kazakhstan	18,064	1.1	10,510	25,045	0.0	6-6	4	7-18	4	7
Kyrgyzstan	6,125	1.4	1,103	3,434	1.3	.	4	7-16	4	7
Tajikistan	8,858	2.1	926	2,834	19.5	.	.	7-16	4	5
Turkmenistan[7]	5,503	1.1	6,672	16,532	...	.	3	6-18	4	8
Uzbekistan	30,691	1.2	2,132	6,086	...	.	.	7-18	4	7
Eastern and South-eastern Asia										
Brunei Darussalam	434	1.3	30,555	78,369	...	5-5	1	6-15	6	7
Cambodia	16,076	1.5	1,159	3,490	2.2	.	.	.	6	3
China	1,388,233	0.4	8,028	14,450	1.9	.	.	6-15	6	3
DPR Korea	25,405	0.5	...	...	...	6-6	1	7-16	5	5
Hong Kong, China[7]	7,402	0.7	42,328	56,923	...	.	.	6-15	6	6
Indonesia	263,510	1.1	3,346	11,058	8.3	.	.	7-15	6	3
Japan[7]	126,045	-0.2	32,477	37,322	...	.	.	6-15	6	3
Lao PDR	7,038	1.7	1,818	5,691	16.7	.	.	6-14	5	.
Macao, China	606	1.5	78,586	111,497	...	5-5	3	6-15	6	6
Malaysia	31,164	1.3	9,768	26,950	0.3	.	.	6-11	6	5
Mongolia	3,052	1.4	3,968	12,221	0.2	.	.	6-17	5	7
Myanmar[7]	54,836	0.9	1,161	5,250	...	4-4	.	5-9	5	.
Philippines[7]	103,797	1.5	2,904	7,387	13.1	5-5	1	6-18	6	4
Republic of Korea	50,705	0.4	27,222	34,549	...	.	.	6-15	6	3
Singapore[7]	5,785	1.4	52,889	85,382	...	.	.	6-14	6	.
Thailand	68,298	0.2	5,815	16,340	0.0	.	.	6-15	6	6
Timor-Leste[7]	1,237	2.1	1,158	2,283	46.8	.	.	6-15	6	3
Viet Nam	95,415	1.0	2,111	6,035	3.1	5-5	.	6-14	5	.
Europe and Northern America										
Albania	2,911	0.3	3,945	11,249	1.1	.	.	6-16	.	.
Andorra[8]	69	-0.2	5,740	17,697	...	.	.	6-16	6	4
Austria	8,592	0.3	4,249	10,633	...	.	3	6-15	4	8
Belarus	9,459	-0.3	6,993	17,958	0.0	.	.	6-15	4	7
Belgium[9]	11,444	0.6	11,536	21,880	...	.	3	6-18	6	6
Bosnia and Herzegovina	3,793	-0.3	17,548	32,759	0.1	5-5	.	6-15	5	4
Bulgaria	7,045	-0.8	17,119	27,808	2.0	6-6	4	7-16	4	8
Canada[7]	36,626	0.9	12,364	25,799	...	.	2	6-16	6	6
Croatia	4,210	-0.4	13,649	24,257	0.9	.	.	7-15	4	4
Cyprus[6]	1,188	0.9	14,147	27,680	...	5-5	1	6-15	6	6
Czechia[9]	10,555	0.1	6,406	15,464	0.1	.	.	6-15	5	8
Denmark[9]	5,712	0.4	12,555	26,261	...	.	3	6-16	7	.
Estonia[9]	1,306	-0.3	1,848	5,049	1.0	.	.	7-17	6	6
Finland[9]	5,541	0.3	8,973	21,403	...	.	.	7-16	6	3
France[7,9]	64,939	0.4	9,093	24,451	...	.	3	6-16	5	7
Germany[9]	80,636	-0.1	5,235	13,721	...	.	3	6-18	4	9
Greece[7]	10,893	-0.2	16,088	29,105	...	5-5	2	6-15	6	6
Hungary	9,788	-0.3	20,727	31,144	0.3	6-6	.	7-18	4	8
Iceland	334	0.8	4,853	13,908	...	.	.	6-16	7	3
Ireland[9]	4,749	0.8	2,115	7,940	...	.	.	6-16	8	5
Italy	59,798	-0.0	...	...	...	.	.	6-16	5	3
Latvia[7]	1,945	-0.5	43,775	48,194	1.4	5-6	4	7-16	6	6
Liechtenstein[6,9]	38	0.6	40,324	44,093	...	.	3	6-15	5	7
Lithuania[7]	2,831	-0.6	43,249	44,310	1.0	4-6	4	7-16	4	8
Luxembourg[7]	584	1.3	23,243	31,116	...	4-5	2	6-16	6	7
Malta[9]	421	0.2	51,989	46,624	...	.	2	5-16	6	7
Monaco[8,9]	38	0.4	42,311	40,979	...	.	3	6-16	5	7
Montenegro[7]	626	0.0	36,206	39,631	0.0	.	.	6-15	5	4
Netherlands[7]	17,033	0.3	41,313	47,377	...	5-5	.	6-18	6	6
Norway[9]	5,331	1.1	18,002	26,631	...	.	.	6-16	7	3
Poland	38,564	-0.1	50,173	46,547	0.0	6-6	.	7-18	6	6
Portugal[9]	10,265	-0.4	61,134	65,144	...	.	.	6-18	6	3
Republic of Moldova[6]	4,055	-0.2	29,958	36,030	0.0	6-6	4	7-16	4	7
Romania	19,238	-0.7	...	...	0.0	5-5	3	6-17	5	8
Russian Federation	143,375	-0.1	101,450	101,926	0.0	.	.	7-18	4	7
San Marino[8]	32	0.4	22,596	33,339	...	.	.	6-16	...	...
Serbia[6]	8,777	-0.4	...	...	0.2	6-6	.	7-15	4	8
Slovakia	5,432	0.0	44,300	48,313	0.2	.	.	6-16	4	9
Slovenia[7,9]	2,071	0.1	74,400	61,197	0.0	.	.	6-15	6	3
Spain[9]	46,070	0.0	19,222	29,213	...	.	.	6-16	6	4
Sweden[9]	9,921	0.7	...	...	...	.	.	7-16	6	6
Switzerland	8,454	0.8	25,832	34,527	...	5-6	2	7-16	6	3
TFYR Macedonia	2,083	0.1	50,580	46,704	1.3	5-5	1	6-19	5	8

STRUCTURE OF NATIONAL EDUCATION SYSTEM AND OFFICIAL SCHOOL-AGE POPULATION								
Age group					Official school-age population (000)			
Pre-primary	Primary	Lower secondary	Upper secondary	Tertiary	Pre-primary	Primary	Total secondary	Tertiary
School year ending in		School year ending in		School year ending in	School year ending in			
2015		2015		2015	2015[5]			
3-5	6-9	10-14	15-17	18-22	124	147	272	243
3-5	6-9	10-14	15-16	17-21	487*	517*	907*	801*
3-5	6-11	12-14	15-17	18-22	155	247	268	294
3-6	7-10	11-15	16-17	18-22	1,412	1,082	1,539	1,430
3-6	7-10	11-15	16-17	18-22	525	420	699	566
3-6	7-10	11-15	16-17	18-22	806	696	1,195	852
3-5	6-9	10-15	16-17	18-22	303	399	762	...
3-6	7-10	11-15	16-18	19-23	2,385	2,091	4,145	2,986
3-5	6-11	12-13	14-18	19-23	18	37	49	35
3-5	6-11	12-14	15-17	18-22	1,045	1,868	1,847	1,661
3-5	6-11	12-14	15-17	18-22	48,444	92,156	91,334	99,944
5-6	7-11	12-14	15-17	18-22	671	1,767	2,300	2,015
3-5	6-11	12-14	15-17	18-22	...	...	391	436
5-6	7-12	13-15	16-18	19-23	9,145	28,058	27,674	21,060
3-5	6-11	12-14	15-17	18-22	3,208	6,581	7,040	...
3-5	6-10	11-14	15-17	18-22	496	764	1,038	770
3-5	6-11	12-14	15-17	18-22	16	24	31	41
4-5	6-11	12-14	15-18	19-23	995	3,053	3,856	3,136
4-5	6-10	11-14	15-17	18-22	121	249	308	262
3-4	5-9	10-13	14-15	16-20	1,901	5,092	6,289	...
5-5	6-11	12-14	15-15	16-20	2,155	12,517	8,174	...
3-5	6-11	12-14	15-17	18-22	1,367	2,749	3,435	3,507
3-5	6-11	12-13	14-15	16-20	...	...	...	...
3-5	6-11	12-14	15-17	18-22	2,368	4,946	5,238	4,575
3-5	6-11	12-14	15-17	18-22	101	178	168	...
3-5	6-10	11-14	15-17	18-22	4,517	6,929	9,378	8,554
3-5	6-10	11-14	15-17	18-22	93	166	329	276
3-5	6-11	12-15	16-17	18-22	...	...	...	...
3-5	6-9	10-13	14-17	18-22	237	318	691	522
3-5	6-9	10-14	15-16	17-21	320	382	601	543
3-5	6-11	12-13	14-17	18-22	396	751	730	673
3-5	6-10	11-14	15-18	19-23	...	...	...	...
3-6	7-10	11-14	15-18	19-23	291	269	506	377
4-5	6-11	12-14	15-17	18-22	792	2,240	2,381	...
3-6	7-10	11-14	15-18	19-23	176	166	367	235
3-5	6-11	12-14	15-17	18-22	29*	54*	57*	62*
3-5	6-10	11-14	15-18	19-23	351	536	730	609
3-5	6-12	13-15	16-18	19-23	196	462	423	379
3-6	7-12	13-15	16-18	19-23	63	81	68	79
3-6	7-12	13-15	16-18	19-23	248	350	361	347
3-5	6-10	11-14	15-17	18-22	2,373	3,991	5,432	...
3-5	6-9	10-15	16-18	19-23	2,007	2,743	6,928	4,362
3-5	6-11	12-14	15-17	18-22	326	645	617	...
3-6	7-10	11-14	15-18	19-23	392	389	786	605
3-5	6-10	13-15	16-19	20-24	14	30	31	...
4-4	5-12	13-15	16-17	18-22	73	537	278	256
3-5	6-10	11-13	14-18	19-23	1,659	2,827	4,476	2,923
3-6	7-12	13-15	16-18	19-23	86	118	99	...
5-6	7-11	12-15	16-18	19-23	0.8*	2*	3*	2*
3-6	7-10	11-16	17-18	19-23	112	104	243	...
3-5	6-11	12-14	15-18	19-23	18	36	46	...
3-4	5-10	11-13	14-17	18-22	8	24	31	28
3-5	6-10	11-14	15-17	18-22	...	...	...	...
3-5	6-10	11-14	15-18	19-23	24	40	67	...
3-5	6-11	12-14	15-17	18-22	535	1,154	1,191	...
3-5	6-12	13-15	16-18	19-23	191	429	387	350
3-6	7-12	13-15	16-18	19-23	1,638	2,140	2,443	2,588
3-5	6-11	12-14	15-17	18-22	282	612	654	545
3-6	7-10	11-15	16-17	18-22	156*	150*	271*	265*
3-5	6-10	11-14	15-18	19-23	615	1,055	1,694	1,018
3-6	7-10	11-15	16-17	18-22	6,642	5,952	8,982	8,200
3-5	6-10	11-13	14-18	19-23	...	...	...	...
3-6	7-10	11-14	15-18	19-23	265*	276*	573*	414*
3-5	6-9	10-14	15-18	19-23	173	217	491	361
3-5	6-11	12-14	15-18	19-23	65	115	129	...
3-5	6-11	12-14	15-17	18-22	1,446	2,866	2,552	2,190
3-6	7-12	13-15	16-18	19-23	472	644	601	688
5-6	7-12	13-15	16-19	20-24	161	472	607	511
3-5	6-10	11-14	15-18	19-23	66	117	213	151

TABLE 1 *(CONTINUED)*

Country or territory	DEMOGRAPHY[1]		GDP AND POVERTY[2]			LEGAL GUARANTEE OF COMPULSORY AND FREE EDUCATION[4]				
			GDP per capita		Population living on less than PPP US$1.90 a day (%)	PRE-PRIMARY EDUCATION		PRIMARY AND SECONDARY EDUCATION		
	Total population (000)	Average annual growth rate (%)	Current US$	Current PPP US$		Compulsory education (age group)	Free education (years)	Compulsory education (age group)	Free education (years)	
									Primary	Secondary
	2017	2017	2015	2015	2004–2014[3]					
Ukraine[7]	44,405	-0.5	80,945	61,086	0.0	5-5	1	6-17	4	7
United Kingdom[7,9]	65,511	0.6	43,876	41,459	...	.	2	5-16	6	7
United States	326,474	0.7	56,116	56,116	...	.	1	6-18	6	6
Latin America and the Caribbean										
Anguilla[8]	15	0.9	...	...	...	.	.	5-17	7	5
Antigua and Barbuda	94	1.0	13,715	23,062	...	.	.	5-16	7	5
Argentina	44,272	0.9	13,432	20,364	1.7	5-5	3	6-18	6	6
Aruba	105	0.3	...	...	...	4-5	2	6-17	6	5
Bahamas	397	1.1	22,817	23,001	...	.	2	5-16	6	6
Barbados	286	0.2	15,429	16,406	...	.	2	5-16	6	5
Belize	375	2.0	4,879	8,484	...	.	.	5-14	6	6
Bermuda	61	-0.4	...	...	...	.	.	5-16	6	7
Bolivia, P.S.	11,053	1.5	3,077	6,954	6.8	5-5	2	6-18	6	6
Brazil[6]	211,243	0.8	8,539	15,391	3.7	4-5	2	6-17	5	7
British Virgin Islands[6]	31	1.6	...	...	...	.	.	5-16	7	5
Cayman Islands[8]	62	1.3	...	...	...	.	2	5-17	6	6
Chile	18,313	1.0	13,416	22,370	0.9	5-5	1	6-21	6	6
Colombia	49,068	0.8	6,056	13,829	5.7	5-5	3	6-15	5	6
Costa Rica	4,906	1.0	11,260	15,595	1.6	3-5	3	6-15	6	5
Cuba	11,390	-0.0	...	...	...	.	3	6-16	6	6
Curaçao[7]	160	0.8	...	...	...	4-5	...	6-18	...	...
Dominica	73	0.4	7,116	10,865	...	.	.	5-16	7	4
Dominican Republic	10,767	1.1	6,468	14,237	2.3	5-5	3	6-18	6	6
Ecuador	16,626	1.4	6,205	11,474	3.8	5-5	3	6-18	6	6
El Salvador	6,167	0.3	4,219	8,620	3.0	4-6	3	7-15	6	3
Grenada	108	0.5	9,212	13,559	...	.	2	5-16	7	5
Guatemala	17,005	1.9	3,903	7,722	9.3	5-6	2	7-15	6	5
Guyana	774	0.5	4,127	7,522	...	.	2	6-15	6	5
Haiti	10,983	1.2	818	1,757	53.9	.	.	6-11	6	.
Honduras	8,305	1.4	2,529	5,095	16.0	5-5	3	6-15	6	3
Jamaica[7]	2,813	0.3	5,232	9,092	1.7	.	.	6-14	6	.
Mexico	130,223	1.2	9,005	17,269	3.0	4-5	2	6-18	6	6
Montserrat[8]	5	0.5	...	...	...	.	.	5-16	7	5
Nicaragua	6,218	1.1	2,087	5,200	6.2	5-5	.	6-11	6	3
Panama	4,051	1.5	13,268	22,237	3.8	4-5	2	6-15	6	6
Paraguay	6,812	1.2	4,081	9,198	2.8	5-5	3	6-18	6	6
Peru	32,166	1.2	6,027	12,529	3.1	3-5	3	6-18	6	5
Saint Kitts and Nevis	57	1.0	15,772	25,088	...	.	.	5-16	7	4
Saint Lucia[7]	188	0.7	7,736	10,944	...	.	.	5-15	7	3
Saint Martin	...	...	...	...	...	.	...	...	...	...
Saint Vincent/Grenadines	110	0.2	6,739	11,140	...	.	2	5-17	7	5
Sint Maarten[8]	40	1.3	...	...	...	5-5	1	5-17	6	5
Suriname	552	0.8	9,485	16,703	...	.	.	6-11	6	.
Trinidad and Tobago	1,369	0.3	17,322	33,309	...	.	...	5-17	7	5
Turks and Caicos Islands[8]	35	1.5	...	...	...	4-5	...	6-17	...	...
Uruguay	3,457	0.4	15,574	21,244	0.3	4-5	2	6-17	6	6
Venezuela, B. R.	31,926	1.3	...	...	9.2	4-5	3	6-14	6	5
Northern Africa and Western Asia										
Algeria	41,064	1.6	4,206	14,717	...	.	1	6-16	5	7
Bahrain	1,419	1.5	22,600	46,586	...	.	.	6-15	6	6
Egypt	95,215	1.9	3,615	10,913	...	.	.	6-18	6	6
Iraq	38,654	2.8	4,944	15,395	...	.	.	6-11	6	6
Israel	8,323	1.6	35,728	35,831	...	.	.	6-18	6	6
Jordan	7,877	1.5	4,940	10,902	...	.	.	6-16	6	6
Kuwait[7]	4,100	2.1	29,301	74,645	...	.	.	6-15	5	7
Lebanon	6,039	0.1	8,048	13,936	...	.	2	6-12	6	.
Libya[7]	6,409	1.3	...	...	...	5-5	1	6-15	6	3
Morocco	35,241	1.2	2,878	7,841	3.1	.	.	6-15	6	3
Oman[7]	4,741	1.4	15,551	39,971	...	.	.	.	6	6
Palestine	4,928	2.7	...	...	0.1	.	.	6-16	4	8
Qatar	2,338	1.9	73,653	141,543	...	.	.	6-18	6	3
Saudi Arabia	32,743	1.7	20,482	53,539	...	.	.	6-15	6	6
Sudan[7]	42,166	2.4	2,415	4,388	14.9	.	.	6-13	6	2
Syrian Arab Republic	18,907	2.5	...	...	...	.	.	6-15	6	6
Tunisia	11,495	1.0	3,873	11,618	2.0	.	3	6-16	6	7
Turkey	80,418	0.9	9,126	19,609	0.3	.	3	6-18	4	8
United Arab Emirates[7]	9,398	1.4	40,439	69,971	...	.	2	6-10	5	7
Yemen[7]	28,120	2.3	1,406	2,821	...	.	.	6-15	6	3
The Pacific										
Australia	24,642	1.2	56,311	45,501	...	.	1	5-16	7	6
Cook Islands[6]	21	0.6	...	...	...	.	2	5-16	6	7
Fiji[7]	903	0.5	4,961	9,323	4.1	.	.	6-18	6	6

STRUCTURE OF NATIONAL EDUCATION SYSTEM AND OFFICIAL SCHOOL-AGE POPULATION								
Age group					Official school-age population (000)			
Pre-primary	Primary	Lower secondary	Upper secondary	Tertiary	Pre-primary	Primary	Total secondary	Tertiary
School year ending in		School year ending in		School year ending in	School year ending in			
2015		2015		2015	2015[5]			
3-5	6-9	10-14	15-16	17-21	...	...	...	...
3-4	5-10	11-13	14-17	18-22	1,672	4,540	5,036	...
3-5	6-11	12-14	15-17	18-22	12,218	24,749	24,617	22,765
3-4	5-11	12-14	15-16	17-21	...	...	...	...
3-4	5-11	12-14	15-16	17-21	3	10	8	8
3-5	6-11	12-14	15-17	18-22	2,204	4,352	4,204	3,451
4-5	6-11	12-13	14-16	17-21	3	8	7	8
3-4	5-10	11-13	14-16	17-21	12	31	33	33
3-4	5-10	11-13	14-15	16-20	7	22	19	18
3-4	5-10	11-14	15-16	17-21	15	46	47	37
4-4	5-10	11-13	14-17	18-22	0.7	5	6	4
4-5	6-11	12-13	14-17	18-22	468	1,384	1,335	1,027
4-5	6-10	11-14	15-17	18-22	5,341*	14,770*	23,584*	16,373
3-4	5-11	12-14	15-16	17-21	1*	3*	2*	2
3-4	5-10	11-13	14-16	17-21	...	...	...	...
3-5	6-11	12-13	14-17	18-22	708	1,454	1,536	1,379
3-5	6-10	11-14	15-16	17-21	2,276	3,944	4,887	4,121
3-5	6-11	12-14	15-16	17-21	215	431	374	406
3-5	6-11	12-14	15-17	18-22	360	764	822	721
4-5	6-11	12-13	14-17	18-22	4	12	12	...
3-4	5-11	12-14	15-16	17-21	2	6	6	7
3-5	6-11	12-13	14-17	18-22	639	1,263	1,194	958
3-5	6-11	12-14	15-17	18-22	957	1,840	1,803	1,470
4-6	7-12	13-15	16-18	19-23	319	679	755	616
3-4	5-11	12-14	15-16	17-21	4	13	9	10
4-6	7-12	13-15	16-17	18-22	1,200	2,340	1,860	1,678
4-5	6-11	12-14	15-16	17-21	23	93	97	85
3-5	6-11	12-14	15-18	19-23	741	1,432	1,590	1,051
3-5	6-11	12-14	15-16	17-21	499	1,042	901	886
3-5	6-11	12-14	15-16	17-21	128	...	262	274
3-5	6-11	12-14	15-17	18-22	6,941	14,074	14,346	11,533
3-4	5-11	12-14	15-16	17-21	...	...	...	...
3-5	6-11	12-14	15-16	17-21	370	736	603	600
3-5	6-11	12-14	15-17	18-22	219	421	413	331
3-5	6-11	12-14	15-17	18-22	406	796	806	670
3-5	6-11	12-14	15-16	17-21	1,780	3,455	2,801	2,790
3-4	5-11	12-14	15-16	17-21	2	7	5	4
3-4	5-11	12-14	15-16	17-21	6	...	16	17
...	...	...	...	...	...	...	...	...
3-4	5-11	12-14	15-16	17-21	4	13	10	10
3-5	6-11	12-13	14-16	17-21	...	...	...	...
4-5	6-11	12-15	16-18	19-23	19	59	67	43
3-4	5-11	12-14	15-16	17-21	39	132	87	91
4-5	6-11	12-14	15-16	17-21	...	...	...	...
3-5	6-11	12-14	15-17	18-22	145	295	304	262
3-5	6-11	12-14	15-16	17-21	1,767	3,476	2,813	2,759
5-5	6-10	11-14	15-17	18-22	810	3,379	4,057	3,492
3-5	6-11	12-14	15-17	18-22	59	107	91	90
4-5	6-11	12-14	15-17	18-22	3,998	10,883	9,658	7,919
4-5	6-11	12-14	15-17	18-22	2,093	5,475	4,711	3,398
3-5	6-11	12-14	15-17	18-22	465	843	766	578
4-5	6-11	12-15	16-17	18-22	368	1,028	929	697
4-5	6-10	11-14	15-17	18-22	...	...	302	...
3-5	6-11	12-14	15-17	18-22	243	532	625	562
4-5	6-11	12-14	15-17	18-22	268	737	640	...
4-5	6-11	12-14	15-17	18-22	1,283	3,522	3,514	3,118
4-5	6-11	12-14	15-17	18-22	136	321	275	...
4-5	6-9	10-15	16-17	18-22	258	477	869	499
3-5	6-11	12-14	15-17	18-22	72	127	105	192
3-5	6-11	12-14	15-17	18-22	1,904	3,512	3,156	2,422
4-5	6-11	12-13	14-16	17-21	2,237	6,260	4,584	...
3-5	6-11	12-14	15-17	18-22	1,390	2,820	2,692	1,755
3-5	6-11	12-14	15-18	19-23	542	976	1,143	932
3-5	6-9	10-13	14-17	18-22	3,999	5,302	10,703	6,400
4-5	6-10	11-14	15-17	18-22	186	396	526	...
3-5	6-11	12-14	15-17	18-22	2,264	4,131	3,698	...
4-4	5-11	12-15	16-17	18-22	315	2,094	1,714	1,602
3-4	5-10	11-14	15-17	18-22	0.6*	2*	2*	1*
3-5	6-11	12-15	16-18	19-23	54	103	109	...

TABLE 1 *(CONTINUED)*

Country or territory	DEMOGRAPHY[1]		GDP AND POVERTY[2]			LEGAL GUARANTEE OF COMPULSORY AND FREE EDUCATION[4]				
			GDP per capita		Population living on less than PPP US$1.90 a day (%)	PRE-PRIMARY EDUCATION		PRIMARY AND SECONDARY EDUCATION		
	Total population (000)	Average annual growth rate (%)	Current US$	Current PPP US$		Compulsory education (age group)	Free education (years)	Compulsory education (age group)	Free education (years)	
									Primary	Secondary
	2017	2017	2015	2015	2004–2014[3]					
Kiribati[7]	116	1.7	1,424	1,995	14.1	.	.	6-15	6	3
Marshall Islands	53	0.1	3,386	3,911	...	5-5	1	6-14	6	2
Micronesia, F. S.[7]	106	1.0	3,015	3,497	17.4	.	.	6-14	6	2
Nauru[6]	10	0.4	9,828	...	...	.	2	6-16	6	6
New Zealand	4,605	0.9	37,808	36,982	...	.	.	6-16	6	7
Niue[6]	2	0.1	...	...	...	.	1	5-16	6	7
Palau[6]	22	1.1	13,499	15,317	...	.	3	6-17	6	6
Papua New Guinea[7]	7,934	2.0	...	...	39.3	.	.	.	.	.
Samoa[7]	196	0.6	3,939	5,935	0.8	.	.	5-14	11	6
Solomon Islands[7]	606	1.8	1,935	2,201	45.6	.	.	.	.	.
Tokelau[6]	1	1.6	...	...	...	.	...	5-16	...	...
Tonga[7]	108	0.8	4,099	5,535	1.1	4-5	.	6-18	.	.
Tuvalu[6]	10	0.4	3,295	3,926	2.7	.	.	6-15	6	.
Vanuatu[7]	276	2.1	2,805	2,988	15.4	.	.	.	.	.
Southern Asia										
Afghanistan	34,169	2.3	594	1,925	...	.	2	7-16	6	6
Bangladesh[7]	164,828	1.1	1,212	3,340	18.5	.	.	6-10	5	.
Bhutan[7]	793	1.1	2,656	8,370	2.2	.	.	.	7	3
India	1,342,513	1.2	1,598	6,101	21.2	.	.	6-14	5	3
Iran, Islamic Republic of	80,946	1.1	...	...	0.1	.	.	6-14	6	2
Maldives[7]	376	1.6	8,396	12,770	7.3	.	.	.	7	5
Nepal	29,187	1.1	743	2,462	15.0	.	.	.	5	3
Pakistan	196,744	2.0	1,435	5,011	6.1	.	.	5-16	5	7
Sri Lanka	20,905	0.4	3,926	11,763	1.9	.	1	5-14	5	8
Sub-Saharan Africa										
Angola	26,656	3.1	4,101	7,387	30.1	.	.	6-11	6	.
Benin	11,459	2.6	762	2,057	53.1	.	.	6-11	6	.
Botswana	2,344	1.7	6,360	15,839	18.2	.	.	.	.	.
Burkina Faso[7]	19,173	2.8	590	1,696	43.7	.	.	6-16	6	4
Burundi[7]	11,936	3.2	277	727	77.7	.	.	.	6	...
Cabo Verde	533	1.2	3,080	6,556	8.1	.	.	6-16	6	2
Cameroon	24,514	2.4	1,217	3,115	24.0	.	.	6-11	6	.
Central African Republic[7]	5,099	2.0	323	619	66.3	.	3	6-16	6	7
Chad[7]	14,965	3.1	776	2,176	38.4	.	3	6-16	6	7
Comoros[7]	826	2.3	717	1,483	13.5	.	.	6-14	6	.
Congo[7]	4,866	2.6	1,851	6,381	37.0	.	3	6-16	6	7
Côte d'Ivoire	23,816	2.4	1,399	3,514	29.0	.	.	6-16	.	.
D. R. Congo[7]	82,243	3.1	456	784	77.1	.	.	6-15	6	.
Djibouti[7]	911	1.3	1,945	3,491	22.5	.	2	6-16	5	7
Equatorial Guinea[7]	894	2.8	14,440	40,719	...	.	.	7-12	6	.
Eritrea[7]	5,482	2.4	...	...	...	.	.	.	.	.
Ethiopia[7]	104,345	2.4	619	1,629	33.5	.	.	.	6	.
Gabon[7]	1,801	2.1	8,266	20,081	8.0	.	.	6-16	5	5
Gambia[7]	2,120	3.1	472	1,680	...	.	.	6-16	6	3
Ghana	28,657	2.2	1,370	4,210	25.2	4-5	2	6-15	6	3
Guinea[7]	13,291	2.6	531	1,209	35.3	.	.	7-12	6	.
Guinea-Bissau[7]	1,933	2.3	573	1,456	67.1	.	.	6-15	.	.
Kenya	48,467	2.5	1,377	3,089	33.6	.	3	6-18	6	6
Lesotho[7]	2,185	1.1	1,067	2,950	59.7	.	.	6-12	7	.
Liberia[7]	4,730	2.5	456	835	68.6	.	.	6-11	6	.
Madagascar[7]	25,613	2.7	402	1,465	77.8	.	3	6-18	5	7
Malawi[7]	18,299	3.0	372	1,184	70.9	.	...	.	6	.
Mali[7]	18,690	3.0	724	2,028	49.3	.	4	7-16	6	6
Mauritania	4,266	2.3	...	...	5.9	.	.	6-16	.	.
Mauritius	1,281	0.3	9,252	20,085	0.5	.	...	5-16	6	7
Mozambique	29,538	2.7	529	1,192	68.7	.	.	.	.	.
Namibia[7]	2,569	2.1	4,674	10,411	22.6	.	.	7-16	7	.
Niger[7]	21,564	4.0	359	955	45.7	.	.	.	.	.
Nigeria[7]	191,836	2.5	2,640	6,004	53.5	.	.	6-15	6	3
Rwanda	12,160	2.3	697	1,762	60.4	.	.	7-16	6	3
Sao Tome and Principe	198	2.1	1,669	3,219	32.3	.	.	6-11	6	.
Senegal	16,054	2.9	900	2,421	38.0	.	.	6-16	6	4
Seychelles	98	0.5	15,476	27,329	1.1	.	.	6-16	6	4
Sierra Leone[7]	6,733	2.1	653	1,569	52.3	.	.	6-15	6	3
Somalia[7]	11,392	2.8	549	...	...	.	3	.	6	6
South Africa[7]	55,436	0.8	5,724	13,209	16.6	.	.	7-15	.	.
South Sudan[7]	13,096	2.7	731	1,854	42.7	.	.	6-11	6	.
Swaziland	1,320	1.2	3,200	8,648	42.0	.	.	6-12	7	.
Togo	7,692	2.5	560	1,460	54.2	.	.	6-15	6	.
Uganda[7]	41,653	3.2	705	1,851	34.6	.	.	6-12	7	.
United Republic of Tanzania	56,878	3.0	879	2,673	46.6	.	2	7-13	7	6
Zambia[7]	17,238	3.1	1,305	3,836	64.4	.	.	.	7	2
Zimbabwe	16,338	2.3	924	1,787	21.4	4-5	2	6-12	.	.

STRUCTURE OF NATIONAL EDUCATION SYSTEM AND OFFICIAL SCHOOL-AGE POPULATION								
Age group					Official school-age population (000)			
Pre-primary	Primary	Lower secondary	Upper secondary	Tertiary	Pre-primary	Primary	Total secondary	Tertiary
School year ending in		School year ending in		School year ending in	School year ending in			
2015		2015		2015	2015[5]			
3-5	6-11	12-14	15-18	19-23	9	15	16	...
4-5	6-11	12-15	16-17	18-22	3	9	7	3
3-5	6-11	12-13	14-17	18-22	7	14	16	...
3-5	6-11	12-15	16-17	18-22	1*	2*	1*	...
3-4	5-10	11-14	15-17	18-22	126	371	418	322
4-4	5-10	11-14	15-17	18-22	0.03*	0.2*	0.2*	...
3-5	6-11	12-13	14-17	18-22	0.7*	1*	1*	...
3-5	6-12	13-14	15-18	19-23	588	1,294	1,006	...
3-4	5-10	11-12	13-17	18-22	10	30	31	...
3-5	6-11	12-14	15-18	19-23	49	91	93	...
3-4	5-10	11-14	15-17	18-22	0.05*	0.1*	0.2*	...
4-5	6-11	12-16	17-18	19-23	5	16	17	...
3-5	6-11	12-15	16-18	19-23	0.8*	1*	1*	...
4-5	6-11	12-15	16-18	19-23	14	38	38	...
5-6	7-12	13-15	16-18	19-23	1,992	5,661	4,850	3,200
3-5	6-10	11-13	14-17	18-22	9,175	15,833	22,931	...
4-5	6-12	13-16	17-18	19-23	28	100	87	...
3-5	6-10	11-13	14-17	18-22	75,865	127,548	175,130	119,470
5-5	6-11	12-13	14-17	18-22	1,323	7,042	6,406	6,681
3-5	6-12	13-15	16-17	18-22	21	44	31	...
3-4	5-9	10-12	13-16	17-21	1,187	3,201	4,729	2,981
3-4	5-9	10-12	13-16	17-21	9,444	21,408	27,126	18,853
4-4	5-9	10-13	14-17	18-22	344	1,749	2,659	1,556
5-5	6-11	12-14	15-17	18-22	845	4,473	3,562	2,375
4-5	6-11	12-15	16-18	19-23	635	1,735	1,696	1,005
3-5	6-12	13-15	1617	18-22	151	321	219	220
3-5	6-11	12-15	16-18	19-23	1,764	3,076	2,868	...
5-6	7-12	13-16	17-19	20-24	682	1,674	1,564	...
3-5	6-11	12-14	15-17	18-22	32	60	63	58
4-5	6-11	12-15	16-18	19-23	1,381	3,731	3,630	2,231
3-5	6-11	12-15	16-18	19-23	391	727	766	...
3-5	6-11	12-15	16-18	19-23	1,429	2,446	2,275	...
3-5	6-11	12-15	16-18	19-23	67	119	119	...
3-5	6-11	12-15	16-18	19-23	421	728	678	...
3-5	6-11	12-15	16-18	19-23	2,013	3,600	3,618	2,105
3-5	6-11	12-13	14-17	18-22	7,588	13,044	10,453	...
4-5	6-10	11-14	15-17	18-22	39	95	126	...
4-6	7-12	13-16	17-18	19-23	69	118	102	...
4-5	6-10	11-13	14-17	18-22	318	729	805	...
4-6	7-12	13-16	17-18	19-23	8,277	15,861	14,297	...
3-5	6-10	11-14	15-17	18-22	134	202	254	...
3-6	7-12	13-15	16-18	19-23	257	321	259	...
4-5	6-11	12-14	15-18	19-23	1,463	3,950	3,972	2,573
4-6	7-12	13-16	17-19	20-24	1,098	1,941	1,893	...
3-5	6-11	12-14	15-17	18-22	159	279	240	...
3-5	6-11	12-13	14-17	18-22	4,156	7,496	6,213	4,296
3-5	6-12	13-15	16-17	18-22	158	343	248	...
3-5	6-11	12-14	15-17	18-22	401	729	608	...
3-5	6-10	11-14	15-17	18-22	2,095	3,199	3,973	...
3-5	6-11	12-15	16-17	18-22	1,667	2,890	2,392	...
3-6	7-12	13-15	16-18	19-23	2,382	2,938	2,289	...
3-5	6-11	12-15	16-18	19-23	341	618	613	370
3-4	5-10	11-13	14-17	18-22	29	99	135	103
3-5	6-12	13-15	16-17	18-22	2,732	5,578	3,309	2,735
5-6	7-13	14-16	17-18	19-23	121	389	267	...
4-6	7-12	13-16	17-19	20-24	2,072	3,372	2,870	...
5-5	6-11	12-14	15-17	18-22	5,514	29,569	23,976	...
4-6	7-12	13-15	16-18	19-23	1,021	1,849	1,548	1,017
3-5	6-11	12-14	15-17	18-22	17	31	26	17
3-5	6-11	12-15	16-18	19-23	1,399	2,406	2,289	1,394
4-5	6-11	12-14	15-18	19-23	3	9	9	7
3-5	6-11	12-14	15-18	19-23	587	1,066	1,039	...
3-5	6-11	12-13	14-17	18-22	1,091	1,851	1,529	...
6-6	7-13	14-15	16-18	19-23	1,121	7,296	5,234	...
3-5	6-11	12-13	14-17	18-22	1,113	1,986	1,725	...
3-5	6-12	13-15	16-17	18-22	101	216	146	151
3-5	6-11	12-15	16-18	19-23	656	1,161	1,100	670
3-5	6-12	13-16	17-18	19-23	4,104	8,176	5,526	...
5-6	7-13	14-17	18-19	20-24	3,366	10,156	6,788	4,589
3-6	7-13	14-15	16-18	19-23	2,140	3,160	1,821	...
4-5	6-12	13-14	15-18	19-23	932	2,822	2,048	1,608

TABLE 1 *(CONTINUED)*

Country or territory	DEMOGRAPHY[1]		GDP AND POVERTY[2]			LEGAL GUARANTEE OF COMPULSORY AND FREE EDUCATION[4]				
			GDP per capita		Population living on less than PPP US$1.90 a day (%)	PRE-PRIMARY EDUCATION		PRIMARY AND SECONDARY EDUCATION		
	Total population (000)	Average annual growth rate (%)	Current US$	Current PPP US$		Compulsory education (age group)	Free education (years)	Compulsory education (age group)	Free education (years)	
									Primary	Secondary
	2017	2017	2015	2015	2004–2014[3]					
	Sum	Weighted average	Median		Median				Median	
World	7,483,931	1.1	5,096	11,690	7.0	...	...	...	6	5
Caucasus and Central Asia	86,219	1.2	3,643	9,059	1.8	...	...	...	4	7
Eastern and South-eastern Asia	2,249,038	0.5	5,815	14,450	2.6	...	...	...	6	3
Eastern Asia	1,601,448	0.3	29,849	35,935	...	...	...	...	6	5
South-eastern Asia	647,590	1.0	2,904	7,387	3.1	...	...	...	6	3
Europe and Northern America	1,103,160	0.3	19,974	31,130	...	...	...	...	6	6
Latin America and the Caribbean	642,661	1.0	7,116	13,559	...	...	...	...	6	5
Caribbean	39,149	0.7	8,474	13,898	...	...	...	...	7	5
Latin America	603,512	1.0	6,056	12,529	3.5	...	...	...	6	6
Northern Africa and Western Asia	479,594	1.7	8,048	15,395	...	...	...	...	6	6
Northern Africa	231,590	1.8	3,615	10,913	...	...	...	...	6	5
Western Asia	248,004	1.7	18,016	37,901	...	...	...	...	6	6
Pacific	39,610	1.3	3,939	4,731	14	...	...	...	6	5
Southern Asia	1,870,461	1.2	1,516	5,556	6.7	...	...	...	5	3
Sub-Saharan Africa	1,013,188	2.6	827	2,176	38.2	...	...	...	6	.
Countries with low income	673,047	2.6	594	1,654	50.8	...	...	...	6	.
Countries with middle income	5,601,321	1.0	3,968	9,198	6.0	...	...	...	6	5
Lower middle	3,010,880	1.4	2,111	5,250	14.1	...	...	...	6	3
Upper middle	2,590,441	0.6	6,383	14,087	2.8	...	...	...	6	5
Countries with high income	1,209,563	0.5	28,261	37,322	...	...	...	...	6	6

Source: UIS database, except where noted.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. United Nations Population Division (UNPD) estimates, revision 2015 (United Nations, 2015), based on the median variant.

2. World Bank (2017); World Bank WDI database, 3 January 2017 update.

3. Data are for the most recent year available during the period specified. For more details see World Bank (2017).

4. Eurydice (2017); UNESCO Global Database on the Right to education; UIS database.

5. Data are for 2015 except for countries with a split calendar school year, in which case data are for 2014.

6. National population data are presented instead of UNPD populations estimates due to inconsistencies in, or lack of, UNPD population data.

7. School-age population data are not presented for some or all levels of education due to inconsistencies in population data.

8. School-age population data are not presented due to lack of United Nations population data by age.

9. For pre-primary education there is legal entitlement but it is not compulsory. Legal entitlement to early childhood care and education (ECCE) means providers have a statutory duty to ensure that publicly subsidized ECCE provision is available for all children living in a given catchment area whose parents, regardless of employment, socio-economic or family status, require a place for them. Children are entitled, but not obliged, to participate (Eurydice, 2014).

(.) The category is not applicable or does not exist.

(...) No data are available.

STRUCTURE OF NATIONAL EDUCATION SYSTEM AND OFFICIAL SCHOOL-AGE POPULATION									
Age group						Official school-age population (000)			
Pre-primary	Primary	Lower secondary	Upper secondary	Tertiary		Pre-primary	Primary	Total secondary	Tertiary
School year ending in		School year ending in		School year ending in		School year ending in			
2015		2015		2015		2015[5]			
						Sum			
...	...	...	...	...		341,271	693,980	757,574	595,555
...	...	...	...	...		6,197	5,599	9,786	7,728
...	...	...	...	...		76,894	167,607	168,814	167,320
...	...	...	...	...		53,991	103,813	104,839	112,300
...	...	...	...	...		22,904	63,794	63,975	55,020
...	...	...	...	...		38,544	64,672	79,703	67,465
...	...	...	...	...		27,830	59,708	67,630	53,749
...	...	...	...	...		1,956	4,020	4,092	3,232
...	...	...	...	...		25,873	55,688	63,538	50,516
...	...	...	...	...		22,707	51,093	53,042	40,647
...	...	...	...	...		9,138	25,758	23,596	19,851
...	...	...	...	...		13,568	25,335	29,446	20,796
...	...	...	...	...		1,183	4,082	3,469	2,830
...	...	...	...	...		99,381	182,585	243,948	168,244
...	...	...	...	...		68,535	158,635	131,181	87,572
...	...	...	...	...		52,878	104,194	89,735	58,311
...	...	...	...	...		248,511	511,023	579,543	461,512
...	...	...	...	...		153,167	317,892	370,001	266,603
...	...	...	...	...		95,344	193,132	209,542	194,909
...	...	...	...	...		39,883	78,763	88,296	75,731

TABLE 2: SDG 4, Target 4.1 – Universal access, participation, completion and learning primary education

By 2030, ensure that all girls and boys complete free, equitable and quality primary education leading to relevant and effective learning outcomes

	ACCESS TO AND PARTICIPATION IN PRIMARY EDUCATION										
	Percentage of pupils over-age for grade (%)[1]	Total enrolment in primary education		Gross enrolment ratio (GER) in primary education (%)			Primary adjusted net enrolment ratio (ANER) (%)			Out-of-school children[2]	
	School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2015	2015		2015			2015			2015	
Country or territory	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Caucasus and Central Asia											
Armenia[7]	0.4	145	47	98	98	98	96**	97**	96**	5**	49**
Azerbaijan[7,8]	2.0	551	46	107*	107*	106*	94**	95**	93**	30**	57**
Georgia[7]	0.9	289	47	117	116	118	...	...	...	...	...
Kazakhstan	**0.2**	**1,274**	**49**	**109**	**109**	**109**	**100**	**100**	**100**	**3**	**15**
Kyrgyzstan	0.4	451	49	107	108	107	98	98	97	9	61
Tajikistan	**0.03**	**718**	48	**100**	**100**	**101**	**99**	**98**	**100**	**8**	**16**
Turkmenistan	...	359[z]	49[z]	89[z]	90[z]	89[z]	...	...	...	...	...
Uzbekistan	**0.1**	**2,261**	**48**	**104**	**106**	**103**	**97**	**98**	**96**	**62**	**68**
Eastern and South-eastern Asia											
Brunei Darussalam	1.0	40	48	108	108	108	...	...	...	...	...
Cambodia	22.9[z]	2,179	49	117	117	116	95**	94**	96	95**	37**
China[7]	...	95,958	46	104	104	104	...	...	...	...	...
DPR Korea	...	1,358	49	...	...	..	...	...	...	...	...
Hong Kong, China[7,9]	0.9**	333	48	...	...	..	...	...	...	...	...
Indonesia[7]	...	29,700	48	106	107	104	91**	91**	90**	2,645**	51**
Japan[7]	-[z]	6,715[z]	49[z]	101[z]	101[z]	101[z]	100**,[z]	100**,[z]	100**,[z]	3[z]	49[z]
Lao PDR	20.3	850	48	111	114	109	93	93	92	56	53
Macao, China	3.0	24	48	100	101	100	95	95	96	1	45
Malaysia	-	3,108	49	102	102	102	98	98	98	58	42
Mongolia	1.3	251	49	101	102	100	97**	98**	97**	7**	61**
Myanmar	3.1[z]	5,177[z]	49[z]	100[z]	101[z]	98[z]	95[z]	...	...	284[z]	...
Philippines	17.7[y]	14,460[y]	48[y]	117[y]	117[y]	117[y]	97[y]	95[y]	99[y]	402[y]	18[y]
Republic of Korea[7]	0.2	2,722	48	99	99	99	99	99	99	34	56
Singapore[7]	...	...	...	...	...	..	...	...	...	...	...
Thailand[7]	3.7	5,081	47	103	106	99	91	94	87	454	67
Timor-Leste	28.6	244	49	137	137	136	97	95	99	5	15
Viet Nam	-	7,544	48	109	109	108	98**,[y]	...	...	127**,[y]	...
Europe and Northern America											
Albania	2.5	188	47	114	116	112	96[z]	...	...	7[z]	...
Andorra[9]	2.4	4	47	...	...	..	...	...	...	...	...
Austria	...	328	49	103	104	102	...	...	...	...	...
Belarus	1.3	387	49	101	101	101	96	95	96	17	40
Belgium	1.4	783	49	104	104	104	99	99	99	6	45
Bosnia and Herzegovina[9]	0.9	163	49	...	...	..	...	...	...	...	...
Bulgaria	1.8[z]	262	48	97	98	97	95	95	95	14	50
Canada[7]	...	2,206[y]	49[y]	101[y]	100[y]	101[y]	99[y]	...	...	12[y]	...
Croatia	0.3	162	49	98	98	98	98	97	100	3	10
Cyprus[8]	0.4	54	49	99*	99*	99*	98*	98*	98*	1*	41*
Czechia[7]	...	535	49	100	100	100	...	...	...	...	...
Denmark[7]	0.4	469	48	102	102	101	99	99	99	6	43
Estonia	0.7	80	49	98	98	99	95	94	96	4	41
Finland[7]	...	355	49	102	102	101	100	99	100	1	16
France[7]	...	4,189[z]	49[z]	105[z]	106[z]	105[z]	99[z]	99[z]	100[z]	22[z]	30[z]
Germany	...	2,879	49	105	105	105	100**	...	...	6**	...
Greece	1.1[z]	629[z]	49[z]	98[z]	98[z]	97[z]	96[z]	97[z]	96[z]	24[z]	53[z]
Hungary	1.4	396	49	102	102	101	96	96	96	17	48
Iceland[7]	-[y]	30[y]	49[y]	99[y]	100[y]	99[y]	99[y]	100[y]	99[y]	0.3[y]	77[y]
Ireland[7]	0.02	545	49	101	101	102	99	..	..	4	...
Italy[7]	0.4	2,856	48	101	101	101	99	99	99	31	57
Latvia	1.5	117	49	100	100	99	97	97	97	4	47
Liechtenstein[8]	0.1	2	49	106*	106*	105*	100*	...	...	0.0*	......
Lithuania	0.4	108	49	103	103	104	99	99	100	0.6	11
Luxembourg	1.9[z]	35[z]	49[z]	97[z]	97[z]	97[z]	96[z]	96[z]	96[z]	1[z]	46[z]
Malta[7]	0.2	25	49	103	102	105	98	97	100	0.4	8
Monaco[9]	...	2	49	...	...	..	...	...	...	...	...
Montenegro	0.9	38	48	94	95	93	94	94	93	3	52
Netherlands[7]	...	1,208	49	105	105	104	99	98	99	16	41
Norway[7]	-	431	49	100	101	100	100	100	100	0.9	78
Poland[7]	...	2,153[z]	49[z]	101[z]	100[z]	101[z]	97[z]	97[z]	97[z]	74[z]	49[z]
Portugal[7]	...	657	48	107	109	105	98	98	98	12	53
Republic of Moldova[8]	0.4	139	48	92*	93*	92*	90*	90*	90*	15*	50*
Romania[7]	...	947	48	90	91	89	90	90	90	104	49
Russian Federation	...	5,983	49	101	100	101	97	97	98	149	36
San Marino	...	...	...	...	...	..	...	...	...	...	...
Serbia[8]	0.6	279	49	101*	101*	101*	99*	99*	99*	2*	43*
Slovakia	...	216	49	100	100	99	...	...	...	...	...
Slovenia[7]	0.6[z]	112[z]	49[z]	99[z]	99[z]	99[z]	98[z]	97[z]	98[z]	2[z]	37[z]

	PROGRESSION AND COMPLETION				LEARNING ASSESSMENTS AND OUTCOMES[4]					
	Gross intake rate (GIR) to last grade (%)			Primary education completion rate[3]	Existence of nationally representative learning assessment		Percentage of pupils in early primary education grades (2 or 3) achieving at least a minimum proficiency level (%)[6] in:		Percentage of pupils at end of primary education achieving at least a minimum proficiency level (%)[6] in:	
					In early grades (2 or 3) of primary education	At the end of primary education				
	School year ending in			Most recent survey year	Most recent survey year	Most recent survey year	Reading	Mathematics	Reading	Mathematics
	2015			2010–2015[5]	2010–2016[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total			Total	Total	Total	Total
	99	98	100	100	No	Yes[LN]	...	...	...	72[I]
	103*	105*	102*	...	No	Yes[I]	...	...	82[I]	71[I]
	121	120	122	...	Yes[LN]	No	87[I]	78[I]	...	...
	113	113	113	100	No	Yes[LN]	...	...	...	96[I]
	112	113	111	99	No	No	...	...	...	...
	96	**96**	**96**	98	No	Yes[N]	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	99	**100**	**98**	...	No	...	...	...	...	...
	103	102	104	...	Yes[N]	No	...	...	...	...
	95	94	96	72	Yes[N]	No	...	...	...	...
	92	93	91	97	Yes[N]	No	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	Yes[I]	...	...	100[I]	...	...
	102	105	99	95	Yes[I]	No	66[I]	50[I]	...	...
	...	...	...	...	Yes[I]	Yes[N]	...	99[I]	...	...
	100	101	99	67	Yes[N]	No	...	...	...	...
	91	90	91	...	...	...	...	...	...	...
	101	101	102	...	No	No	...	...	...	...
	98	99	98	98	No	Yes[N]	...	...	...	...
	85[2]	...	...	81	Yes[N]	Yes[N]	...	...	...	...
	101[9]	97[9]	105[9]	90	Yes[LN]	Yes[N]	...	...	...	...
	102	102	101	...	Yes[I]	Yes[N]	...	100[I]	...	...
	...	...	...	...	Yes[I]	No	97[I]	99[I]	...	...
	93	96	90	99	Yes[LN]	Yes[N]	...	78[I]	...	...
	106	103	110	...	No	No	...	...	...	...
	104	104	104	96	Yes[I]	Yes[N]	...	...	...	...
	106	108	105	...	Yes[N]	Yes[N]			...	...
	...	...	...	...	...	...			...	...
	101	102	100	...	No	Yes[LN]	...	...	97[I]	95[I]
	97	98	97	100	...	...			...	...
	89	87	91	...	No	No	...	...	...	...
	...	...	...	99	No	No			...	...
	98	98	98	...	No	Yes[LN]	...	...	93[I]	92[I]
	...	...	...	...	Yes[I]	No	98[I]	93[I]	...	...
	100	100	100	...	No	Yes[I]	...	...	99[I]	93[I]
	97*	96*	98*	...	Yes[LN]	Yes[N]	...	93[I]	...	...
	96	96	96	...	No	Yes[I]	...	...	98[I]	96[I]
	99	99	98	...	Yes[LN]	Yes[N]	99[I]	96[I]	...	...
	102	101	102	...	Yes[N]	Yes[N]	...	...	...	...
	100	100	100	...	Yes[I]	Yes[N]	100[I]	97[I]	...	...
	...	...	...	...	Yes[N]	Yes[LN]	...	...	95[I]	87[I]
	103	103	102	...	Yes[N]	Yes[I]	...	...	97[I]	96[I]
	96[2]	96[2]	96[2]	...	...	...	...	...	...	...
	97	97	97	...	No	Yes[LN]	...	...	95[I]	92[I]
	...	...	...	...	Yes[N]	Yes[N]	...	...	...	...
	...	...	...	...	Yes[LN]	Yes[I]	97[I]	97[I]	...	...
	100	100	100	...	Yes[N]	Yes[LN]	...	...	98[I]	93[I]
	103	102	104	...	Yes[N]	Yes[N]	...	...	...	...
	106*	99*	113*	...	...	...			...	
	102	101	103	...	No	Yes[LN]	...	...	97[I]	96[I]
	79[2]	78[2]	81[2]	...	Yes[N]	No	...	...	...	...
	99	99	100	...	Yes[I]	No	78[I]	89[I]	...	...
	...	...	...	...	...	...	...	...	...	...
	93	92	93	99	Yes[N]	No	...	...	...	...
	...	...	...	...	Yes[LN]	Yes[LN]	100[I]	99[I]	...	...
	98	98	98	...	Yes[LN]	Yes[LN]	96[I]	98[I]	...	...
	98[2]	98[2]	98[2]	...	Yes[I]	Yes[LN]	95[I]	96[I]	...	...
	...	...	...	...	Yes[LN]	Yes[LN]	98[I]	97[I]	...	...
	91*	91*	91*	99	...	...	...	...	...	...
	92	93	92	...	No	Yes[I]	...	...	86[I]	79[I]
	101	101	102	100	No	Yes[I]	...	...	99[I]	98[I]
	...	...	...	...	...	...	...	...	...	...
	101*	101*	101*	98	No	Yes[LN]	...	...	...	90[I]
	97	98	97	...	No	Yes[I]	...	...	96[I]	88[I]
	99[2]	99[2]	99[2]	...	Yes[I]	Yes[N]	96[I]	95[I]	...	...

TABLE 2 *(CONTINUED)*

Country or territory	ACCESS TO AND PARTICIPATION IN PRIMARY EDUCATION										
	Percentage of pupils over-age for grade (%)[1]	Total enrolment in primary education		Gross enrolment ratio (GER) in primary education (%)			Primary adjusted net enrolment ratio (ANER) (%)			Out-of-school children[2]	
	School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2015	2015		2015			2015			2015	
	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Spain[7]	0.2	3,010	49	105	104	106	99	99	100	14	34
Sweden[7]	0.1	792	50	123	121	126	100	100	100	2	44
Switzerland	0.2	490	49	104	104	104	100	99	100	2	18
TFYR Macedonia	0.5	109	49	93	94	93	91	91	91	10	50
Ukraine[9]	1.0	1,537	49	104[z]	103[z]	105[z]	97[z]	96[z]	98[z]	56[z]	34[z]
United Kingdom	...	4,737[z]	49[z]	108[z]	108[z]	108[z]	100[z]	...	...	6[z]	...
United States[7]	3.5	24,786	49	100	100	100	94	94	95	1,372	46
Latin America and the Caribbean											
Anguilla	...	...	...	...	...	..	...	...	...	...	...
Antigua and Barbuda	3.7	10	49	97	100	94	90	91	90	1	52
Argentina	4.2[z]	4,780[z]	49[z]	110[z]	110[z]	110[z]	100[z]	100[z]	99[z]	14[z]	80[z]
Aruba	9.0[z]	10[z]	48[z]	117[z]	119[z]	115[z]	99**,[z]	99**,[z]	99**,[z]	0.1**,[z]	40**,[z]
Bahamas	...	...	...	...	...	..	...	...	...	...	...
Barbados	5.1[z]	21[z]	49[z]	94[z]	93[z]	94[z]	91[z]	91[z]	92[z]	2[z]	43[z]
Belize	8.1	52	48	113	116	110	99	100	99	0.4	80
Bermuda	-	4	49	90	91	89	...	...	...	...	...
Bolivia, P.S.[7]	7.5	1,344	48	97	98	96	90	91	89	140	52
Brazil[7,8]	8.8	17,036	48	115*	117*	114*	95*	94*	95*	772*	42*
British Virgin Islands[8]	1.4	3	47	99*	...	...	...	...	...	...	...
Cayman Islands[9]	0.3[y]	4[y]	50[y]	...	...	...	...	...	...	...	...
Chile	5.4	1,478	48	102	103	100	94	94	94	82	50
Colombia[7]	14.7	4,479	48	114	115	112	93	93	93	269	47
Costa Rica	7.4	473	49	110	110	109	97	97	96	15	51
Cuba	0.4	746	47	98	100	95	92	92	92	59	48
Curaçao	...	21[y]	48[y]	175[y]	179[y]	171[y]	...	...	...	...	...
Dominica	4.0	8	49	116	117	115	...	...	...	...	...
Dominican Republic	19.0	1,307	47	103	108	99	89	89	88	142	51
Ecuador	**5.0**	**1,998**	**49**	**108**	**107**	**108**	**98**	**97**	**99**	**34**	**22**
El Salvador	16.8	741	48	109	111	107	92	92	93	54	46
Grenada	1.9	13	48	105	107	103	98	98	98	0.3	53
Guatemala	18.6	2,382	48	102	104	100	88	88	88	280	50
Guyana	...	...	...	...	...	...	...	...	...	...	...
Haiti	...	...	...	...	...	...	...	...	...	...	...
Honduras	15.7	1,154	49	111	111	110	94	93	94	67	43
Jamaica[9]	1.2	258	49	...	...	...	...	...	...	...	...
Mexico	2.9[z]	14,627[z]	49[z]	103[z]	104[z]	103[z]	98**,[z]	97**,[z]	98**,[z]	340**,[z]	38**,[z]
Montserrat[9]	-[z]	0.4[z]	49[z]	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	...	...	...	...
Panama	9.4[z]	427[z]	48[z]	102[z]	104[z]	101[z]	93[z]	94[z]	93[z]	28[z]	51[z]
Paraguay	...	...	...	...	...	...	...	...	...	...	...
Peru	6.6	3,513	49	102	102	102	98	98	98	73	40
Saint Kitts and Nevis	0.3	5	50	83	82	83	80	79	82	1	46
Saint Lucia[9]	1.0[z]	17	49	...	...	...	...	...	...	...	...
Saint Martin	...	...	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	1.3	13	49	105	106	103	99	99	99	0.2	48
Sint-Maarten[9]	15.4[z]	4[z]	49[z]	...	...	...	...	...	...	...	...
Suriname	20.7	72	48	123	124	121	95	94	95	3	45
Trinidad and Tobago[7]	...	...	...	...	...	...	...	...	...	...	...
Turks and Caicos Islands[9]	1.2	3	49	...	...	...	...	...	...	...	...
Uruguay	12.4[z]	322[z]	48[z]	109[z]	110[z]	107[z]	95[z]	95[z]	94[z]	16[z]	49[z]
Venezuela, B. R.	7.5	3,476	48	100	101	99	92	92	92	265	49
Northern Africa and Western Asia											
Algeria	6.3	3,925	48	116	120	113	99	...	...	40	...
Bahrain[7]	1.7	108	49	101	101	102	98	98	98	2	37
Egypt	2.2[z]	11,128[z]	48[z]	104[z]	104[z]	104[z]	99[z]	99[z]	99[z]	113[z]	29[z]
Iraq	...	...	...	...	...	...	...	...	...	...	...
Israel[7]	0.5	884	49	105	104	105	98	97	98	21	42
Jordan[7]	0.4[y]	980[z]	49[z]	97[z]	97[z]	98[z]	89[y]	89[y]	89[y]	105[y]	50[y]
Kuwait[7,9]	1.2	263	49	...	...	...	99[z]	98[z]	99[z]	3[z]	25[z]
Lebanon[7]	10.6	491	48	92	97	88	84	86	81	88	59
Libya	...	...	...	...	...	...	...	...	...	...	...
Morocco[7]	14.1[z]	4,039	47	115	118	112	99[z]	99[z]	99[z]	37[z]	54[z]
Oman	1.2	351	50	109	107	111	98	98	98	6	50
Palestine	0.8	450	49	94	94	94	92	92	93	37	46
Qatar[7]	1.3	130	49	103	102	104	97	96	97	4	39
Saudi Arabia[7]	12.0	3,845	49	109	108	111	98	97	98	81	33
Sudan	...	4,292[y]	47[y]	70[y]	74[y]	67[y]	...	...	...	...	...
Syrian Arab Republic	4.9[y]	1,547[y]	48[y]	80[y]	81[y]	79[y]	71[y]	72[y]	70[y]	563[y]	50[y]

	PROGRESSION AND COMPLETION				LEARNING ASSESSMENTS AND OUTCOMES[4]					
	Gross intake rate (GIR) to last grade (%)			Primary education completion rate[3]	Existence of nationally representative learning assessment		Percentage of pupils in early primary education grades (2 or 3) achieving at least a minimum proficiency level (%)[6] in:		Percentage of pupils at end of primary education achieving at least a minimum proficiency level (%)[6] in:	
					In early grades (2 or 3) of primary education	At the end of primary education				
	School year ending in			Most recent survey year	Most recent survey year	Most recent survey year	Reading	Mathematics	Reading	Mathematics
	2015			2010–2015[5]	2010–2016[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total			Total	Total	Total	Total
	99	99	100	...	Yes[I]	No	95[I]	93[I]	...	...
	104	104	104	...	Yes[I,N]	Yes[N]	98[I]	95[I]	...	...
	96	94	97	...	...	...	...	...	...	...
	90	90	89	99	No	No	...	...	...	...
	110[Z]	109[Z]	112[Z]	...	No	No	...	...	...	...
	...	...	...	...	Yes[N]	Yes[N]	...	...	...	...
	...	...	...	99	Yes[I]	No	...	95[I]	...	...
	...	...	...	...	Yes[N]	Yes[N]	...	...	...	...
	85	87	82	...	...	...	...	...	...	...
	102[Z]	102[Z]	101[Z]	92	Yes[N,R]	Yes[N,R]	62[R]	61[R]	83[R]	63[R]
	101[Z]	101[Z]	101[Z]	...	...	...	...	...	...	...
	...	...	...	...	Yes[N]	Yes[N]	...	...	...	...
	96[Z]	92[Z]	99[Z]	98	Yes[N]	No	...	...	...	...
	104	105	104	85	Yes[N]	Yes[N]	...	...	...	...
	81	...	...	...	...	...	...	...	...	...
	90	91	90	96	...	...	...	...	...	...
	...	...	...	85	Yes[N,R]	Yes[N,R]	66[R]	63[R]	89[R]	60[R]
	88*	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	95	95	95	97	Yes[I,N,R]	Yes[N,R]	90[R]	78[R]	95[R]	84[R]
	100	101	100	95	Yes[N,R]	Yes[I,N,R]	68[R]	52[R]	90[R]	58[R]
	99	99	100	95	Yes[R]	Yes[N,R]	82[R]	77[R]	96[R]	70[R]
	96	95	97	100	Yes[N]	Yes[N]	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	111	106	117	...	...	...	...	...	...	...
	94	96	93	92	Yes[N,R]	Yes[R]	26[R]	15[R]	62[R]	20[R]
	109	**108**	**109**	98	Yes[N,R]	Yes[N,R]	62[R]	52[R]	79[R]	55[R]
	100	101	99	86	Yes[N]	Yes[N]	...	...	...	...
	89[Z]	89[Z]	90[Z]	...	...	...	...	...	...	...
	85	86	84	79	Yes[N,R]	Yes[N,R]	54[R]	40[R]	80[R]	44[R]
	...	...	...	98	Yes[N]	Yes[N]	...	...	...	...
	...	...	...	44	...	...	...	...	...	...
	92	92	93	83	Yes[N,R]	Yes[N,R]	54[R]	44[R]	75[R]	38[R]
	...	...	...	99	Yes[N]	Yes[N]	...	...	...	...
	105[Z]	104[Z]	105[Z]	97	Yes[N,R]	Yes[N,R]	67[R]	70[R]	90[R]	77[R]
	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	Yes[R]	Yes[N,R]	44[R]	32[R]	74[R]	29[R]
	100[Z]	101[Z]	98[Z]	94	Yes[R]	Yes[R]	51[R]	40[R]	74[R]	33[R]
	...	...	...	90	Yes[N,R]	Yes[N,R]	43[R]	33[R]	66[R]	31[R]
	99	99	100	96	Yes[N,R]	Yes[R]	68[R]	60[R]	82[R]	62[R]
	85	84	86	...	Yes[N]	Yes[N]	...	...	...	...
	...	...	...	99	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	98	98	99	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	95	90	99	80	...	...	...	...	...	...
	...	...	...	...	Yes[I,N]	Yes[N]	78[I]	...	...	...
	...	...	...	...	...	...	...	...	...	...
	103[Z]	103[Z]	104[Z]	97	Yes[N,R]	Yes[N,R]	71[R]	68[R]	89[R]	74[R]
	95	95	96	95	Yes[N]	Yes[N]	...	...	...	...
	106	106	105	94	...		...	...	...	...
	99	97	100	...	Yes[I,N]	Yes[N]	...	72[I]	...	...
	104[Y]	103[Y]	104[Y]	91	Yes[I]	No	...	...	...	...
	...	...	...	65	...	...	...	...	...	...
	109	107	110	100	Yes[I]	Yes[N]	93[I]	...	...	...
	91[Z]	91[Z]	91[Z]	98	Yes[I]	Yes[N]	...	50[I]	...	...
	103**[,Y]	100**[,Y]	107**[,Y]	...	No	Yes[I]	...	...	...	33[I]
	72	73	71	...	Yes[I]	Yes[I]	...	...	58[I]	33[I]
	...	...	...	...	...	...	...	...	...	...
	103	104	102	...	Yes[I]	Yes[N]	19[I]	41[I]	...	...
	105	105	105	...	Yes[I]	No	46[I]	61[I]	...	...
	96	96	95	99	No	Yes[N]	...	...	...	...
	92	90	94	...	Yes[I,N]	Yes[N]	58[I]	64[I]	...	...
	108	107	109	...	Yes[I,N]	Yes[N]	65[I]	43[I]	...	...
	57[Y]	59[Y]	54[Y]	65	No	No	...	...	...	...
	69[Y]	69[Y]	69[Y]	...	No	No	...	...	...	...

TABLE 2 *(CONTINUED)*

Country or territory	ACCESS TO AND PARTICIPATION IN PRIMARY EDUCATION										
	Percentage of pupils over-age for grade (%)[1]	Total enrolment in primary education		Gross enrolment ratio (GER) in primary education (%)			Primary adjusted net enrolment ratio (ANER) (%)			Out-of-school children[2]	
	School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2015	2015		2015			2015			2015	
	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Tunisia[7]	5.0	1,115	48	114	116	113	100[g]	..	..	4[g]	...
Turkey	...	5,434	49	102	103	102	94	95	94	305	53
United Arab Emirates	1.6	461	49	116	117	116	96**	96**	96**	16**	52**
Yemen	17.1[g]	3,875[g]	45[g]	97[g]	106[g]	89[g]	85[g]	92[g]	78[g]	583[g]	73[g]
The Pacific											
Australia	0.2	2,141	49	102	102	102	97**	97**	97**	59**	43**
Cook Islands[8]	0.2	2	48	103*	106*	99*	97*	...	...	0.05*	...
Fiji[7]	4.0	109	48	106	106	105	98	98	98	2	39
Kiribati[7]	3.7	16	50	104	103	106	97	...	...	0.5	...
Marshall Islands[7]	...	8	48	93	93	93	78	76	81	2	43
Micronesia, F. S.[7]	-	14	48	96	95	96	84	83	85	2	44
Nauru[7,8]	0.2[z]	2[z]	48[z]	105*[,z]	110*[,z]	100*[,z]	87*[,z]	89*[,z]	84*[,z]	0.2*[,z]	58*[,z]
New Zealand[7]	0.2	368	49	99	100	99	...	...	...	3	60
Niue[7,8]	-	0.2	49	133*	147*	120*	...	...	...	...	...
Palau[7,8]	**15.7**	**1**	**47**	**100***	**100***	**99***	**80***	**74***	**87***	**0.3**	**32***
Papua New Guinea[7]	...	...	...	...	...	...	...	...	...	...	...
Samoa[7]	8.7	32	48	107	107	107	97	97	98	0.8	38
Solomon Islands[7]	74.9	104	48	114	115	114	71	70	71	27	48
Tokelau[7]	...	**0.2**	45	**118***	**121***	**114***	...	...	...	...	...
Tonga	2.3[z]	17[z]	48[z]	108[z]	109[z]	107[z]	99[z]	...	...	0.2[z]	...
Tuvalu[7,8]	0.1	1	48	104*	103*	104*	98*	...	...	0.02*	...
Vanuatu	49.5	46	47	120	121	119	87	86	88	5	43
Southern Asia											
Afghanistan	5.5	6,334	40	112	132	91	...	...	...	...	...
Bangladesh	4.0[g]	19,068	51	120	116	125	...	...	...	...	...
Bhutan[7]	14.5[z]	**97**	**49**	**97**	**97**	**97**	89[z]	88[z]	90[z]	11[z]	44[z]
India	4.6[g]	138,518	50	109	103	115	98**[,g]	97**[,g]	98**[,g]	2,886**[,g]	32**[,g]
Iran, Islamic Republic of[7]	2.5	7,670	50	109	106	112	99	...	...	53	...
Maldives[7]	**1.1**	**44**	**49**	**98**	**97**	**99**	**95**	**94**	**96**	**2**	**38**
Nepal	**36.0**	**4,265**	51	**136**	**131**	**141**	**97**	**97**	**97**	**91**	**55**
Pakistan	-	19,847	44	93	100	85	74*	79*	68*	5,599*	59*
Sri Lanka[7]	0.7	1,778	49	102	103	101	99	98[z]	96[z]	16	...
Sub-Saharan Africa											
Angola	...	...	...	...	...	...	...	...	...	...	...
Benin	11.5	2,238	47	129	134	124	96[z]	...	...	70[z]	...
Botswana[7]	18.9[z]	341[z]	49[z]	108[z]	109[z]	106[z]	91[g]	91[g]	92[g]	27[g]	46[g]
Burkina Faso	37.3	2,707	48	88	90	86	70	71	68	933	52
Burundi	34.0	2,072	51	124	123	124	95	94	96	90	42
Cabo Verde	10.1	66	48	110	113	107	97	97	97	2	48
Cameroon	15.8	4,370	47	117	123	111	95	100	91	182	96
Central African Republic	...	...	...	...	...	...	...	...	...	...	...
Chad	...	2,331[g]	43[g]	101[g]	115[g]	88[g]	79**[,g]	89**[,g]	69**[,g]	480**[,g]	74**[,g]
Comoros[7]	25.0[z]	120[z]	47[z]	103[z]	107[z]	99[z]	81[z]	83[z]	80[z]	22[z]	53[z]
Congo	...	...	...	...	...	...	...	...	...	...	...
Côte d'Ivoire	23.1[z]	3,371	47	94	99	88	79	84	75	747	61
D. R. Congo	...	13,535[z]	47[z]	107[z]	112[z]	102[z]	...	...	...	...	...
Djibouti	**11.8**	**62**	46	**65**	**69**	**61**	57	61	54	40	53
Equatorial Guinea	38.7	93	49	79	80	78	57	57	57	51	49
Eritrea	29.5	362	45	50	53	46	39	41	37	443	50
Ethiopia	22.2	16,198	47	102	107	97	86**	89**	83**	2,194**	61**
Gabon	...	...	...	...	...	...	...	...	...	...	...
Gambia[7]	**27.7**	**309**	**51**	**93**	**90**	**97**	**76**	**72**	**80**	**79**	**42**
Ghana	**33.3**	**4,358**	**49**	**108**	**107**	**109**	**88**	**87**	**89**	**486**	**46**
Guinea	15.0[z]	1,730[z]	45[z]	91[z]	99[z]	84[z]	78[z]	84[z]	72[z]	417[z]	63[z]
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...
Kenya	...	8,169	50	109	109	109	...	...	...	...	...
Lesotho[7]	34.0	362	49	106	107	104	81	79	82	66	46
Liberia	85.5[z]	684	46	94	99	89	38	39	36	455	50
Madagascar	...	4,764	50	149	149	149	...	...	...	...	...
Malawi	35.9	4,205	50	145	144	147	...	...	...	...	...
Mali	16.4	2,227	47	76	79	72	61	64	57	1,154	53
Mauritania	40.1	633	50	102	100	105	80	78	82	124	45
Mauritius	0.6	102	49	103	102	104	96	95	97	4	35
Mozambique	38.9	5,902**	48**	106**	110**	101**	89	91	87	606	60
Namibia	26.9[g]	425[g]	49[g]	111[g]	113[g]	110[g]	91[g]	89[g]	92[g]	36[g]	42[g]
Niger	5.6	2,445	45	72	78	67	63	68	58	1,238	55
Nigeria	...	26,168[g]	48[g]	94[g]	94[g]	93[g]	...	...	...	...	...

	PROGRESSION AND COMPLETION				LEARNING ASSESSMENTS AND OUTCOMES[4]					
	Gross intake rate (GIR) to last grade (%)			Primary education completion rate[3]	Existence of nationally representative learning assessment		Percentage of pupils in early primary education grades (2 or 3) achieving at least a minimum proficiency level (%)[6] in:		Percentage of pupils at end of primary education achieving at least a minimum proficiency level (%)[6] in:	
					In early grades (2 or 3) of primary education	At the end of primary education				
	School year ending in			Most recent survey year	Most recent survey year	Most recent survey year	Reading	Mathematics	Reading	Mathematics
	2015			2010–2015[5]	2010–2016[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total			Total	Total	Total	Total
	100[z]	99[z]	100[z]	94	Yes[I]	Yes[N]	...	33[I]	...	...
	92	92	91	...	Yes[I]	Yes[I]	...	82[I]	...	81[I]
	109	110	108	...	Yes[I,N]	Yes[I,N]	...	...	64[I]	68[I]
	69[y]	77[y]	61[y]	63	Yes[I]	No	...	8[I]	...	...
	...	...	...	...	Yes[I,N]	Yes[N]	94[I]	91[I]	95[N]	96[N]
	94*	93*	94*	...	Yes [N,R]	Yes[R]	...	...	...	...
	106	106	107	...	Yes[N,R]	Yes[N,R]	...	...	...	...
	112[z]	106[z]	120[z]	...	Yes[N,R]	Yes[N,R]	...	...	...	...
	...	...	...	...	Yes[R]	Yes[R]	...	...	...	...
	...	...	...	...	Yes[R]	Yes[R]	...	...	...	...
	112*[,z]	128*[,z]	97*[,z]	...	Yes[R]	Yes[R]	...	...	...	...
	...	...	...	...	Yes[I,N]	No	92[I]	84[I]	...	...
	115*	136*	100*	...	Yes[R]	Yes[R]	...	...	...	...
	80*	**79***	**81***	...	Yes[R]	Yes[R]	...	...	...	...
	...	...	...	...	Yes[R]	Yes[R]	...	...	...	...
	103	102	105	...	Yes[N,R]	Yes[N,R]	...	...	...	...
	89	89	89	...	Yes[N,R]	Yes[N,R]	...	...	...	...
	...	...	...	...	Yes[R]	Yes[R]	...	...	...	...
	111[y]	115[y]	106[y]	...	Yes[N]	Yes[N]	...	...	...	...
	98*	88*	109*	...	Yes[N,R]	Yes[N,R]	...	...	...	...
	94[y]	90[y]	98[y]	...	Yes[I,R]	Yes[R]	...	...	...	...
	...	...	...	41	No	Yes[N]	...	...	...	...
	98	90	107	80	Yes[N]	Yes[N]	...	...	...	...
	99	**94**	**104**	68	No	Yes[N]	...	...	...	...
	98[z]	95[z]	100[z]	88	Yes[N]	Yes[N]	...	...	...	...
	102	102	102	...	Yes[I]	No	76[I]	65[I]	...	...
	92	**95**	**89**	...	Yes[N]	Yes[N]	...	...	...	...
	110	**105**	**116**	75	Yes[I,N]	Yes[N]	...	...	...	...
	72	78	65	61	No	Yes[N]	...	...	...	...
	99	100	98	...	No	Yes[N]	...	...	...	...
	...	...	...	...	No	No	...	...	...	...
	78	83	73	59	Yes[I,N]	Yes[I,N]	10[I]	34[I]	52[I]	40[I]
	100[y]	98[y]	101[y]	...	Yes[I]	No	26[I]	...	...	...
	62	61	63	31	Yes[I,N]	Yes[I]	35[I]	59[I]	57[I]	59[I]
	62	58	66	40	Yes[I]	Yes[I]	79[I]	97[I]	57[I]	87[I]
	102	100	104	...	Yes[N]	Yes[N]	...	...	...	...
	74	78	70	69	Yes[I]	Yes[I]	30[I]	55[I]	49[I]	35[I]
	...	...	...	38	...	...	...	...	...	...
	38[y]	46[y]	30[y]	27	Yes[I]	Yes[I]	18[I]	48[I]	16[I]	19[I]
	76[z]	74[z]	79[z]	69	Yes[I]	Yes[I]	...	...	...	...
	...	...	...	74	Yes[I]	Yes[I]	38[I]	71[I]	41[I]	29[I]
	63	69	57	44	Yes[I,N]	Yes[I]	17[I]	34[I]	48[I]	27[I]
	67[y]	73[y]	60[y]	69	No	No	...	...	...	...
	64	**69**	**60**	...	...		...	...	...	...
	50	50	51	...	...	...	...	...	...	...
	39	42	36	...	No[N]	No	...	...	...	...
	54	55	53	40	Yes[N]	No	...	...	...	...
	...	...	...	76	No	No	...	...	...	...
	71	**68**	72	62	Yes[N]	Yes[N]	...	...	...	...
	101	101	101	66	Yes[I,N]	Yes[N]	...	...	...	...
	62[z]	68[z]	56[z]	42	Yes[N]	Yes[N]	...	...	...	...
	...	...	...	38	Yes[N]	No	...	...	...	...
	105	105	106	84	Yes[N,R]	No	29[R]	32[R]	...	...
	77	68	86	65	Yes[N]	Yes[N]	...	...	...	...
	59[z]	63[z]	54[z]	34	Yes[I]	No	...	...	...	...
	69	67	71	...	Yes[I]	Yes[N]	...	...	...	...
	79[z]	79[z]	80[z]	54	Yes[I,N]	No	...	...	...	...
	51	53	48	42	Yes[N]	Yes[N]	...	...	...	...
	68	66	70	49	No	No	...	...	...	...
	101	99	103	...	No	No	...	...	...	...
	48	51	45	42	No	No	...	...	...	...
	86[y]	84[y]	89[y]	83	No	Yes[N]	...	...	...	...
	69	76	62	28	Yes[I,N]	Yes[I,N]	10[I]	28[I]	9[I]	8[I]
	...	...	...	68	Yes[N]	Yes[N]	...	...	...	...

TABLE 2 *(CONTINUED)*

	ACCESS TO AND PARTICIPATION IN PRIMARY EDUCATION										
	Percentage of pupils over-age for grade (%)[1]	Total enrolment in primary education		Gross enrolment ratio (GER) in primary education (%)			Primary adjusted net enrolment ratio (ANER) (%)			Out-of-school children[2]	
	School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2015	2015		2015			2015			2015	
Country or territory	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Rwanda	36.2[z]	2,451	50	133	132	133	95	94	96	91	40
Sao Tome and Principe	17.7	**36**	**48**	**115**	**118**	**112**	96	97	95	1	62
Senegal	9.8	1,977	52	82	78	87	73	70	76	650	43
Seychelles	0.3	9	50	102	101	104	95	95	96	0.4	38
Sierra Leone	22.7	1,360	50	128	127	128	99	99	99	7	55
Somalia	...	...	...	...	...	...	...	...	...	...	...
South Africa[7]	...	7,195[z]	49[z]	100[z]	102[z]	97[z]	...	...	...	...	...
South Sudan	77.3	1,274	41	64	75	53	31**	35**	27**	1,371**	52**
Swaziland	49.3[z]	240[z]	48[z]	113[z]	118[z]	108[z]	80**,[z]	80**,[z]	80**,[z]	43**,[z]	50**,[z]
Togo	19.9	1,414	49	122	125	118	97	96[z]	90[z]	30	...
Uganda[7]	34.8	8,459[y]	50[y]	110[y]	109[y]	111[y]	94[y]	92[y]	95[y]	477[y]	38[y]
United Republic of Tanzania[7]	7.4[y]	8,298	51	82	80	83	80**,[z]	79**,[z]	81**,[z]	1,955**,[z]	49**,[z]
Zambia	28.2[y]	3,075[y]	50[y]	104[y]	103[y]	104[y]	89[y]	88[y]	90[y]	325[y]	45[y]
Zimbabwe	22.7[y]	2,663[y]	50[y]	100[y]	101[y]	99[y]	86[y]	86[y]	87[y]	365[y]	47[y]
	Median	Sum	% F	Weighted average			Weighted average			Sum	% F
World	3.1	723,840	48	104	105	104	91**	92**	90**	61,364**	53**
Caucasus and Central Asia	0.4	5,806	48	104	104	103	97	97	96	191	58
Eastern and South-eastern Asia	2.2	176,123	47	105	105	105	96**	96**	96**	6,947**	48**
Eastern Asia	0.9	107,307	47	103	103	103	97**	97**	97**	2,885**	46**
South-eastern Asia	3.7	68,817	48	108	109	107	94	94	94	4,062	49
Europe and Northern America	0.6	65,653	49	102	102	101	97	97	97	2,090	45
Latin America and the Caribbean	5.2	65,330	48	109	110	108	95	95	96	2,884	45
Caribbean	1.3	5,115	48	127	129	125	92	91	93	320	45
Latin America	8.1	60,215	48	108	109	107	95	95	96	2,565	45
Northern Africa and Western Asia	2.0	51,265**	48**	100**	103**	98**	89**	90**	88**	5,462**	54**
Northern Africa	5.7	25,642**	48**	100**	102**	97**	88**	88**	89**	3,017**	48**
Western Asia	1.5	25,623**	47**	101**	104**	98**	90**	93**	88**	2,446**	62**
Pacific	1.3	4,346	48	106	108	105	93	94	93	269	55
Southern Asia	4.0	197,692	49	108	105	112	94**	95**	93**	10,871**	53**
Sub-Saharan Africa	24.0	157,624**	48**	99**	102**	96**	79**	82**	77**	32,649**	55**
Countries with low income	25.0	107,066	48	103	106	99	81**	83**	79**	19,854**	56**
Countries with middle income	4.3	535,597	48	105	104	105	92**	93**	92**	39,421**	52**
Lower middle	9.4	331,495	49	104	103	106	90**	91**	89**	30,955**	52**
Upper middle	2.5	204,102	47	106	107	104	96**	96**	95**	8,466**	50**
Countries with high income	0.7	81,177	49	103	103	103	97	97	98	2,090	46

Source: UIS database, except where noted. Enrolment ratios and gross intake rates to last grade are based on the United Nations Population Division estimates, revision 2015 (United Nations, 2015), median variant.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. Over-age pupils are defined as those whose age is at least two years higher than the official age of entry in a given grade.

2. Data reflect the actual number of children not enrolled at all, derived from the age-specific or adjusted net enrolment ratio of primary school age children, which measures the proportion of those who are enrolled in either primary or secondary school.

3. UIS database; GEM Report team calculations based on data from national and international household surveys.

4. Cheng and Omoeva (2014); Ministry of education national reports and websites; EGMA/EGRA; PASEC (for all countries in sub-Saharan Africa except Kenya, Uganda, South Africa, and U. R. Tanzania); PILNA (for countries in the Pacific); PIRLS 2011; TERCE (for countries in Latin America); TIMSS 2011 and 2015; Uwezo (for Kenya, Uganda and the United Republic of Tanzania). 'Nationally representative learning assessment' refers to national (N), regional (R) and international (I) formative low-stake learning assessments.

5. Data are for the most recent year available in the period specified.

6. The minimun proficiency level in reading and mathematics is as defined by each assessment. Data need to be interpreted with caution since the different assessments are not comparable. The sources are available at the SDG Indicators Global Database https://unstats.un.org/sdgs/indicators/database/?indicator=4.1.1.

7. In the absence of assessments conducted in the proposed indicator grade, surveys of student learning achievement in the grade below or above the proposed indicator grade are used as placeholders to report on learning assessments and/or learning outcomes in early grades and at the end of primary education.

8. National population data were used to calculate GIR, GER and NER due to inconsistencies in the United Nations population data or lack of United Nations population by age.

9. Enrolment ratios and gross intake rates were not calculated due to inconsistencies in the United Nations population data or lack of United Nations population by age.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(-) Magnitude nil or negligible.

(...) No data are available.

	PROGRESSION AND COMPLETION				LEARNING ASSESSMENTS AND OUTCOMES[4]					
	Gross intake rate (GIR) to last grade (%)			Primary education completion rate[3]	Existence of nationally representative learning assessment		Percentage of pupils in early primary education grades (2 or 3) achieving at least a minimum proficiency level (%)[6] in:		Percentage of pupils at end of primary education achieving at least a minimum proficiency level (%)[6] in:	
					In early grades (2 or 3) of primary education	At the end of primary education				
	School year ending in			Most recent survey year	Most recent survey year	Most recent survey year	Reading	Mathematics	Reading	Mathematics
	2015			2010–2015[5]	2010–2016[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total			Total	Total	Total	Total
	61	55	66	54	Yes[L,N]	Yes[I]	...	...	...	...
	83	**81**	**85**	78	No	Yes[N]	...	...	...	...
	57	54	61	50	Yes[L,N]	Yes[L,N]	29[I]	62[I]	61[I]	59[I]
	109	107	110	...	No	No	...	...	...	...
	66	67	65	67	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...
	...	...	...	94	Yes[L,N]	Yes[N]	33[I]	39[I]	...	...
	...	...	...	25	No	Yes[N]	...	...	...	...
	79[g]	78[g]	80[g]	66	No	Yes[N]	...	...	...	...
	84	89	80	61	Yes[I]	Yes[I]	20[I]	41[I]	38[I]	48[I]
	53	53	53	39	Yes[N,R]	Yes[N]	10[R]	13[R]	...	...
	74[g]	70[g]	77[g]	73	Yes[L,R]	No	12[R]	44[R]	...	...
	81[g]	82[g]	80[g]	75	No	Yes[N]	...	...	...	...
	90[g]	90[g]	91[g]	86	Yes[N]	No	...	...	...	...
	Weighted average			Weighted average			Median	Median	Median	Median
	90**	90**	90**	83	...	...	...	...	...	...
					...	...	...	...	...	...
	104	105	104	...	...	...	...	...	...	...
	96**	97**	95**	95	...	...	...	...	...	...
	93**	94**	93**	...	...	...	...	...	...	...
	100**	100**	99**	...	...	...	...	...	...	...
	98**	98**	99**	...	...	...	...	...	...	...
	100**	100**	100**	90	...	...	...	...	...	...
	99**	98**	100**	...	...	...	...	...	...	...
	100**	100**	100**	...	...	...	...	...	...	...
	88**	90**	86**	80	...	...	...	...	...	...
	93**,z	93**,z	92**,z	...	...	...	...	...	...	...
	84**	87**	81**	...	...	...	...	...	...	...
	95**	94**	96**	...	...	...	...	...	...	...
	93**	90**	96**	83	...	...	...	...	...	...
	70**	73**	68**	59	...	...	...	...	...	...
					...	...	...	...	...	...
	66**	68**	63**	50	...	...	...	...	...	...
	93**	92**	94**	87	...	...	...	...	...	...
	92**	91**	94**	83	...	...	...	...	...	...
	95	95	94	95	...	...	...	...	...	...
	99**	98**	100**	...	...	...	...	...	...	...

TABLE 3: SDG 4, Target 4.1 – Universal access, participation, completion and learning secondary education

By 2030, ensure that all girls and boys complete free, equitable and quality secondary education leading to relevant and effective learning outcomes

Country or territory	ACCESS AND PARTICIPATION IN SECONDARY EDUCATION													
	Effective transition from primary to lower secondary general education (%)			Percentage of students over-age for grade in lower secondary education (%)[1]	Total enrolment in secondary education		Gross enrolment ratio (GER) (%) in total secondary education			Lower secondary total net enrolment ratio (NERT) (%)			Lower secondary out-of-school adolescents[2]	
	School year ending in			School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2014			2015	2015		2015			2015			2015	
	Total	Male	Female	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Caucasus and Central Asia														
Armenia[8]	100	100	100	...	240	48	89	88	89	...	...	...	...	...
Azerbaijan[9]	99	100	99	4	...	...	...	...	...	90**	91**	89**	62**	52**
Georgia[10]	100	99	100	2	278	48	104	104	104	99[z]	...	...	1[z]	...
Kazakhstan	**100**	**100**	**100**	**0.6**	**1,713**	**49**	**112**	**111**	**113**	100[y]	...	...	3[y]	...
Kyrgyzstan	99	99	99	0.7	643	49	92	91	93	94	94	94	30	49
Tajikistan	**99**	**100**	**99**	**0.0**	1,063[y]	46[y]	88[y]	92[y]	83[y]	...	...	...	...	...
Turkmenistan	...	...	...	...	651[z]	48[z]	85[z]	87[z]	84[z]	...	...	...	...	...
Uzbekistan	**99**	**100**	**99**	**0.2**	**3,909**	**49**	**96**	**97**	**95**	**97**	**98**	**97**	**62**	**64**
Eastern and South-eastern Asia														
Brunei Darussalam	99	100	99	4	47	48	96	96	96	98[z]	...	...	0.3[z]	...
Cambodia	82	80	83	27	...	...	...	...	...	86**	87**	86**	123**	52**
China	100	99	100	...	86,127	47	94	93	96	...	...	...	...	...
DPR Korea	...	...	...	...	2,148	49	93	93	94	95	95	96	53	46
Hong Kong, China[10]	100	100	100	5*	394	47	101	103	99	98**	99**	98**	3**	66**
Indonesia	92	88	96	8	23,756	49	86	86	86	84**	82**	87**	2213**	41**
Japan[10]	...	...	...	-[z]	7,227[z]	49[z]	102[z]	102[z]	102	100[z]	...	...	3[z]	...
Lao PDR	89	90	88	36	640	47	62	64	59	80	81	79	116	52
Macao, China[10]	100	99	100	19	30	48	96	97	96	87	86	88	2	44
Malaysia[10]	88	87	88	-	2,991	50	78	75	81	88	86	90	197	41
Mongolia[10]	...	...	...	...	282	50	91	91	92	...	...	...	...	...
Myanmar	...	...	...	14[z]	3,191[z]	50[z]	51[z]	51[z]	52[z]	56[z]	...	...	1857[z]	...
Philippines	...	...	...	23[y]	7,220[y]	51[y]	88[y]	84[y]	93[y]	96[y]	93[y]	98[y]	272[y]	18[y]
Republic of Korea[10]	100	100	100	0.3	3,397	48	99	99	98	99	100	99	11	79
Singapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thailand[10]	96	97	96	4	6,757	48	129	133	125	93	94	91	192	62
Timor-Leste	94	94	95	47	129	51	77	74	80	90	89	90	9	48
Viet Nam[10]	94	97	91	-	...	...	...	...	...	...	...	...	...	...
Europe and Northern America														
Albania[10]	99	99	99	4	315	47	96	99	93	99	100	98	2	89
Andorra[8]	...	...	...	10	4	48	...	...	...	...	...	...	...	...
Austria[10]	100	100	100	...	691	48	100	102	98	...	...	...	...	...
Belarus	98	98	99	1	644	48	107	108	106	100	...	...	0.2	...
Belgium[10]	...	...	...	7	1,218	52	167	156	178	99	100	99	1	65
Bosnia and Herzegovina	99	100	99	0.4	278	49	...	...	...	...	...	...	...	...
Bulgaria[10]	99	99	99	5[z]	501	48	99	101	97	95	96	95	11	54
Canada[10]	...	...	...	...	2,698[y]	49[y]	110[y]	110[y]	110[y]	...	...	...	...	...
Croatia[10]	...	...	...	...	360	50	98	96	101	99	...	...	3	...
Cyprus[9,10]	99	99	100	2	57	49	100*	100*	99*	98*	98*	98*	0.5*	50*
Czechia[10]	100	100	100	...	770	49	106	105	106	...	...	...	...	...
Denmark	100	100	100	0.9	553	50	131	128	133	98	98	99	4	35
Estonia	99	99	99	4	78	49	115	116	115	99[y]	...	...	0.3[y]	...
Finland	100	100	100	...	540	51	149	143	156	99	100	99	1	66
France[10]	...	...	...	1[z]	5,947[z]	49[z]	111[z]	110[z]	111[z]	100[z]	...	...	2[z]	...
Germany	100	100	99	...	7,113	47	103	106	100	...	...	...	...	...
Greece[10]	99[y]	100[y]	98[y]	5[z]	668[z]	48[z]	106[z]	109[z]	103[z]	97[z]	98[z]	96[z]	8[z]	68[z]
Hungary[10]	100	100	100	3	827	49	105	105	105	98	98	98	7	51
Iceland	...	...	...	0.0[y]	38[y]	50[y]	119[y]	116[y]	121[y]	98[y]	97[y]	98[y]	0.3[y]	35[y]
Ireland	...	...	...	0.2	355	49	127	126	129	...	...	...	...	...
Italy[10]	100	100	100	3	4,606	48	103	104	102	100	...	...	6	...
Latvia	98	98	98	4	118	48	119	120	119	100[y]	...	...	0.2[y]	...
Liechtenstein[9]	...	...	...	0.8	3	44	116*	131*	102*	96*	98*	93*	0.1*	80*
Lithuania[10]	100	99	100	3	263	48	108	110	106	100	...	...	0.2	...
Luxembourg[10]	...	...	...	8[z]	47[z]	49[z]	102[z]	101[z]	103[z]	95[z]	93[z]	97[z]	0.9[z]	29[z]
Malta	97	100	94	0.5	29	50	95	92	98	99	...	...	0.1	...
Monaco[8]	...	...	...	...	3	49	...	...	...	...	...	...	...	...
Montenegro[10]	...	...	...	0.5	61	48	90	90	90	...	...	...	...	...
Netherlands[10]	...	...	...	...	1,613	49	135	135	136	100	...	...	2	...
Norway	100	100	100	-	437	48	113	115	111	100	...	...	0.5	...
Poland	99[y]	100[y]	99[y]	...	2,641[z]	48[z]	108[z]	110[z]	106[z]	96[z]	96[z]	96[z]	46[z]	49[z]
Portugal[10]	...	...	...	...	779	49	119	121	117	99	...	...	3	...
Republic of Moldova[9,10]	98	99	97	0.8	233	49	86*	86*	86*	85*	86*	85*	27*	49*
Romania[10]	...	...	...	4[y]	1,563	49	92	93	92	91	92	91	72	52
Russian Federation	100	100	100	...	9,385	48	104	106	103	...	...	...	...	...
San Marino	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Serbia[9,10]	99	100	99	0.7	553	49	97*	96*	97*	100*	100*	100*	0.1*	12*
Slovakia[10]	99	99	99	...	454	49	92	92	93	...	...	...	...	...

	Upper secondary total net enrolment ratio (NERT) (%)			Upper secondary out-of-school youth[3]		PROGRESSION AND COMPLETION IN SECONDARY EDUCATION					LEARNING ASSESSMENTS AND OUTCOMES[6]		
						Gross intake rate (GIR) to last grade of lower secondary education (%)			Lower secondary education completion rate[4]	Upper secondary education completion rate[4]	Existence of nationally representative learning assessment at the end of lower secondary education	Percentage of students at end of lower secondary education achieving at least a minimum proficiency level (%)[7] in:	
	School year ending in			School year ending in		School year ending in						Reading	Mathematics
	2015			2015		2015			2010–2015[5]	2010–2015[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total (000)	% F	Total	Male	Female	Total	Total		Total	Total
	…	…	…	…	…	…	…	…	94	60	Yes[L,N]	…	76[I]
	…	…	…	…	…	86*	88*	84*	…	…	No	…	…
	88	88	89	17	46	108	109	107	99	96	Yes[L,N]	48[I]	43[I]
	98	…	…	**9**	…	**115**	**115**	**116**	100	95	Yes[L,N]	43[I]	91[I]
	69	63	74	66	40	90	90	91	95	81	No	…	…
	…	…	…	…	…	**98**	**100**	**95**	90	62	…	…	…
	…	…	…	…	…	…	…	…	…	…	…	…	…
	88	**89**	**87**	**190**	**53**	**94**	**95**	**94**	…	…	No	…	…
	80	79	82	7	43	104	104	104	…	…	…	…	…
	…	…	…	…	…	48	47	49	41	21	No	…	…
	…	…	…	…	…	99	98	100	83	61	Yes[N]	…	…
	57	57	58	494	48	…	…	…	…	…	…	…	…
	86**	86**	85**	31**	51**	100	100	100	…	…	Yes[I]	91[I]	91[I]
	73**	75**	71**	3,666**	53**	91	87	96	78	51	Yes[I]	45[I]	31[I]
	96[z]	95[z]	97[z]	148[z]	39[z]	…	…	…	…	…	Yes[L,N]	87[I]	89[I]
	54	57	50	211	53	61	63	58	35	25	No	…	…
	81	80	83	3	45	94	93	95	…	…	Yes[I]	88[I]	93[I]
	59	54	64	921	42	87	83	91	…	…	Yes[I]	47[I]	76[I]
	…	…	…	…	…	…	…	…	84	65	Yes[N]	…	…
	39[z]	…	…	1,217[z]	…	49[z]	47[z]	50[z]	44	15	No	…	…
	80[y]	77[y]	85[y]	396[y]	38[y]	82[y]	77[y]	88[y]	75	72	No	…	…
	96	96	96	77	52	108	109	107	…	…	Yes[L,N]	86[I]	85[I]
	…	…	…	…	…	…	…	…	…	…	Yes[I]	89[I]	92[I]
	86	87	85	379	52	84	84	84	85	56	Yes[L,N]	50[I]	46[I]
	77	76	78	18	46	78	74	81	…	…	…	…	…
	…	…	…	…	…	100	100	99	81	55	Yes[L,N]	86[I]	81[I]
	80	81	79	31	51	97	97	97	…	…	Yes[I]	50[I]	47[I]
	…	…	…	…	…	…	…	…	…	…	…	…	…
	…	…	…	…	…	96	97	95	99	88	Yes[L,N]	78[I]	78[I]
	98[z]	97[z]	99[z]	4[z]	21[z]	110	110	109	100	87	…	…	…
	100	100	100	2	22	97	95	98	92	86	Yes[I]	81[I]	80[I]
	…	…	…	…	…	…	…	…	94	69	No	…	…
	84	86	82	42	54	46	50	42	93	80	Yes[L,N]	59[I]	58[I]
	…	…	…	…	…	…	…	…	100	86	Yes[L,N]	89[I]	86[I]
	89	86	92	22	37	…	…	…	99	95	Yes[I]	80[I]	68[I]
	95*	94*	95*	2*	46*	98*	98*	98*	99	93	Yes[I]	64[I]	57[I]
	…	…	…	…	…	99	99	100	99	94	Yes[I]	78[I]	78[I]
	88	87	88	26	46	98	97	99	99	82	Yes[I]	85[I]	86[I]
	97	96	98	1	36	114	116	111	98	83	Yes[I]	89[I]	89[I]
	94	94	93	12	51	100	100	100	100	89	Yes[L,N]	89[I]	86[I]
	100[z]	…	…	5[z]	…	103[z]	103[z]	104[z]	99	86	Yes[L,N]	79[I]	77[I]
	…	…	…	…	…	58	58	57	92	80	Yes[L,N]	84[I]	83[I]
	96[z]	96[z]	96[z]	13[z]	51[z]	95[z]	96[z]	95[z]	99	93	Yes[I]	73[I]	64[I]
	90	90	90	39	49	96	95	96	99	86	Yes[L,N]	73[I]	72[I]
	82[y]	80[y]	84[y]	3[y]	43[y]	…	…	…	100	70	Yes[L,N]	78[I]	76[I]
	…	…	…	…	…	108	107	109	97	94	Yes[I]	90[I]	85[I]
	95	95	95	141	51	100	101	100	99	83	Yes[L,N]	79[I]	77[I]
	96	95	97	2	39	111	110	113	99	84	Yes[I]	82[I]	79[I]
	87*	…	…	0.2*	…	93*	103*	84*	…	…	Yes[I]	88[I]	86[I]
	94	93	96	4	36	105	108	102	98	89	Yes[I]	75[I]	75[I]
	82[z]	80[z]	83[z]	5[z]	44[z]	97[z]	96[z]	98[z]	90	69	Yes[L,N]	74[I]	74[I]
	88	83	93	2	28	95	95	95	99	75	Yes[I]	64[I]	84[I]
	…	…	…	…	…	…	…	…	…	…	…	…	…
	…	…	…	…	…	90	89	90	96	55	Yes[I]	58[I]	48[I]
	100	…	…	1	…	…	…	…	94	79	Yes[L,N]	82[I]	83[I]
	91	91	92	17	45	100	100	100	99	78	Yes[I]	85[I]	83[I]
	92[z]	91[z]	92[z]	109[z]	47[z]	95[z]	96[z]	95[z]	98	92	Yes[I]	86[I]	83[I]
	99	98[y]	97[y]	4	…	…	…	…	94	65	Yes[I]	83[I]	76[I]
	61*	60*	62*	33*	48*	84*	83*	85*	95	66	Yes[I]	54[I]	50[I]
	82	81	82	156	47	89	88	89	96	81	Yes[I]	61[I]	60[I]
	…	…	…	…	…	99	98	100	99	87	Yes[I]	84[I]	81[I]
	…	…	…	…	…	…	…	…	…	…	…	…	…
	89*	88*	91*	31*	42*	102*	102*	102*	92	75	Yes[L,N]	67[I]	61[I]
	…	…	…	…	…	88	89	88	100	92	Yes[L,N]	68[I]	72[I]

TABLE 3 *(CONTINUED)*

Country or territory	ACCESS AND PARTICIPATION IN SECONDARY EDUCATION													
	Effective transition from primary to lower secondary general education (%)			Percentage of students over-age for grade in lower secondary education (%)[1]	Total enrolment in secondary education		Gross enrolment ratio (GER) (%) in total secondary education			Lower secondary total net enrolment ratio (NERT) (%)			Lower secondary out-of-school adolescents[2]	
	School year ending in			School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2014			2015	2015		2015			2015			2015	
	Total	Male	Female	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Slovenia[10]	100[y]	99[y]	100[y]	0.8[z]	145[z]	48[z]	111[z]	111[z]	111[z]	99[z]	99[z]	99[z]	0.7[z]	48[z]
Spain	100	100	100	9	3,313	49	130	130	130	100	...	...	0.8	...
Sweden	100	100	100	0.3	844	52	140	132	150	100	...	...	0.4	...
Switzerland	100	100	100	0.9	614	48	101	103	99	100	...	...	0.7	...
TFYR Macedonia[10]	100**	100**	100**	...	169	48	79	80	78	...	...	...	...	...
Ukraine[10]	89	89	89	2	2,370	48	99[z]	100[z]	98[z]	100**,[z]	...	...	8**,[z]	...
United Kingdom[10]	...	...	...	...	6,557[z]	50[z]	128[z]	125[z]	130[z]	98[z]	98[z]	99[z]	32[z]	48[z]
United States[10]	...	...	...	4	24,230[z]	49[z]	98[z]	97[z]	98[z]	99[z]	...	...	115[z]	...
Latin America and the Caribbean														
Anguilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	...	...	...	18	8	50	103	102	104	94	94	95	0.3	42
Argentina[10]	97[y]	95[y]	100[y]	15[z]	4,451[z]	51[z]	107[z]	103[z]	110[z]	100[z]	...	...	9[z]	...
Aruba	...	...	...	31[z]	...	...	...	...	...	...	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barbados	...	...	...	11[z]	21[z]	50[z]	109[z]	108[z]	111[z]	99[z]	...	...	0.1[z]	...
Belize	96	97	95	17	38	51	81	80	82	89	90	88	3	54
Bermuda	51	...	...	-	4	52	72	68	76	...	...	...	...	...
Bolivia, P.S.	97	97	97	17	1,153	49	86	87	86	91	91	90	41	52
Brazil[9,10]	...	...	...	18	23,502	50	100*	97*	102*	94*	94*	95*	741*	47*
British Virgin Islands[9]	99	100	98	21	2	51	99*	...	...	...	...	...	...	...
Cayman Islands[8]	97[x]	93[x]	100[x]	1[y]	3[y]	50[y]	...	...	...	...	...	...	...	...
Chile[10]	97	97	98	9	1,546	49	101	100	101	95	95	95	23	50
Colombia[10]	98[x]	98[x]	95[x]	23	4,794	51	98	95	102	95	94	95	173	44
Costa Rica[10]	84	85	82	28	460	50	123	121	126	92	92	92	18	51
Cuba	98	98	99	1	825	49	100	98	103	98	98	99	6	24
Curaçao	...	...	...	...	11[y]	51[y]	88[y]	86[y]	91[y]	...	...	...	...	...
Dominica	96	100	93	12	6	49	100	101	100	99	...	...	0.0	...
Dominican Republic	95	93	98	22	929	52	78	74	82	96	98	94	17	73
Ecuador	**96**	**96**	**96**	**10**	**1,932**	**50**	**107**	**105**	**109**	**99**	...	...	**11**	...
El Salvador	93	94	93	23	600	50	79	79	80	98	98	97	9	59
Grenada	98[y]	...	...	9	9	49	99	99	99	98	98	97	0.1	61
Guatemala	84	88	80	28	1,221	48	66	68	63	73	77	69	304	56
Guyana	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Honduras[10]	75	74	77	33	638	54	71	65	77	74	73	75	141	47
Jamaica	91	86	96	3	215	51	82	79	85	83	81	86	25	40
Mexico[10]	97[y]	97[y]	96[y]	4[z]	12,993[z]	51[z]	91[z]	88[z]	93[z]	...	...	...	...	...
Montserrat[8]	...	...	...	...	0.3[z]	48[z]	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Panama	...	...	...	...	312[z]	51[z]	76[z]	73[z]	78[z]	...	...	...	...	...
Paraguay	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peru[10]	95	96	95	11	2,682	49	96	96	96	90	89	91	168	46
Saint Kitts and Nevis	100	100	100	0.6	4	51	90	88	93	88	88	88	0.3	49
Saint Lucia	97[y]	97[y]	98[y]	3[z]	13	50	85	85	85	91	...	...	0.9	...
Saint Martin	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	99	100	98	13	10	49	106	108	105	...	...	...	...	...
Sint-Maarten[8]	...	...	...	18[z]	3[z]	50[z]	...	...	...	...	...	...	...	...
Suriname	70	59	79	37	55	55	81	72	91	89	87	90	4	42
Trinidad and Tobago[10]	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Turks and Caicos Islands[8]	...	...	...	3	2	52	...	...	...	...	...	...	...	...
Uruguay[10]	...	...	...	25[z]	292[z]	52[z]	95[z]	90[z]	100[z]	95[z]	94[z]	95[z]	8[z]	46[z]
Venezuela, B. R.	99	99	98	12	2,523	51	90	86	93	90	90	91	163	45
Northern Africa and Western Asia														
Algeria	99	100	98	27	...	...	...	...	...	...	...	...	...	...
Bahrain[10]	100	100	100	4	92	49	102	102	102	98	99	96	1	72
Egypt[10]	...	...	...	...	8,208[z]	49[z]	86[z]	86[z]	86[z]	94[z]	93[z]	95[z]	286[z]	39[z]
Iraq	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Israel[10]	100	100	100	1.0	785	49	102	102	103	100[z]	...	...	0.8[z]	...
Jordan	99[y]	98[y]	100[y]	1[z]	749[z]	50[z]	82[z]	80[z]	85[z]	84[y]	84[y]	84[y]	96[y]	47[y]
Kuwait	98**,[x]	97**,[x]	100**,[x]	4	287	50	95	88	103	95	...	...	9	...
Lebanon[10]	89	89	90	13	382	51	61	61	61	...	...	...	...	...
Libya	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Morocco[10]	89[y]	92[y]	85[y]	26[z]	...	...	...	...	...	...	...	...	...	...
Oman[10]	99	99	100	7	287	49	104	101	108	96[y]	...	...	5[y]	...
Palestine[10]	99	97	100	2	721	51	83	79	87	88	86	90	80	42
Qata[10]	100	100	99	4	96	48	91	82	104	93	89	97	4	19
Saudi Arabia[10]	95	90	100	16	3,419**,[z]	43**,[z]	108**,[z]	123**,[z]	94**,[z]	93**,[y]	96**,[y]	90**,[y]	114**,[y]	73**,[y]
Sudan	96[x]	95[x]	97[x]	...	1,871[y]	48[y]	43[y]	44[y]	41[y]	...	...	...	...	...

	Upper secondary total net enrolment ratio (NERT) (%)			Upper secondary out-of-school youth[3]		PROGRESSION AND COMPLETION IN SECONDARY EDUCATION					LEARNING ASSESSMENTS AND OUTCOMES[6]		
						Gross intake rate (GIR) to last grade of lower secondary education (%)			Lower secondary education completion rate[4]	Upper secondary education completion rate[4]	Existence of nationally representative learning assessment at the end of lower secondary education	Percentage of students at end of lower secondary education achieving at least a minimum proficiency level (%)[7] in:	
	School year ending in			School year ending in		School year ending in						Reading	Mathematics
	2015			2015		2015			2010–2015[5]	2010–2015[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total (000)	% F	Total	Male	Female	Total	Total		Total	Total
	95[z]	95[z]	96[z]	4[z]	45[z]	94[z]	93[z]	95[z]	100	93	Yes[I]	85[I]	84[I]
	98	98	99	21	38	94	91	97	93	67	Yes[I,N]	84[I]	78[I]
	98	99	97	7	65	106	106	106	100	93	Yes[I,N]	82[I]	79[I]
	81	82	80	67	52	97	95	99	99	79	Yes[I]	80[I]	84[I]
	...	...	...	...	...	85**	85**	84**	86	47	Yes[I,N]	29[I]	30[I]
	94**[z]	92**[z]	95**[z]	53**[z]	37**[z]	96[z]	96[z]	95[z]	99	95	Yes[I]	...	81[I]
	99[z]	...	...	25[z]	...	...	...	...	100	83	Yes[I,N]	82[I]	78[I]
	92[z]	92[z]	93[z]	944[z]	42[z]	...	...	...	99	92	Yes[I,N]	81[I]	71[I]
	...	...	...	...	...	...	...	...	...	...	No	...	...
	77	79	75	0.7	54	91	88	94	...	...	...	...	...
	88[z]	84[z]	93[z]	239[z]	28[z]	89[z]	88[z]	91[z]	75	66	Yes[I,N]	46[I]	34[I]
	...	...	...	...	...	99[z]	95[z]	103[z]	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	No	...	...
	97[z]	...	...	0.2[z]	...	...	...	...	98	94	No	...	...
	62	61	63	6	48	68	63	73	43	20	No	...	...
	...	...	...	...	...	80	...	...	...	...	...	...	...
	83	84	83	148	51	90	90	91	...	...	Yes[N]	...	...
	84*	84*	84*	1,669*	49*	...	...	...	82	63	Yes[I,N]	49[I]	30[I]
	...	...	...	...	...	102*	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...
	94	93	95	62	44	94	93	94	88	51	Yes[I,N]	72[I]	51[I]
	84	83	85	262	45	78	73	83	82	75	Yes[I,N]	57[I]	34[I]
	86	85	88	22	44	59	56	63	64	46	Yes[I,N]	60[I]	38[I]
	80	76	83	85	39	92	90	94	98	86	Yes[N]	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...
	78	80	76	0.5	54	97	96	97	...	...	...	...	...
	75	74	76	196	47	76	72	80	83	59	Yes[I,N]	28[I]	10[I]
	80	**81**	**80**	**180**	**50**	**105**	**103**	**106**	86	66	Yes[N]	...	...
	72	73	70	110	52	88	86	89	73	35	Yes[N]	...	...
	84	84	85	0.6	47	87	87	88	...	...	...	...	...
	48	51	45	380	52	63	64	61	49	36	Yes[N]	...	...
	...	...	...	...	...	...	...	...	86	55	Yes[N]	...	...
	...	...	...	...	...	...	...	...	32	12	...	...	...
	55	51	59	162	45	53	47	58	48	40	Yes[I,N]	...	21[I]
	72	69	75	31	44	90	87	92	96	79	No	...	...
	...	...	...	...	...	81[z]	79[z]	82[z]	84	53	Yes[I,N]	58[I]	43[I]
	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	No	...	...
	...	...	...	...	...	...	...	...	76	62	No	...	...
	...	...	...	...	...	...	...	...	...	...	Yes[N]	...	...
	79	78	79	236	48	86	84	87	80	74	Yes[I]	46[I]	34[I]
	80	76	84	0.4	39	99	99	99	...	...	No	...	...
	65	54	77	2	34	87[z]	86[z]	87[z]	96	82	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	98	97	100	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...
	66	62	69	10	44	50	36	65	47	25	...	...	...
	...	...	...	...	...	...	...	...	...	...	Yes[I]	58[I]	48[I]
	...	...	...	...	...	...	...	...	...	...	...	...	...
	83[z]	79[z]	86[z]	27[z]	39[z]	61[y]	54[y]	68[y]	63	33	Yes[I]	61[I]	48[I]
	71	69	72	325	46	76	71	80	...	...	Yes[N]	...	...
	...	...	...	...	...	76	68	85	56	29	Yes[I]	21[I]	19[I]
	91	90	93	4	39	99	101	97	...	...	Yes[I,N]	...	75[I]
	77[z]	79[z]	76[z]	1,058[z]	52[z]	83**[z]	81**[z]	85**[z]	80	42	Yes[I,N]	...	47[I]
	...	...	...	...	...	...	...	...	38	19	...	...	...
	99	...	...	6	...	106	105	106	98	88	Yes[I,N]	73[I]	68[I]
	79[y]	75[y]	83[y]	61[y]	39[y]	81[z]	80[z]	83[z]	89	59	Yes[I,N]	54[I]	32[I]
	72	66	79	36	35	89**[y]	83**[y]	96**[y]	...	...	Yes[I]	...	45[I]
	...	...	...	...	...	53	52	55	...	...	Yes[I]	30[I]	40[I]
	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	68[z]	70[z]	66[z]	...	...	Yes[I,N]	...	41[I]
	89	83	97	15	14	105	102	109	...	...	Yes[I]	...	52[I]
	64	56	73	76	37	75	67	82	86	62	Yes[N]	...	...
	69	57	87	17	16	88	85	93	...	...	Yes[I,N]	48[I]	41[I]
	91**[z]	...	...	135**[z]	...	108	109	107	...	...	Yes[I,N]	...	34[I]
	...	...	...	...	...	50[y]	53[y]	48[y]	38	...	...	...	...

TABLE 3 *(CONTINUED)*

Country or territory	ACCESS AND PARTICIPATION IN SECONDARY EDUCATION													
	Effective transition from primary to lower secondary general education (%)			Percentage of students over-age for grade in lower secondary education (%)[1]	Total enrolment in secondary education		Gross enrolment ratio (GER) (%) in total secondary education			Lower secondary total net enrolment ratio (NERT) (%)			Lower secondary out-of-school adolescents[2]	
	School year ending in			School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2014			2015	2015		2015			2015			2015	
	Total	Male	Female	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Syrian Arab Republic[10]	57[x]	57[x]	57[x]	8[y]	1,857[y]	49[y]	50[y]	50[y]	51[y]	59[y]	60[y]	58[y]	979[y]	50[y]
Tunisia[10]	91[y]	89[y]	93[y]	15	1,008	...	88	...	...	...	...	...	...	...
Turkey[10]	...	...	...	...	10,969	48	102	104	101	94*,[z]	95*,[z]	93*,[z]	309*,[z]	56*,[z]
United Arab Emirates[10]	100[y]	100[y]	100[y]	4[z]	...	...	...	...	...	...	...	...	...	...
Yemen	90[x]	91[x]	89[x]	23[y]	1,768[y]	40[y]	49[y]	57[y]	40[y]	...	...	...	...	...
The Pacific														
Australia	...	...	...	2	2,371[z]	47[z]	138[z]	141[z]	134[z]	100**	...	...	2**	...
Cook Islands[9]	95	99	91	0.5	2	50	86*	83*	90*	96**	96**	95**	0.0**	53**
Fiji	...	...	...	8	...	...	...	...	...	...	...	...	...	...
Kiribati	...	...	...	13	...	...	...	...	...	...	...	...	...	...
Marshall Islands	...	...	...	...	5	50	77	73	80	78	78	78	1	48
Micronesia, F. S.	...	...	...	-	...	...	...	...	...	82[z]	80[z]	84[z]	0.9[z]	42[z]
Nauru[9]	...	...	...	...	1[z]	49[z]	83*,[z]	82*,[z]	83*,[z]	87*,[z]	87*,[z]	88*,[z]	0.1*,[z]	46*,[z]
New Zealand[10]	...	...	...	0.3	487	50	117	113	120	98	98	98	4	44
Niue[9]	77	...	...	2	0.2	58	110*	104*	114*	...	...	...	...	...
Palau[9]	97[y]	98[y]	95[y]	**26**	**1**	**47**	**96***	**96***	**95***	**65***	**80***	**48***	**0.2***	**69***
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Samoa	99	99	99	12	26	51	85	81	90	97	98	97	0.2	58
Solomon Islands	95	94	96	74	...	...	...	...	...	...	...	...	...	...
Tokelau	...	...	...	...	**0.1**	**50**	**125***	**129***	**121***	...	...	...	...	...
Tonga	...	...	...	3[z]	15[z]	50[z]	90[z]	86[z]	94[z]	96[z]	94[z]	99[z]	0.5[z]	14[z]
Tuvalu[9]	100	99	100	4[z]	1	54	86*	76*	97*	89	...	...	0.1*	...
Vanuatu	...	...	...	48	21	49	55	53	56	99	99	99	0.2	38
Southern Asia														
Afghanistan	...	...	...	17	2,699	35	56	71	40	66	81	50	866	72
Bangladesh	...	...	...	4	14,567	52	64	60	67	79	72	87	2033	30
Bhutan	99[y]	98[y]	100[y]	**39**	74[z]	51[z]	84[z]	81[z]	87[z]	84[z]	80[z]	88[z]	9[z]	37[z]
India	91[y]	91[y]	91[y]	7	129,542	48	74	74	74	85**,[y]	83**,[y]	88**,[y]	11123**,[y]	38**,[y]
Iran, Islamic Republic of	...	...	...	3	5,712	48	89	89	89	98	98	98	47	51
Maldives	97[x]	93[x]	100[x]	**16**	...	...	...	...	...	...	...	...	...	...
Nepal	**87**	**89**	**86**	**43**	**3,277****	**51****	**70****	**67****	**72****	**88**	**85**	**92**	**232**	**34**
Pakistan	79	79	78	-	12,078	42	45	49	39	53	58	48	5445	53
Sri Lanka	100**	99**	100**	2	2,606[y]	51[y]	100[y]	97[y]	102[y]	94**,[y]	95**,[y]	94**,[y]	75[y]	51**,[y]
Sub-Saharan Africa														
Angola	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Benin	88	88	87	30	964	41	57	67	47	64	71	58	362	59
Botswana[10]	97[x]	97[x]	98[x]	38[y]	...	...	...	...	...	...	...	..	...	...
Burkina Faso	77	77	76	61	966	47	34	35	32	58	58	58	728	49
Burundi	80	82	78	75	664	48	42	44	41	65	63	66	323	48
Cabo Verde	98	97	99	34	59	52	93	88	98	91	90	91	3	48
Cameroon	68	65	71	28	2,108	46	58	63	54	64	68	60	783	55
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chad	95[x]	100[x]	87[x]	...	...	...	...	...	...	...	...	...	...	...
Comoros	93[y]	100[y]	85[y]	48[z]	70[z]	51[z]	60[z]	58[z]	62[z]	73[y]	72[y]	73[y]	19[y]	48[y]
Congo	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Côte d'Ivoire	93	94	90	29[z]	1,587	41	44	51	37	...	...	...	...	...
D. R. Congo	72[x]	73[x]	71[x]	...	4,388[z]	38[z]	44[z]	54[z]	33[z]	...	...	...	...	...
Djibouti	**76**	**77**	**75**	22	**61**	**44**	**48**	**53**	**43**	...	...	...	...	...
Equatorial Guinea	...	...	...	49	...	...	...	...	...	...	...	...	...	...
Eritrea	92	93	91	49	246	45	31	33	28	39	42	35	231	52
Ethiopia	91	92	91	26	5,029	48	35	36	34	53**	55**	51**	4577**	52**
Gabon	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gambia[10]	94[y]	94[y]	95[y]	**35**	...	...	...	...	...	...	...	...	...	...
Ghana[10]	98	98	99	**42**	**2,512**	**48**	**62**	**63**	**61**	**91**	**91**	**91**	**164**	**50**
Guinea	69[y]	74[y]	62[y]	29[z]	716[z]	39[z]	39[z]	47[z]	31	48[z]	57[z]	40[z]	567[z]	58[z]
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kenya	99	98	99	...	...	...	...	...	...	...	...	...	...	...
Lesotho	87	85	88	53	133	57	54	46	62	77**	73**	81**	34**	40**
Liberia	79	81	77	82[z]	227	43	37	42	33	...	...	...	...	...
Madagascar	76	76	76	53	1,494[z]	50[z]	38[z]	39[z]	38[z]	...	...	...	...	...
Malawi	...	...	...	44**,[y]	1,038	47	43	46	41	83**	83**	82**	285**	52**
Mali	78	78	78	19	945	44	41	46	37	54	57	52	553	52
Mauritania	59	63	56	49	188	47	31	32	29	60	59	60	147	49
Mauritius	86	82	90	8	129	50	96	94	98	93	92	95	4	39
Mozambique	64	61	67	47	1,073**	48**	32**	34**	31**	55	59**	52**	920	54**
Namibia	96[x]	95[x]	97[x]	48[y]	...	...	...	...	...	...	...	...	...	...
Niger	58	61	55	26	595	41	21	24	17	32	36	27	1211	53

	Upper secondary total net enrolment ratio (NERT) (%)			Upper secondary out-of-school youth[3]		PROGRESSION AND COMPLETION IN SECONDARY EDUCATION					LEARNING ASSESSMENTS AND OUTCOMES[6]		
						Gross intake rate (GIR) to last grade of lower secondary education (%)			Lower secondary education completion rate[4]	Upper secondary education completion rate[4]	Existence of nationally representative learning assessment at the end of lower secondary education	Percentage of students at end of lower secondary education achieving at least a minimum proficiency level (%)[7] in:	
	School year ending in			School year ending in		School year ending in						Reading	Mathematics
	2015			2015		2015			2010–2015[5]	2010–2015[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total (000)	% F	Total	Male	Female	Total	Total		Total	Total
	33[g]	33[g]	33[g]	874[g]	48[g]	51[g]	51[g]	52[g]	...	...	Yes[i]	...	43[i]
	...	...	...	...	...	70[z]	62[z]	78[z]	69	44	Yes[i]	28[i]	25[i]
	86*,[z]	86*,[z]	85*,[z]	769*,[z]	52*,[z]	...	...	...	...	...	Yes[i]	60[i]	49[i]
	...	...	...	...	...	72[z]	64[z]	82[z]	...	...	Yes[i,N]	60[i]	51[i]
	...	...	...	...	...	48[g]	57[g]	40[g]	45	30	No	...	...
										...			
	93[z]	91[z]	95[z]	43[z]	36[z]	...	...	...	99	85	Yes[i]	82[i]	78[i]
	69*	61*	77*	0.3*	34*	93*	88*	99*	...	...	No	...	...
	...	...	...	...	...	96	94	99	...	...	No	...	...
	...	...	...	...	...	101[z]	92[z]	110[z]	...	...	No	...	...
	70	65	76	0.6	39	...	...	...	...	...	No	...	...
	...	...	...	...	...	...	...	...	...	...	No	...	...
	47*,[z]	43*,[z]	50*,[z]	0.2*,[z]	44*,[z]	...	...	...	...	...	No	...	...
	98	96	99	4	17	...	...	...	...	...	Yes[i,N]	83[i]	78[i]
	...	...	...	...	...	113*	100*	123*	...	...	No	...	...
	90*	**86***	**94***	**0.1***	**29***	105*,[z]	102*,[z]	107*,[z]	...	...	No	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...
	81	77	86	4	35	102	104	101	...	...	No	...	...
	...	...	...	...	...	71	70	71	...	...	No	...	...
	82*	...	...	**0.0***	...	...	...	...	...	...	No	...	...
	44[z]	39[z]	48[z]	3[z]	44[z]	...	...	...	...	...	No	...	...
	38*	31*	46*	0.4*	41*	100*,[z]	93*,[z]	108*,[z]	...	...	No	...	...
	56	57	54	7	49	53[g]	51[g]	55[g]	...	...	No	...	...
	46	59	33	1,234	61	...	...	...	23	14	No	...	...
	46	44	47	7,102	48	68[g]	62[g]	73[g]	55	19	Yes[N]	...	...
	66[z]	63[z]	69[z]	10[z]	45[z]	**81**	**77**	**85**	39	21	Yes[N]	...	...
	52**,[g]	53**,[g]	51**,[g]	46,815**,[g]	48**,[g]	86	83	88	76	35	Yes[N]	...	...
	65	66	64	1,495	49	95	95	95	...	...	Yes[i]	...	63[i]
	...	...	...	...	...	**96**	**96**	**96**	...	...	Yes[N]	...	...
	73	**67**	**79**	**732**	**37**	**86**	**82**	**91**	60	...	Yes[N]	...	...
	37	42	32	9,755	52	52	57	47	46	20	Yes[N]	...	...
	...	...	...	...	...	96	97	96	...	...	Yes[N]	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...
	42	52	32	397	59	44	50	37	30	15	No	...	...
	...	...	...	...	...	87[g]	86[g]	87[g]	...	...	Yes[i]	...	50[i]
	27	29	26	833	50	27	28	26	9	2	No	...	...
	36	38	35	411	52	32	35	30	12	5	No	...	...
	70	67	74	10	44	76	69	84	...	...	No	...	...
	45	49	41	809	54	46	46	45	41	18	No	...	...
	...	...	...	...	...	...	...	...	9	6	...	...	...
	...	...	...	...	...	18[g]	25[g]	10[g]	14	10	No	...	...
	44[g]	43[g]	45[g]	26[g]	49[g]	48[z]	47[z]	49[z]	43	25	...	...	...
	...	...	...	...	...	...	...	...	35	15	No	...	...
	...	...	...	...	...	35	41	29	24	14	No	...	...
	...	...	...	...	...	48[z]	62[z]	34[z]	53	26	...	...	...
	...	...	...	...	...	**43**	**47**	**40**	...	...	...	...	...
	...	...	...	...	...	28	29	27	...	...	...	...	...
	31	35	28	294	52	31	32	30	...	...	No	...	...
	26**	27**	25**	3,321**	50**	30	30	29	16	12	Yes[N]	...	...
	...	...	...	...	...	...	...	...	42	11	...	...	...
	...	...	...	...	...	64[z]	63[z]	64[z]	48	30	Yes[N]	...	...
	57	**57**	**57**	**965**	**49**	78	80	75	52	45	Yes[i]	...	22[i]
	32[z]	40[z]	24[z]	507[z]	55[z]	35[z]	42[z]	28[z]	25	15	No	...	...
	...	...	...	...	...	...	...	...	24	15	No	...	...
	...	...	...	...	...	84	85	84	71	42	No	...	...
	58**	53**	63**	42**	44**	43[z]	36[z]	50[z]	27	11	No	...	...
	...	...	...	...	...	37[z]	42[z]	32[z]	26	13	No	...	...
	...	...	...	...	...	38	38	38	...	...	No	...	...
	44**	47**	40**	425**	53**	21[g]	22[g]	20[g]	26	15	No	...	...
	29	32	25	768	52	31	34	27	17	11	No	...	...
	27	28	26	181	50	31	32	31	28	17	...	...	...
	84	81	87	12	39	84	78	90	...	...	Yes[N]	...	...
	30	34	26	879	53	22	23	22	15	7	No	...	...
	...	...	...	...	...	59[g]	56[g]	63[g]	56	37	No	...	...
	12	15	9	961	52	16	18	13	6	2	...	...	...

TABLE 3 *(CONTINUED)*

Country or territory	ACCESS AND PARTICIPATION IN SECONDARY EDUCATION													
	Effective transition from primary to lower secondary general education (%)			Percentage of students over-age for grade in lower secondary education (%)[1]	Total enrolment in secondary education		Gross enrolment ratio (GER) (%) in total secondary education			Lower secondary total net enrolment ratio (NERT) (%)			Lower secondary out-of-school adolescents[2]	
	School year ending in			School year ending in	School year ending in		School year ending in			School year ending in			School year ending in	
	2014			2015	2015		2015			2015			2015	
	Total	Male	Female	Total	Total (000)	% F	Total	Male	Female	Total	Male	Female	Total (000)	% F
Nigeria	...	...	...	...	12,533[9]	47[9]	56[9]	58[9]	53[9]	...	...	...	...	...
Rwanda	68	70	67	53[z]	568	52	37	35	38	...	...	...	...	...
Sao Tome and Principe	93[9]	91[9]	95[9]	44	**23**	**53**	**86**	**81**	**92**	94	92	97	1	26
Senegal	90	91	89	16	1,136	49	50	50	49	52[9]	51**[,9]	53**[,9]	623[9]	49**[,9]
Seychelles	99	98	100	0.3	7	51	82	79	84	...	...	...	...	...
Sierra Leone	88[x]	88[x]	88[x]	50	449	47	43	46	40	...	...	...	...	...
Somalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Africa[10]	...	...	...	...	5,221[z]	52[z]	99[z]	88[z]	112[z]	...	...	...	...	...
South Sudan	...	...	...	91	164	34	10	12	7	...	...	...	...	...
Swaziland	99[x]	100[x]	98[x]	69[z]	97[z]	50[z]	66[z]	66[z]	66[z]	88**[,z]	88**[,z]	87**[,z]	11**[,z]	50**[,z]
Togo	85	88	83	41	...	...	...	...	...	...	...	...	...	...
Uganda	54	55	53	49	1,284	47	23	24	22	...	...	...	...	...
United Republic of Tanzania	56[x]	59[x]	54[x]	26[9]	2,052[9]	48[9]	...	...	...	...	...	...	...	...
Zambia	64[x]	66[x]	62[x]	29[9]	...	...	...	...	...	...	...	...	...	...
Zimbabwe	78[x]	77[x]	79[x]	26[9]	957,461[9]	50[9]	48[9]	48[9]	47[9]	92[9]	94[9]	90[9]	56[9]	60[9]
	Median			Median	Sum	% F	Weighted average			Weighted average			Sum	% F
World	91**	91**	90**	9.7	578,946	48	76	77	76	84**	84**	84**	61,851**	48**
Caucasus and Central Asia	99	100	99	0.6	9,162	49	94	94	94	94**	94**	93**	400**	54**
Eastern and South-eastern Asia	96	96	97	6.4	150,792	48	89	89	90	90**	90**	91**	8,479**	45**
Eastern Asia	100	99	100	2.6	99,541	48	95	94	96	94**	94**	94**	3,232**	47**
South-eastern Asia	92	91	93	11.0	51,251**	49**	80**	80**	80**	85**	84**	87**	5,247**	44**
Europe and Northern America	96	96	96	1.5	84,323**	49**	106	106	106	98**	...	...	768**	...
Latin America and the Caribbean	95**	96**	94**	14.0	62,833	50	93	91	95	92	92**	92**	2,888	48**
Caribbean	82**	80**	84**	10.3	2,448	51	60	58	62	96	96**	97**	66	41**
Latin America	96**	97**	95**	17.4	60,385	50	95	93	98	92	92**	92**	2,822	48**
Northern Africa and Western Asia	89**[,9]	90**[,9]	88**[,9]	6.9	42,313**	47**	80**	82**	77**	85**	88**	82**	3,992**	59**
Northern Africa	88**[,9]	88**[,9]	88**[,9]	26.4	18,409**	49**	78**	79**	77**	90**	92**	87**	1,213**	60**
Western Asia	90**[,9]	92**[,9]	89**[,9]	4.3	23,904**	47**	81**	85**	77**	82**	85**	78**	2,779**	59**
Pacific	...	...	...	4.1	3,492**	47**	101**	103**	98**	98**	...	...	39**	...
Southern Asia	92**	93**	90**	7.3	170,521	47	70	70	70	81**	80**	83**	19,583**	44**
Sub-Saharan Africa	75**	75**	75**	41.5	55,511**	46**	42**	45**	39**	64**	65**	63**	25,702**	51**
Countries with low income	77**	78**	75**	43.3	35,274	45	39	43	36	62**	64**	59**	19,359**	53**
Countries with middle income	92**	92**	91**	11.9	449,431	48	78	77	78	85**	85**	86**	41,856**	46**
Lower middle	89**	89**	88**	22.5	252,803	48	68	69	68	81**	80**	82**	33,721**	45**
Upper middle	97	97	97	8.2	196,628	48	94	93	95	92**	93**	92**	8,135**	50**
Countries with high income	96**	96**	96**	3.2	94,241**	49**	107**	107**	107**	99**	...	...	636**	...

Source: UIS database, except where noted. Enrolment ratios and gross intake rates to last grade are based on the United Nations Population Division estimates, revision 2015 (United Nations, 2015), median variant.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. Over-age pupils are defined as those whose age is at least two years higher than the official age of entry in a given grade. The percentage is calculated as the number of pupils who are two or more years above the theoretical age of their grade divided by total enrolment in lower secondary education.

2. Data reflect the actual number of adolescents of lower secondary school age not enrolled at all, derived from the lower secondary ANER, which measures the proportion of lower secondary school age adolescents who are enrolled in primary, secondary, post-secondary or tertiary education.

3. Data reflect the actual number of adolescents and youth of upper secondary school age not enrolled at all, derived from the upper secondary ANER, which measures the proportion of upper secondary school age adolescents and youth who are enrolled in primary, secondary, post-secondary or tertiary education.

4. UIS database; GEM Report team calculations based on data from national and international household surveys.

5. Data are for the most recent year available in the period specified.

6. PISA 2015 (OECD, 2016), TIMSS 2015. 'Nationally representative learning assessment' refers to national (N) or international (I) formative learning assessments. Information and data need to be used and interpreted with caution since the different types of assessments are not necessarily comparable.

7. The minimun proficiency level in reading and mathematics is as defined by each assessment. Data need to be interpreted with caution since the different assessments are not comparable. The sources are available at the SDG Indicators Global Database https://unstats.un.org/sdgs/indicators/database/?indicator=4.1.1.

8. Enrolment ratios and GIR to last grade were not calculated due to inconsistencies in the United Nations population data or lack of United Nations population by age.

9. National population data were used to calculate GER and GIR to last grade due to inconsistencies in the United Nations population data or lack of United Nations population by age.

10. In the absence of assessments conducted in the proposed indicator grade, surveys of student learning achievement in the grade below or above the proposed indicator grade are used as placeholders to report on learning assessments and/or learning outcomes at the end of secondary education.

	Upper secondary total net enrolment ratio (NERT) (%)			Upper secondary out-of-school youth[3]		PROGRESSION AND COMPLETION IN SECONDARY EDUCATION					LEARNING ASSESSMENTS AND OUTCOMES[6]		
	School year ending in			School year ending in		Gross intake rate (GIR) to last grade of lower secondary education (%)			Lower secondary education completion rate[4]	Upper secondary education completion rate[4]	Existence of nationally representative learning assessment at the end of lower secondary education	Percentage of students at end of lower secondary education achieving at least a minimum proficiency level (%)[7] in:	
						School year ending in						Reading	Mathematics
	2015			2015		2015			2010–2015[5]	2010–2015[5]	2010–2016[5]	2010–2015[5]	2010–2015[5]
	Total	Male	Female	Total (000)	% F	Total	Male	Female	Total	Total		Total	Total
	…	…	…	…	…	…	…	…	52	50	Yes[N]	…	…
	…	…	…	…	…	34	32	36	28	18	No	…	…
	84**	82**	85**	2**	46**	74	70	78	34	6	Yes[N]	…	…
	25[y]	26[y]	23[y]	666[y]	51[y]	39	38	40	21	9	No	…	…
	84	83	85	0.8	45	111	106	117	…	…	No	…	…
	…	…	…	…	…	51	54	48	40	20	…	…	…
	…	…	…	…	…	…	…	…	…	…	…	…	…
	…	…	…	…	…	…	…	…	83	45	Yes[L,N]	…	34[l]
	…	…	…	…	…	…	…	…	15	6	…	…	…
	72**,[z]	74**,[z]	69**,[z]	17**,[z]	54**,[z]	41[z]	43[z]	40[z]	47	28	Yes[N]	…	…
	…	…	…	…	…	41	50	32	24	15	No	…	…
	…	…	…	…	…	26	27	25	23	16	Yes[N]	…	…
	…	…	…	…	…	35[y]	38[y]	32[y]	25	8	No	…	…
	…	…	…	…	…	55[y]	59[y]	51[y]	51	28	Yes[N]	…	…
	47[y]	49[y]	45[y]	703[y]	52[y]	66[y]	64[y]	67[y]	71	9	No	…	…
	Weighted average			Sum	% F	Weighted average			Weighted average			Median	Median
	63**	63**	63**	140,938**	49**	77	76	77	69	45	…	…	…
											…	…	…
	81	80	83	622	46	96	97	96	…	…	…	…	…
	78**	75**	81**	17,949**	41**	93	92	95	79	57	…	…	…
	84**	79**	89**	8,680**	32**	99	99	100	…	…	…	…	…
	67**	68**	67**	9,270**	49**	84	81	87	…	…	…	…	…
	92**	92**	93**	2,871**	45**	92**	92**	92**	98	87	…	…	…
	76	76	77	7,442	48	77**	75**	80**	79	59	…	…	…
	77	76	78	530	47	71	68	74	…	…	…	…	…
	76	76	77	6,912	48	78	75	80	…	…	…	…	…
	67**	68**	66**	8,647**	51**	73**,[z]	74**,[z]	72**,[z]	60	33	…	…	…
	64**	65**	64**	4,235**	49**	72**,[z]	70**,[z]	73**,[z]	…	…	…	…	…
	69**	71**	67**	4,412**	52**	74**,[z]	76**,[z]	71**,[z]	…	…	…	…	…
	66**	60**	73**	538**	39**	80**,[y]	78**,[y]	76**,[y]	99	85	…	…	…
	51**	52**	49**	68,470**	49**	79	77	81	69	31	…	…	…
	43**	46**	39**	34,399**	53**	43**	46**	40**	38	25	…	…	…
											…	…	…
	38**	42**	34**	24,560**	53**	37**	41**	34**	27	13	…	…	…
	62**	62**	62**	113,187**	48**	80	79	82	73	45	…	…	…
	53**	54**	52**	90,963**	49**	76	75	77	68	37	…	…	…
	78**	76**	81**	22,224**	43**	88	87	89	82	60	…	…	…
	93**	92**	94**	3,191**	43**	93**	93**	94**	96	84	…	…	…

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(x) Data are for the school year ending in 2012.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(-) Magnitude nil or negligible.

(…) No data are available.

TABLE 4: SDG 4, Target 4.2 – Universal access to early childhood development, care and pre-primary education

By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

	CHILD MORTALITY AND MALNUTRITION		PARTICIPATION IN PRE-PRIMARY EDUCATION								SCHOOL READINESS[5]		
	Under-5 mortality rate (deaths per 1,000 live births)[1]	Under-5 moderate or severe stunting rate (%)[2]	Total enrolment in pre-primary education		Gross enrolment ratio (GER) in pre-primary education and early childhood educational development (%)			Adjusted net enrolment ratio (ANER) one year before the official primary school entry age (%)[4]			Percentage of children aged 36 to 59 months experiencing positive and stimulating home learning environments (%)[6]	Percentage of children under 5 living in households with three or more children's books	Percentage of children aged 36 to 59 months who are developmentally on track in health, learning and psychosocial well-being (%)[7]
			School year ending in		School year ending in			School year ending in					
			2015		2015			2015			2010–2015[3]	2010–2015[3]	2010–2015[3]
	Total	Total	Total	% F	Total	Male	Female	Total	Male	Female	Total	Total	Total
Country or territory	2015	2010–2015[3]	(000)										
Caucasus and Central Asia													
Armenia	14	9	65	49	52	52	53	...	...	...	...	...	...
Azerbaijan[8]	32	18	116	47	24*	24*	24*	28*	27*	28*	...	...	...
Georgia	12	...	...	...	...	...	...	...	...	...	84	51	81
Kazakhstan	14	8	**881**	**49**	**43**	**41**	**43**	**91**	**87**	**95**	86	51	86
Kyrgyzstan	21	13	145	49	19	19	19	69	68	70	72	27	78
Tajikistan	45	27	**92**	**45**	**11**	**12**	**10**	**15**	**16**	**14**	...	...	...
Turkmenistan	51	12	189[z]	49[z]	...	...	...	...	...	...	...	...	...
Uzbekistan	39	...	**634**	**48**	**26**	**26**	**26**	**31**	**31**	**31**			
Eastern and South-eastern Asia													
Brunei Darussalam	10	...	13	49	72	71	73	100	100	99	...	...	...
Cambodia	29	32	187	50	...	...	...	...	...	...	59	4	68
China	11	9	40,507	46	84	83	84	...	...	...	...	...	...
DPR Korea	25	28	341	49	142	141	142	...	...	...	91	79	75
Hong Kong, China[9]	...	...	178	48	...	...	...	...	...	...	...	...	...
Indonesia	27	36	5,349[z]	49[z]	31[z]	30[z]	32[z]	99**,[z]	100**,[z]	99**,[z]	...	...	...
Japan	3	7	2,881[z]	...	89[z]	...	...	96[y]	...	...	...	...	...
Lao PDR	67	44	175	50	35	35	36	52	51	53	57	5	81
Macao, China	...	...	15	48	92	92	92	93	93	94	...	...	...
Malaysia	7	18	934	49	94	92	96	98	98	99	...	...	...
Mongolia	22	11	...	...	...	...	...	...	...	...	55	33	76
Myanmar	50	29	453[z]	51[z]	...	...	...	...	...	...	54	5	...
Philippines	28	30	...	...	...	...	...	...	...	...	...	...	...
Republic of Korea	3	...	1,279	49	87	87	87	90	91	90	...	...	...
Singapore	3	...	...	...	...	...	...	...	...	...	...	...	...
Thailand	12	16	1,636	45	70	72	67	95	100	91	93	43	92
Timor-Leste	53	50	19	51	19	18	20	73	69	77	...	...	...
Viet Nam	22	25	3,755	47	58	59	57	99	100	97	76	26	89
Europe and Northern America													
Albania	14	...	82	48	...	...	...	93	94	92	...	...	...
Andorra[9]	3	...	2	50	...	...	...	...	...	...	...	...	...
Austria	4	...	245	49	60	60	61	...	...	...	...	...	...
Belarus	5	...	331	47	92	94	90	98	100	96	96	92	94
Belgium	4	...	461	49	116	117	116	99	99	99	...	...	...
Bosnia and Herzegovina[9]	5	9	18	48	...	...	...	...	...	...	95	56	96
Bulgaria	10	...	241	48	83	84	82	92	93	92	...	...	...
Canada	5	...	556[y]	49[y]	...	...	...	...	...	...	...	...	...
Croatia	4	...	111	48	76	77	74	97	99	95	...	...	...
Cyprus[8]	3	...	24	49	51*	51*	51*	95*	95*	94*	...	...	...
Czechia	3	...	372	48	106	107	104	...	...	...	...	...	...
Denmark	4	...	188	49	149	149	149	96	95	98	...	...	...
Estonia	3	...	...	...	...	...	...	93	93	93	...	...	...
Finland	2	...	197	49	66	66	66	98	98	97	...	...	...
France	4	...	2,584[z]	49[z]	109[z]	109[z]	109[z]	100[z]	100[z]	100[z]	...	...	...
Germany	4	...	2,231	48	75	75	75	...	...	...	...	...	...
Greece	5	...	161[z]	49[z]	47[z]	...	...	98[z]	...	...	...	...	...
Hungary	6	...	311	48	67	68	66	92	93	92	...	...	...
Iceland	2	...	14[y]	48[y]	141[y]	141[y]	141[y]	96[y]	97[y]	94[y]	...	...	...
Ireland	4	...	71	49	97	95	99	91	89	94	...	...	...
Italy	4	...	1,637	48	99	100	97	98	99	98	...	...	...
Latvia	8	...	76	49	88	89	88	100	100	100	...	...	...
Liechtenstein[8]	...	...	0.8	45	104*	102*	106*	98*	100*	96*	...	...	...
Lithuania	5	...	102	49	86	87	85	99	100	99	...	...	...
Luxembourg	2	...	17[z]	49[z]	94[z]	94[z]	93[z]	99[z]	98[z]	100[z]	...	...	...
Malta	6	...	9	48	111	109	113	97	95	100	...	...	...
Monaco[9]	4	...	1.0	48	...	...	...	...	...	...	...	...	...
Montenegro	5	9	13	47	44	46	43	66	68	63	98	73	94
Netherlands	4	...	512	49	96	95	97	100	99	100	...	...	...
Norway	3	...	186	49	91	90	91	100	100	100	...	...	...
Poland	5	...	1,297[z]	49[z]	79[z]	79[z]	79[z]	99[z]	99[z]	99[z]	...	...	...
Portugal	4	...	265	49	92[z]	93[z]	90[z]	98[z]	100[z]	96[z]	...	...	...
Republic of Moldova[8]	16	6	131	48	64*	64*	63*	96*	95*	96*	89	68	84
Romania	11	...	560	49	50	50	50	91	92	90	...	...	...
Russian Federation	10	...	5,776	48	81	81	80	95	95	95	...	...	...
San Marino	3	...	...	...	...	...	...	...	...	...	...	...	...

	CHILD MORTALITY AND MALNUTRITION		PARTICIPATION IN PRE-PRMARY EDUCATION								SCHOOL READINESS[5]		
	Under-5 mortality rate (deaths per 1,000 live births)[1]	Under-5 moderate or severe stunting rate (%)[2]	Total enrolment in pre-primary education		Gross enrolment ratio (GER) in pre-primary education and early childhood educational development (%)			Adjusted net enrolment ratio (ANER) one year before the official primary school entry age (%)[4]			Percentage of children aged 36 to 59 months experiencing positive and stimulating home learning environments (%)[6]	Percentage of children under 5 living in households with three or more children's books	Percentage of children aged 36 to 59 months who are developmentally on track in health, learning and psychosocial well-being (%)[7]
			School year ending in		School year ending in			School year ending in					
			2015		2015			2015			2010–2015[3]	2010–2015[3]	2010–2015[3]
	Total	Total	Total	% F	Total	Male	Female	Total	Male	Female	Total	Total	Total
Country or territory	2015	2010–2015[3]	(000)										
Serbia[8]	7	6	154	48	48*	49*	48*	68*	69*	68*	96	72	95
Slovakia	7	...	162	48	94	95	93	...	...	...	...	...	...
Slovenia	3	...	60[z]	48[z]	77[z]	78[z]	77[z]	98[z]	98[z]	97[z]	...	...	...
Spain	4	...	1,398	48	68	68	68	98	98	97	...	...	...
Sweden	3	...	443	49	85	85	85	98	98	98	...	...	...
Switzerland	4	...	169	48	105[z]	106[z]	104[z]	100[z]	99[z]	100[z]	...	...	...
TFYR Macedonia	6	5	24	49	27	27	27	45	45	45	92	52	93
Ukraine[9]	9	...	1,094	48	...	...	...	...	...	...	98	91	89
United Kingdom	4	...	1,480[z]	49[z]	50[z]	50[z]	50[z]	100[z]	100[z]	99[z]	...	...	...
United States	7	2	8,655	48	71	72	70	88	89	88	...	...	...
												...	
Latin America and the Caribbean													
Anguilla	...	...		...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	8	...	3	49	50	51	49	99	98	100	...	...	...
Argentina	13	...	1,598[z]	49[z]	39[z]	38[z]	39[z]	99[z]	99[z]	100[z]	84	61	85
Aruba	...	...	3[z]	48[z]	107[z]	108[z]	106[z]	100[z]	100[z]	100[z]	...	...	...
Bahamas	12	...	...	...	...	...	...	...	...	...	...	...	...
Barbados	13	8	6[z]	50[z]	84[z]	83[z]	86[z]	94[z]	93[z]	95[z]	97	85	97
Belize	17	15	8	50	50	49	50	84	83	85	86	40	88
Bermuda	...	...	0.4	45	62	67	56	...	...	...	...	...	...
Bolivia, P.S.	38	18	331	49	71	71	71	86	86	86	...	...	...
Brazil[8]	16	...	4,923	49	59**	60**	59**	93*	94*	92*	...	...	...
British Virgin Islands[8]	...	...	0.9	52	68*	...	...	92*	...	...	...	...	...
Cayman Islands[9]	...	...	1[y]	48[y]	...	...	...	...	...	...	...	...	...
Chile	8	2	616	49	55	55	54	100	100	100	...	...	...
Colombia	16	13	1,923	49	...	...	...	100	99	100	...	...	...
Costa Rica	10	...	113	49	29	29	28	91	92	91	68	37	81
Cuba	6	...	368	49	97	96	99	100	100	100	89	48	89
Curaçao	...	...	...	...	...	...	...	...	...	...	...	...	...
Dominica	21	...	2	50	37	38	35	71	71	70	...	...	...
Dominican Republic	31	7	281	50	44	43	45	78	77	79	58	10	84
Ecuador	22	25	**686**	**50**	**36**	**35**	**36**	**98**	**96**	**100**	...	...	...
El Salvador	17	14	230	49	39	38	39	91	90	93	59	18	81
Grenada	12	...	3	47	36[y]	37[y]	36[y]	98[y]	97[y]	98[y]	...	...	...
Guatemala	29	47	536	49	19	19	19	78	78	78	...	...	...
Guyana	39	12	...	...	...	...	...	...	...	...	87	47	86
Haiti	69	22	...	...	...	...	...	...	...	...	...	...	...
Honduras	20	23	229	50	29[z]	28[z]	29[z]	88	87	90	48	11	80
Jamaica	16	6	127	51	99	96	103	96	93	100	88	55	89
Mexico	13	12	4,798[z]	49[z]	36[z]	36[z]	36[z]	99[z]	98[z]	100[z]	76	35	82
Montserrat[9]	...	...	0.1[z]	52[z]	...	...	...	...	...	...	...	...	...
Nicaragua	22	...	...	...	...	...	...	...	...	...	...	...	...
Panama	17	...	105[z]	49[z]	25[z]	24[z]	25[z]	82[z]	82[z]	82[z]	74	26	80
Paraguay	21	11	...	...	...	...	...	...	...	...	...	...	...
Peru	17	15	1,579	49	45	45	46	99	99	100	...	...	...
Saint Kitts and Nevis	11	...	2	46	73	74	71	93	95	90	...	...	...
Saint Lucia	14	3	3	51	43	42	44	80	76	85	93	68	91
Saint Martin	...	...	...	...	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	18	...	3	50	93	93	93	91	92	90	...	...	...
Sint-Maarten[9]	...	...	1[z]	48[z]	...	...	...	...	...	...	...	...	...
Suriname	21	9	18	50	93	90	97	97	94	100	73	25	71
Trinidad and Tobago	20	...	...	...	...	...	...	...	...	...	...	...	...
Turks and Caicos Islands[9]	...	...	1	49	...	...	...	...	...	...	...	...	...
Uruguay	10	11	129[z]	49[z]	62[z]	62[z]	63[z]	97[z]	97[z]	96[z]	93	59	87
Venezuela, Bolivarian Republic of	15	...	1,331	49	54	54	54	93	93	93	...	...	...
Northern Africa and Western Asia													
Algeria	26	12	...	...	...	...	...	...	...	...	78	11	70
Bahrain	6	...	33	49	35	35	35	82	83	81	...	...	...
Egypt	24	22	1,177[z]	48[z]	30[z]	31[z]	30[z]	41[z]	41[z]	41[z]	...	...	...
Iraq	32	23	...	...	...	...	...	...	...	...	58	5	72
Israel	4	...	516	49	68	69	68	99	99	100	...	...	...
Jordan	18	8	118	48	32	33	32	...	...	...	82	23	69
Kuwait[9]	9	5	81	48	...	...	...	...	...	...	...	...	...
Lebanon	8	...	188	48	78	80	75	93	96	91	...	...	...
Libya	13	...	...	...	...	...	...	...	...	...	...	...	...
Morocco	28	15	730	43	22	24	20	72[z]	77[z]	67[z]	35	...	...
Oman	12	14	75	49	50[y]	50[y]	51[y]	71[y]	70[y]	71[y]	22	25	68
Palestine	21	7	135	48	52	53	52	57[z]	56[z]	57[z]	78	20	72
Qatar	8	...	43	49	33	33	33	91	90	92	88	40	84
Saudi Arabia	15	...	330	50	13	13	13	14[z]	13[z]	15[z]	...	...	...
Sudan	70	38	927[y]	57[y]	42[y]	36[y]	48[y]	...	...	...	...	2	...
Syrian Arab Republic	13	...	87[y]	48[y]	6[y]	6[y]	6[y]	41[y]	42[y]	40[y]	...	...	...

TABLE 4 *(CONTINUED)*

	CHILD MORTALITY AND MALNUTRITION		PARTICIPATION IN PRE-PRMARY EDUCATION								SCHOOL READINESS[5]		
	Under-5 mortality rate (deaths per 1,000 live births)[1]	Under-5 moderate or severe stunting rate (%)[2]	Total enrolment in pre-primary education		Gross enrolment ratio (GER) in pre-primary education and early childhood educational development (%)			Adjusted net enrolment ratio (ANER) one year before the official primary school entry age (%)[4]			Percentage of children aged 36 to 59 months experiencing positive and stimulating home learning environments (%)[6]	Percentage of children under 5 living in households with three or more children's books	Percentage of children aged 36 to 59 months who are developmentally on track in health, learning and psychosocial well-being (%)[7]
			School year ending in		School year ending in			School year ending in					
			2015		2015			2015			2010–2015[3]	2010–2015[3]	2010–2015[3]
	Total	Total	Total	% F	Total	Male	Female	Total	Male	Female	Total	Total	Total
Country or territory	2015	2010–2015[3]	(000)										
Tunisia	14	10	238	49	44	44	44	...	...	...	71	18	76
Turkey	14	10	1,157	48	17	18	17	68	69	67	...	...	...
United Arab Emirates	7	...	155	49	33	33	33	99	99	100	...	...	...
Yemen	42	47	29[y]	46[y]	1[y]	1[y]	1[y]	4[y]	5[y]	4[y]	...	...	...
											...	...	...
The Pacific													
Australia	4	...	393	48	72	73	71	87	87	87	...	...	...
Cook Islands[8]	8	...	0.5	52	91*	84*	97*	93*	87*	100*	...	...	...
Fiji	22	...	...	...	...	...	...	...	...	...	...	...	...
Kiribati	56	...	...	...	...	...	...	...	...	...	...	...	...
Marshall Islands	36	...	1	49	42	42	43	66	62	70	...	...	...
Micronesia, F. S.	35	...	2	46	33	34	32	76	80	73	...	...	...
Nauru[8]	35	...	0.9[z]	48[z]	90*,[z]	85*,[z]	96*,[z]	71*,[z]	62*,[z]	82*,[z]	...	...	...
New Zealand	6	...	118	49	63	63	62	95	95	95	...	...	...
Niue[8]	23	...	0.03	70	86*	81*	92*	56*	23*	100*	...	...	...
Palau[8]	16	...	0.5[z]	52[z]	74*,[z]	71*,[z]	77*,[z]	91*,[z]	100*,[z]	81*,[z]	...	...	...
Papua New Guinea	57	50	...	...	...	...	...	...	...	...	...	...	...
Samoa	18	...	4	50	41	39	42	31	30	31	...	...	...
Solomon Islands	28	...	49	48	100	100	100	66	66	66	...	...	...
Tokelau[8]	...	...	**0.05**	**46**	**168***	**175***	**160***	**87***	**75***	**100***	...	...	...
Tonga	17	8	2[z]	48[z]	39[z]	39[z]	38[z]	...	...	...	...	...	...
Tuvalu[8]	27	...	0.8	47	95*	96*	93*	97*	94*	100*	...	...	...
Vanuatu	28	29	14	47	97[y]	98[y]	97[y]	...	...	...	...	...	...
Southern Asia													
Afghanistan	91	41	...	...	...	...	...	...	...	...	73	2	...
Bangladesh	38	36	2,865	49	31	31	31	...	...	...	78	9	64
Bhutan	33	34	**7**	**51**	**26**	**25**	**27**	...	...	...	54	6	72
India	48	38	9,261	46	12	13	12	...	...	...	...	...	...
Iran, Islamic Republic of	16	7	672	49	51	51	50	47	48	47	70	36	...
Maldives[9]	9	...	**22**	**48**	**101**	**101**	**102**	**100**	**99**	**100**	...	...	...
Nepal	36	37	**977**	**48**	**84**	**85**	**83**	**84**	**85**	**83**	67	5	64
Pakistan	81	45	6,830	45	...	...	...	...	...	...	...	...	...
Sri Lanka	10	15	320	49	93	93	93	...	...	...	...	...	...
Sub-Saharan Africa													
Angola	157	38		...	...	...	...	...	...	...	...	...	...
Benin	100	34	152	50	24	24	24	76**	77**	75**	28	1	61
Botswana	44	...	27[y]	49[y]	20[y]	20[y]	20[y]	28[y]	27[y]	28[y]	...	...	...
Burkina Faso	89	27	73	50	4	4	4	9	9	9	...	...	...
Burundi	82	58	86	50	13	13	13	33	33	33	...	...	...
Cabo Verde	25	...	23	49	74	74	73	81	81	80	...	...	...
Cameroon	88	32	522	50	38	38	38	52	52	51	44	4	61
Central African Republic	130	41	...	...	...	...	...	...	...	...	74	0.7	47
Chad	139	40	11[y]	47[y]	0.8[y]	0.8[y]	0.8[y]	...	...	...	47	0.8	33
Comoros	74	32	13[z]	51[z]	21[z]	20[z]	21[z]	49[z]	56[z]	42[z]	...	...	...
Congo	45	21	...	...	...	...	...	...	...	...	56	1	49
Côte d'Ivoire	93	30	144	50	7	7	7	19[z]	21[z]	18[z]	...	...	...
D. R. Congo	98	43	309[z]	51[z]	4[z]	4[z]	4[z]	...	...	...	52	0.6	66
Djibouti	65	34	**2**	**49**	**5**	**5**	**5**	**11**	**10**	**11**	37	...	...
Equatorial Guinea	94	26	40	50	29	29	29	58	57	59	...	...	...
Eritrea	47	50	42	48	13	13	13	15	15	15	...	...	...
Ethiopia	59	38	2,513	48	30	31	30	38	39	37	...	...	...
Gabon	51	18	...	...	...	...	...	...	...	...	...	...	...
Gambia	69	25	98	51	...	...	...	...	...	...	48	1	68
Ghana	62	19	**1,771**	**50**	**57**	**56**	**58**	99[z]	98[z]	100[z]	40	6	74
Guinea	94	31	...	...	...	...	...	41[z]	42[z]	39[z]	...	...	...
Guinea-Bissau	93	28	...	...	...	...	...	...	...	...	34	0.5	61
Kenya	49	26	3,168	49	76	77	76	...	...	...	...	...	...
Lesotho	90	33	54	51	34	33	35	38	38	39	...	...	...
Liberia	70	32	625	48	156	159	153	84	87	82	...	...	...
Madagascar	50	...	378	51	18	17	19	...	...	...	...	...	...
Malawi	64	42	1,361	50	82	81	82	...	...	...	29	1	60
Mali	115	...	97	50	4	4	4	44	45	42	55	0.3	62
Mauritania	85	28	36	55	5	5	6	...	...	...	44	1	60
Mauritius	14	...	30	50	75	74	76	94	92	96	...	...	...
Mozambique	79	43	...	...	...	...	...	...	...	...	...	...	...
Namibia	45	23	25[y]	51[y]	22[y]	21[y]	22[y]	67[y]	65[y]	70[y]	...	...	...

	CHILD MORTALITY AND MALNUTRITION		PARTICIPATION IN PRE-PRMARY EDUCATION								SCHOOL READINESS[5]		
	Under-5 mortality rate (deaths per 1,000 live births)[1]	Under-5 moderate or severe stunting rate (%)[2]	Total enrolment in pre-primary education		Gross enrolment ratio (GER) in pre-primary education and early childhood educational development (%)			Adjusted net enrolment ratio (ANER) one year before the official primary school entry age (%)[4]			Percentage of children aged 36 to 59 months experiencing positive and stimulating home learning environments (%)[6]	Percentage of children under 5 living in households with three or more children's books	Percentage of children aged 36 to 59 months who are developmentally on track in health, learning and psychosocial well-being (%)[7]
			School year ending in		School year ending in			School year ending in					
			2015		2015			2015			2010–2015[3]	2010–2015[3]	2010–2015[3]
	Total	Total	Total	% F	Total	Male	Female	Total	Male	Female	Total	Total	Total
Country or territory	**2015**	**2010–2015[3]**	**(000)**										
Niger	96	43	153	50	7	7	8	25[y]	25	24[y]	...	...	...
Nigeria	109	33	...	...	...	...	...	...	...	...	65	6	61
Rwanda	42	38	184	51	18	18	18	46	46	46	49	0.9	63
Sao Tome and Principe	47	17	**9**	**52**	**58**	**56**	**61**	57	56	58	63	6	55
Senegal	47	21	209	52	15	14	16	17	16	18	...	...	...
Seychelles	14	8	3	50	90	88	93	90	87	93	...	...	...
Sierra Leone	120	38	60	53	10	10	11	37	36	38	54	2	45
Somalia	137	...	...	...	...	...	...	...	...	...	...	...	...
South Africa	41	...	857[z]	50[z]	34[z]	...	...	...	...	...	...	...	...
South Sudan	93	31	111	48	10	10	10	18**	20**	17**	...	...	...
Swaziland	61	26	...	...	...	...	...	...	...	...	39	6	65
Togo	78	28	115	51	18	17	18	...	...	...	25	0.7	51
Uganda	55	34	477	50	12	11	12	...	...	...	...	...	...
United Republic of Tanzania	49	34	1,070	50	32	31	32	45**,z	43**,z	48**,z	...	...	...
Zambia	64	40	...	...	...	...	...	...	...	...	...	...	...
Zimbabwe	71	28	374[y]	50[y]	42[y]	42[y]	43[y]	37[y]	36[y]	37[y]	43	3	62
	Weighted average	**Median**	**Sum**	**% F**	**Median**			**Weighted average**			**Median**	**Median**	**Median**
World	43	25	165,773	48	52	52	52	69**	70**	69**	...	...	...
Caucasus and Central Asia	32	12	2,168	49	25	25	25	49	47	50	...	...	...
Eastern and South-eastern Asia	17	28	59,052	47	78	77	78	...	...	...	...	...	...
Eastern Asia	10	10	45,287	47	89	...	...	...	...	...	...	...	...
South-eastern Asia	27	30	13,765**	48**	58	59	57	84**	84**	83**	...	...	...
Europe and Northern America	6	...	32,496	48	84	84	84	94	94	93	...	...	...
Latin America and the Caribbean	18	...	20,974**	49**	50	50	50	95	94	95	...	...	...
Caribbean	...	...	1,443	50	68	71	64	91	91	91	...	...	...
Latin America	17	13	19,532	49	42	42	42	95	95	95	...	...	...
Northern Africa and Western Asia	29	13	6,873	49	33	33	33	52**	53**	51**	...	...	...
Northern Africa	35	15	3,790**	50**	36	33	37	61**	62**	59**	...	...	...
Western Asia	22	10	3,083**	48**	33	33	33	44**	45**	44**	...	...	...
Pacific	24	...	1,192**	48**	80	77	85	82	80	84	...	...	...
Southern Asia	51	37	21,004	46	51	51	50	...	...	...	...	...	...
Sub-Saharan Africa	84	32	22,015**	50**	20	20	21	42**	42**	42**	...	...	...
Countries with low income	76	34	11,013	49	18	17	18	43	43	43	...	...	...
Countries with middle income	41	21	122,080	48	42	41	43	...	...	...	...	...	...
Lower middle	53	29	49,437	48	35	34	35	...	...	...	...	...	...
Upper middle	19	...	72,642	47	48	49	48	81**	81**	81**	...	...	...
Countries with high income	6	...	32,681	49	79	79	79	92	92	91	...	...	...

Source: UIS database, except where noted. Enrolment ratios and gross intake rates to last grade are based on the United Nations Population Division estimates, revision 2015 (United Nations, 2015), median variant.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. UN Inter-agency Group for Child Mortality Estimation (September 2015). They are based on the median variant.

2. UNICEF, WHO and World Bank joint child malnutrition estimates (May 2017).

3. Data are for the most recent year available in the period specified.

4. ANER one year before the official primary school entry age is the percentage of children at the intended age a year before entry into primary education who are enrolled in either pre-primary or primary education.

5. UNICEF-MICS 4 and 5, country reports.

6. Data refer to the MICS indicator "Adult support for learning", which is the percentage of children 36 to 59 months old with whom an adult has engaged in four or more of the following activities to promote learning and school readiness in the previous 3 days: (a) reading books to the child, (b) telling stories to the child, (c) singing songs to the child, (d) taking the child outside the home, (e) playing with the child, and (f) spending time with the child naming, counting or drawing things.

7. Data refer to the MICS indicator "Early Child Development Index", which is the percentage of children who are developmentally on track in at least three of the following domains: (a) literacy-numeracy, (b) physical development, (c) social-emotional development, and (d) learning (ability to follow simple instructions, ability to occupy herself/himself independently).

8. National population data were used to calculate enrolment ratios due to inconsistencies in the United Nations population data or lack of United Nations population by age.

9. Enrolment ratios were not calculated due to inconsistencies in the United Nations population data or lack of United Nations population by age.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(...) No data are available.

TABLE 5: SDG 4, Target 4.3 – Universal access to technical, vocational and tertiary education

By 2030, ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university

	PARTICIPATION IN TECHNICAL AND VOCATIONAL EDUCATION PROGRAMMES												
	Share of technical and vocational education in total enrolment (%) by level						Percentage of youth (15 to 24) enrolled in secondary technical and vocational education (%)			Transition from upper secondary to tertiary education (ISCED levels 5, 6 and 7 combined) (%)			
	Total secondary education			Post-secondary non-tertiary education									
	School year ending in 2015			School year ending in 2015			School year ending in 2015			School year ending in 2015			
Country or territory	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Caucasus and Central Asia													
Armenia	11	12	9	.	.	.	...	...	...	...	...	...	
Azerbaijan[2]	...	...	...	100	100	100	...	...	...	...	...	...	
Georgia	4	5	4	100	100	100	2	2	1	...	...	...	
Kazakhstan	11	11	11	100	100	100	7	7	6	...	...	...	
Kyrgyzstan	9	10	9	100	100	100	5	6	5	...	...	...	
Tajikistan	1[y]	2[y]	0.3[y]	...	...	...	...	...	...	...	...	...	
Turkmenistan	8[z]	9[z]	6[z]	.[z]	.[z]	.[z]	...	...	...	...	...	...	
Uzbekistan	36	35	36	.	.	.	25	25	25	11	13	9	
Eastern and South-eastern Asia													
Brunei Darussalam	12	13	11	.	.	.	7	8	6	...	...	...	
Cambodia	...	...	...	...	...	...	...	...	...	...	...	...	
China	20	21	20	40	46	31	...	...	...	...	...	...	
DPR Korea	.	.	.	...	...	...	.	.	.	...	...	...	
Hong Kong, China	2	3	0.6	63	74	49	0.9*	2*	0.3*	...	...	...	
Indonesia	18	20	16	.	.	.	10	11	8	44[z]	39[z]	49[z]	
Japan	12[z]	13[z]	10[z]	...	...	...	...	...	...	85[z]	83[z]	88[z]	
Lao PDR	1	1	2	100	100	100	0.3	0.3	0.2	80	75	87	
Macao, China	4	5	3	.	.	.	2	2	1	...	...	...	
Malaysia	11	13	9	100	100	.	5	6	4	75	63	87	
Mongolia	10	12	8	100	100	100	5	6	4	145	155	138	
Myanmar	-[z]	-[z]	-[z]	...	...	...	-[z]	-[z]	-[z]	...	...	...	
Philippines	.[y]	.[y]	.[y]	100[y]	100[y]	100[y]	.	.	.	...	...	...	
Republic of Korea	9	10	8	.	.	.	5	5	4	...	...	...	
Singapore[3]	...	...	...	...	...	...	...	...	...	...	...	...	
Thailand	10	12	8	.	.	.	6	7	4	117	113	120	
Timor-Leste	5	6	4	.	.	.	3	3	2	...	...	...	
Viet Nam	...	...	...	100	100	100	...	...	...	...	...	...	
Europe and Northern America													
Albania	9	13	4	100	100	100	5	7	2	99[z]	96[z]	102[z]	
Andorra[3]	9	10	8	100	100	100	...	...	...	29[z]	24[z]	33[z]	
Austria	36	39	33	100	100	100	...	...	...	76	68	84	
Belarus	13	16	10	100	100	100	7	9	6	78[y]	63[y]	98[y]	
Belgium	45	46	44	93	95	90	22	24	20	93[z]	84[z]	101[z]	
Bosnia and Herzegovina[3]	38	41	35	...	...	...	...	...	...	79	81	77	
Bulgaria	31	35	27	100	100	100	15	18	12	108	102	113	
Canada	4[y]	5[y]	4[y]	...	...	...	...	...	...	...	...	...	
Croatia	40	43	38	.	.	.	25	27	23	...	...	...	
Cyprus[2]	8	13	4	100	100	100	4*	6*	2*	...	...	...	
Czechia	38	41	35	15	30	7	...	...	...	120	113	126	
Denmark	24	26	21	.	.	.	12	15	9	88	81	95	
Estonia	19	24	14	100	100	100	9	12	6	...	...	...	
Finland	48	48	47	100	100	100	22	24	21	38	40	37	
France	19[z]	20[z]	17[z]	51[z]	40[z]	57[z]	14[z]	16[z]	12[z]	...	...	...	
Germany	19	22	15	91	88	93	...	...	...	78[z]	75[z]	82[z]	
Greece	17[z]	21[z]	13[z]	...	...	...	9[z]	11[z]	6[z]	...	...	...	
Hungary	13	15	10	100	100	100	8	10	7	68	63	72	
Iceland	21[y]	24[y]	18[y]	98[y]	99[y]	96[y]	11[y]	13[y]	8[y]	...	...	...	
Ireland	.	.	.	100	100	100	.	.	.	...	...	...	
Italy	34	41	27	100	100	100	22	27	17	58[y]	52[y]	65[y]	
Latvia[3]	21	25	18	100	100	100	11	13	9	...	...	...	
Liechtenstein[2]	35	40	29	.	.	.	26*	33*	19*	54	56	51	
Lithuania[3]	10	12	7	100	100	100	6	7	4	93	89	96	
Luxembourg	32[z]	33[z]	31[z]	100[z]	100[z]	100[z]	21[z]	22[z]	21[z]	59[z]	59[z]	60[z]	
Malta	8	9	6	95	96	93	4	5	3	218	242	201	
Monaco	11	13	9	.	.	.	...	...	...	...	...	...	
Montenegro	33	35	30	...	...	...	...	...	...	...	...	...	
Netherlands[3]	37	37	37	.	.	.	23	23	22	93	95	91	
Norway	29	34	23	100	100	100	17	21	13	133[z]	144[z]	125[z]	
Poland	28[z]	34[z]	22[z]	100[z]	100[z]	100[z]	15[z]	19[z]	12[z]	102[z]	99[z]	104[z]	
Portugal	28	32	24	100	100	100	17	20	14	59	53	64	
Republic of Moldova[2]	13	15	11	100	100	100	6*	7*	5*	...	...	...	
Romania	28	32	24	100	100	100	...	...	...	95	103	89	
Russian Federation	16	19	13	100	100	100	...	...	...	121[y]	...	...	
San Marino	...	...	...	...	...	...	...	...	...	...	...	...	
Serbia[2]	36	37	34	100	100	100	25*	25*	24*	...	...	...	
Slovakia	32	34	29	100	100	100	...	...	...	92	82	102	
Slovenia	42[z]	46[z]	37[z]	.[z]	.[z]	.[z]	26[z]	29[z]	22[z]	90[z]	89[z]	90[z]	
Spain	18	20	17	100	100	100	9	11	7	98	98	98	
Sweden	23	24	23	77	73	80	12	13	11	76[y]	64[y]	88[y]	
Switzerland	38	42	33	85	83	86	23	26	19	83	83	82	

ACCESS, PARTICIPATION IN TERTIARY EDUCATION									PARTICIPATION IN EDUCATION AND TRAINING		
	Gross intake rate (GIR) to first tertiary programmes (ISCED levels 5 to 7) (%)			Total number of students enrolled in tertiary education		Gross enrolment ratio (GER) in tertiary education (%)			Participation rate of adults (25 to 64) in formal or non-formal education and training in the last 12 months[1]		
	School year ending in 2015			School year ending in 2015		School year ending in 2015			Most recent survey year 2011		
	Total	Male	Female	Total (000)	F %	Total	Male	Female	Total	Male	Female
	62	63	61	108	54	44	42	47	...	...	...
	33*	31*	36*	204	52	25*	24*	27*	...	...	...
	...	...	...	128	54	43	39	48	...	...	...
	69	63	76	624	55	46	41	51	...	...	...
	...	...	...	265	56	47	41	53	...	...	...
	...	...	...	247	41	29	34	24	...	...	...
	...	...	...	44[z]	39[z]	8[z]	10[z]	6[z]	...	...	...
	10	13	8	266	38	9	11	7	...	...	...
	...	...	...	11	61	31	23	39	...	...	...
	...	...	...	217	44	13	14	12	...	...	...
	...	...	...	43,367	51	43	40	47	...	...	...
	...	...	...	565	35	28	36	20	...	...	...
	...	...	...	299	52	68	64	74			
	31[z]	30[z]	32[z]	5,108	52	24	23	26	...	...	...
	82[z]	79[z]	85[z]	3,862[z]	47[z]	63[z]	66[z]	61[z]	...	...	...
	25	25	25	130	48	17	17	17	...	...	...
	...	...	...	31	56	76	65	86	...	...	...
	39	31	47	818	58	26	21	32	...	...	...
	91	77	105	180	57	69	58	80	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	3,563[z]	55[z]	36[z]	31[z]	40[z]	...	...	...
	...	...	...	3,268	41	93	105	80	...	...	...
	...	...	...	255[y]	50[y]	...	...	...	...	...	...
	82	72	91	2,235	58	49	41	57	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	2,467	49	29	29	29	...	...	...
	63[z]	55[z]	72[z]	161	57	58	49	68	...	...	...
	...	...	...	1	58	...	...	...	...	...	...
	74	67	81	426	53	82	74	89	48	49	48
	84[y]	75[y]	94[y]	477	56	88	76	101	...	...	...
	70	59	80	505	56	75	65	85	38	39	37
	...	...	...	108	56	...	...	...	...	...	...
	79	73	85	279	55	74	65	83	26	28	25
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	162	56	69	59	80	...	...	...
	...	...	...	37	57	60*	51*	69*	42	43	42
	68	56	81	396	57	65	54	76	37	37	37
	86[z]	77[z]	95[z]	314	57	83	70	96	59	55	62
	...	...	...	55	59	70	55	85	50	46	53
	56	52	61	302	54	87	79	96	56	49	63
	...	...	...	2,389[z]	55[z]	64[z]	58[z]	71[z]	51	50	51
	67[z]	65[z]	68[z]	2,978	48	68	70	67	50	53	51
	...	...	...	677[z]	49[z]	114[z]	114[z]	114[z]	12	10	13
	44	38	51	308	55	51	45	57	41	43	39
	82[y]	68[y]	97[y]	19[y]	62[y]	81[y]	60[y]	103[y]	...	...	...
	...	...	...	215	51	84	80	88	24	25	24
	68	60	77	1,826	56	62	53	72	36	37	34
	...	...	...	86	60	...	..	...	32	27	37
	59*	69*	49*	0.8	32	34*	45*	22*	...	...	...
	73[z]	66[z]	81[z]	141	58	...	...	...	29	23	33
	33[z]	30[z]	36[z]	...	...	...	...	...	70	72	69
	74	65	84	13	56	47	40	55	36	38	34
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	843	52	...	...	...	59	63	56
	79[z]	71[z]	89[z]	268	58	77	63	91	60	59	61
	76[z]	67[z]	85[z]	1,763[z]	59[z]	68[z]	54[z]	83[z]	24	23	25
	54	48	60	338	53	62	58	66	44	44	45
	...	...	...	109	56	41*	35*	47*	...	...	...
	56	50	62	542	54	53	48	59	8	8	8
	84[y]	...	...	6,592	53	80	73	88	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	241	56	58*	50*	67*	17	17	16
	57	48	67	198[z]	60[z]	53[z]	42[z]	65[z]	42	41	42
	75[z]	68[z]	82[z]	91[z]	58[z]	83[z]	68[z]	98[z]	36	35	38
	78	73	85	1,964	53	90	82	97	38	39	37
	59[z]	49[z]	70[z]	429	59	62	50	76	72	69	74
	87	86	88	294	50	58	57	59	66	65	66

TABLE 5 *(CONTINUED)*

Country or territory	PARTICIPATION IN TECHNICAL AND VOCATIONAL EDUCATION PROGRAMMES												
	Share of technical and vocational education in total enrolment (%) by level						Percentage of youth (15 to 24) enrolled in secondary technical and vocational education (%)			Transition from upper secondary to tertiary education (ISCED levels 5, 6 and 7 combined) (%)			
	Total secondary education			Post-secondary non-tertiary education									
	School year ending in 2015			School year ending in 2015			School year ending in 2015			School year ending in 2015			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
TFYR Macedonia	30	32	27	100	100	100	...	...	...	93[z]	88[z]	99[z]	
Ukraine[3]	8	10	6	100	100	100	4[z]	6[z]	3[z]	149	149	150	
United Kingdom	32[z]	32[z]	32[z]	.[z]	.[z]	.[z]	18[z]	19[z]	17[z]	...	...	...	
United States	.[z]	.[z]	.[z]	100	100	100	.[z]	.[z]	.[z]	65[z]	63[z]	67[z]	
Latin America and the Caribbean													
Anguilla	...	...	...	...	...	...	...	...	...	...	...	...	
Antigua and Barbuda	3	3	3	...	...	...	1	2	0.9	...	...	...	
Argentina	.[z]	.[z]	.[z]	.[z]	.[z]	.[z]	.[z]	.[z]	.[z]	103[z]	105[z]	102[z]	
Aruba	...	...	...	.[z]	.[z]	.[z]	...	...	...	...	...	...	
Bahamas	...	...	...	...	...	...	...	...	...	...	...	...	
Barbados	.[z]	.[z]	.[z]	66[z]	72[z]	60[z]	.[z]	.[z]	.[z]	...	...	...	
Belize	5	6	4	.[y]	.[y]	.[y]	2	3	2	...	...	...	
Bermuda	.	.	.	.[y]	.[y]	.[y]	.	.	.	...	...	...	
Bolivia, P.S.	62	61	63	.	.	.	28	28	27	...	...	...	
Brazil[2]	4	3	4	100	100	100	2*	2*	2*	...	...	...	
British Virgin Islands[2]	2	2	2	...	...	...	1.0*	...	...	...	...	...	
Cayman Islands	.[y]	.[y]	.[y]	...	...	...	...	...	...	...	...	...	
Chile	20	21	19	.	.	.	10	10	9	101[z]	98[z]	103[z]	
Colombia	7	7	8	.	.	.	4	4	4	60	63	57	
Costa Rica	24	23	25	.	.	.	8	8	8	...	...	...	
Cuba	24	28	19	100	100	100	12	13	10	43	53	37	
Curaçao	72[y]	76[y]	69[y]	100[y]	100[y]	100[y]	...	...	...	...	...	...	
Dominica	-	-	-	-[z]	-[z]	-[z]	-	-	-	...	...	...	
Dominican Republic	5	4	6	.	.	.	2	2	3	149	130	163	
Ecuador	15	17	14	.	.	.	9	9	8	...	...	...	
El Salvador	18	18	18	.	.	.	9	9	9	23	35	12	
Grenada	.	.	.	100	100	100	.	.	.	...	...	...	
Guatemala	24	23	26	.	.	.	9	8	9	...	...	...	
Guyana	...	...	...	...	...	...	...	...	...	...	...	...	
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	
Honduras	41	41	41	.	.	.	11	10	12	...	...	...	
Jamaica	.	.	.	84	84	84	.	.	.	...	...	...	
Mexico	...	...	...	.[z]	.[z]	.[z]	...	...	...	74[z]	79[z]	70[z]	
Montserrat	.[z]	.[z]	.[z]	...	...	...	.[z]	...	...	...	...	...	
Nicaragua	...	...	...	...	...	...	...	...	...	...	...	...	
Panama	...	...	...	...	...	...	...	...	...	...	...	...	
Paraguay	...	...	...	...	...	...	...	...	...	...	...	...	
Peru	1	1	2	.	.	.	0.5	0.4	0.5	...	...	...	
Saint Kitts and Nevis	.	.	.	100	100	100	.	.	.	311	248	365	
Saint Lucia	1	2	0.5	78	87	68	0.3	0.4	0.1	...	...	...	
Saint-Martin	...	...	...	...	...	...	...	...	...	...	...	...	
Saint Vincent/Grenadines	...	...	...	...	...	...	...	...	...	...	...	...	
Sint-Maarten[3]	59[z]	67[z]	51[z]	.[z]	.[z]	.[z]	...	...	...	14[z]	14[z]	14[z]	
Suriname	41	49	35	...	...	...	20	22	18	...	...	...	
Trinidad and Tobago	...	...	...	...	...	...	...	...	...	...	...	...	
Turks and Caicos Islands[3]	.	.	.	.	.	.	.	.	.	...	...	...	
Uruguay	25[z]	29[z]	20[z]	.[z]	.[z]	.[z]	9[z]	11[z]	8[z]	...	...	...	
Venezuela, B. R.	5	5	5	.	.	.	2	2	2	...	...	...	
Northern Africa and Western Asia													
Algeria	...	...	...	.	.	.	...	...	...	109[z]	131[z]	98[z]	
Bahrain	7	13	2	100	100	100	4	6	0.8	...	...	...	
Egypt	21[z]	23[z]	18[z]	18[z]	22[z]	12[z]	10[z]	12[z]	9[z]	104[z]	112[z]	97[z]	
Iraq	...	...	...	...	...	...	...	...	...	...	...	...	
Israel	20	20	20	.	.	.	13	13	13	80[z]	77[z]	83[z]	
Jordan	4[z]	5[z]	3[z]	.	.	.	2[z]	3[z]	1[z]	...	...	...	
Kuwait	3	2	3	100[y]	100[y]	100[y]	-	-	-	...	...	...	
Lebanon[3]	16	19	12	.	.	.	...	...	...	...	...	...	
Libya	...	...	...	...	...	...	...	...	...	...	...	...	
Morocco	...	...	...	100	100	100	...	...	...	...	...	...	
Oman[3]	0.0	0.1	-	.	.	.	...	...	...	87	87	87	
Palestine	0.4	0.7	0.1	100	100	100	0.3	0.5	0.1	88	85	91	
Qatar	0.7	1	.	.	.	.	0.2	0.2	-	...	...	...	
Saudi Arabia	5**,z	8**,z	2**,z	.	.	.	2**,z	2**,z	0.7**,z	110[z]	110[z]	111[z]	
Sudan	1[y]	2[y]	...[y]	.[y]	.[y]	.[y]	...	...	...	...	...	...	
Syrian Arab Republic	5[y]	6[y]	4[y]	86[y]	92[y]	77[y]	2[y]	2[y]	2[y]	...	...	...	
Tunisia	6	...	...	100	...	...	...	...	...	100[y]	117[y]	90[y]	
Turkey	25	26	24	.	.	.	16	17	15	138[z]	147[z]	130[z]	
United Arab Emirates[3]	...	...	...	.	.	.	...	...	...	...	...	...	
Yemen	0.7[y]	1.0[y]	0.1[y]	.[y]	.[y]	.[y]	...	...	...	...	...	...	

ACCESS, PARTICIPATION IN TERTIARY EDUCATION								PARTICIPATION IN EDUCATION AND TRAINING		
Gross intake rate (GIR) to first tertiary programmes (ISCED levels 5 to 7) (%)			Total number of students enrolled in tertiary education		Gross enrolment ratio (GER) in tertiary education (%)			Participation rate of adults (25 to 64) in formal or non-formal education and training in the last 12 months[1]		
School year ending in 2015			School year ending in 2015		School year ending in 2015			Most recent survey year 2011		
Total	Male	Female	Total (000)	F %	Total	Male	Female	Total	Male	Female
71[z]	68[z]	74[z]	64	54	42	38	47	...	...	...
...	...	...	1,776	52	...	..	...	...	...	...
62[z]	55[z]	70[z]	2,353[z]	56[z]	56[z]	49[z]	64[z]	36	34	38
51	48	55	19,532	56	86	73	100	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
63[z]	54[z]	73[z]	2,869[z]	61[z]	83[z]	64[z]	103[z]	...	...	...
11	8	14	1	68	15	9	21	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	9	62	23	18	29	...	...	...
...	...	...	1.0	69	24	15	34	...	...	...
...	...	...	...	...	...	...	...			
...	...	...	8,285	57	51*	42*	59*	...	...	...
...	...	...	0.8	64	42*	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
88[z]	83[z]	95[z]	1,222	52	89	83	94	...	...	...
...	...	...	2,294	53	56	52	60	...	...	...
...	...	...	218	56	54	47	61	...	...	...
23	22	25	261	57	36	30	43	...	...	...
...	...	...	2[y]	70[y]	20[y]	12[y]	28[y]	...	...	...
...	...	...	...	...	...	...	...	...	...	...
67	49	85	480	64	50	35	65	...	...	...
...	...	...	586[y]	...	40[y]	...	...	...	...	...
15	21	8	179	54	29	28	31	...	...	...
...	...	...	9	53	91	85	98	...	...	...
...	...	...	367	54	22	20	24	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
17[y]	15[y]	19[y]	195	57	22	19	25	...	...	...
...	...	...	75	63	27	20	35	...	...	...
36[z]	36[z]	35[z]	3,419[z]	49[z]	30[z]	30[z]	30[z]	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	124[y]	59[y]	39[y]	31[y]	47[y]	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
59	43	75	4	67	80	53	107	...	...	...
...	...	...	3	65	17	12	22	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	0.2	78	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	0.3	...	...	...	...	...	...	...
...	...	...	146	...	56	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
32[z]	25[z]	40[z]	1,289	60	37	29	45	...	...	...
60[z]	49[z]	73[z]	39	60	43	31	59	...	...	...
33[z]	33[z]	34[z]	2,869	48	36	37	36	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	374	57	65	55	75	...	...	...
...	...	...	313	52	45	43	47	...	...	...
...	...	...	72[y]	64[y]	27[y]	20[y]	33[y]	...	...	...
...	...	...	216	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...
...	...	...	877	48	28	29	28	...	...	...
...	...	...	127	58	...	...	...	...	...	...
56	47	67	221	60	44	35	54	...	...	...
...	...	...	28	66	15	6	44	...	...	...
72	78	67	1,528	49	63	64	62	...	...	...
...	...	...	632[z]	51[z]	16[z]	16[z]	17[z]	...	...	...
32	29	36	773	51	44	41	47	...	...	...
42	33	51	323	62	35	26	43	...	...	...
92[z]	96[z]	88[z]	6,063	46	95	101	88	18	21	15
...	...	...	157	55	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...

TABLE 5 *(CONTINUED)*

Country or territory	PARTICIPATION IN TECHNICAL AND VOCATIONAL EDUCATION PROGRAMMES												
	Share of technical and vocational education in total enrolment (%) by level						Percentage of youth (15 to 24) enrolled in secondary technical and vocational education (%)			Transition from upper secondary to tertiary education (ISCED levels 5, 6 and 7 combined) (%)			
	Total secondary education			Post-secondary non-tertiary education									
	School year ending in 2015			School year ending in 2015			School year ending in 2015			School year ending in 2015			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
The Pacific													
Australia	33[z]	37[z]	30[z]	100[z]	100[z]	100[z]	11[z]	13[z]	8[z]	...	...	...	
Cook Islands[2]	.	.	.	.	.	.	-*	-*	-*	...	...	...	
Fiji	...	...	...	100	100	100	...	...	...	...	...	...	
Kiribati	...	...	...	.	.	.	...	...	...	...	...	...	
Marshall Islands	3	2	3	2	3	0.2	1	1	2	...	...	...	
Micronesia, F. S.	...	...	...	.[z]	.[z]	.[z]	...	...	...	...	...	...	
Nauru	.[z]	.[z]	.[z]	.[z]	.[z]	.[z]	.*,[z]	.*,[z]	.*,[z]	...	...	...	
New Zealand	16	15	17	100[y]	100[y]	100[y]	6	6	6	125	117	132	
Niue	.	.	.	.	.	.	.*	.*	.*	...	...	...	
Palau[2]	23	23	24	...	...	...	12*	12*	12*	...	...	...	
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	
Samoa	.	.	.	.	.	.	.	.	.	...	...	...	
Solomon Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Tokelau	.	.	.	.	.	.	.*	.*	.*	...	...	...	
Tonga	3[z]	6[z]	0.7[z]	...	...	...	2[z]	4[z]	1[z]	...	...	...	
Tuvalu[2]	-	-	-	.	.	.	-*	-*	-*	...	...	...	
Vanuatu	2	2	3	74	86	53	0.7	0.7	0.7	...	...	...	
Southern Asia													
Afghanistan	1.0	1	0.3	93	93	93	0.3	0.6	0.1	41[z]	51[z]	23[z]	
Bangladesh	4	6	2	98	98	96	2	3	1	...	...	...	
Bhutan	2[z]	2[z]	1[z]	100[y]	100[y]	100[y]	-[z]	-[z]	-[z]	32[y]	36[y]	28[y]	
India	1	2	0.5	100	100	100	...	...	...	138	142	134	
Iran, Islamic Republic of	15	18	11	.	.	.	6	8	4	144	175	117	
Maldives	...	...	...	...	...	...	...	...	...	...	...	...	
Nepal	...	...	...	.	.	.	-	-	-	...	...	...	
Pakistan	3	3	2	100	100	100	0.9	1	0.6	...	...	...	
Sri Lanka	6[y]	6[y]	5[y]	100[y]	100[y]	100[y]	...	...	...	57[y]	61[y]	54[y]	
Sub-Saharan Africa													
Angola	...	...	...	...	...	...	...	...	...	...	...	...	
Benin	2	3	2	...	...	...	1.0	1	0.6	...	...	...	
Botswana	...	...	...	...	...	...	...	...	...	...	...	...	
Burkina Faso	3	3	3	100[y]	100[y]	100[y]	0.8	0.9	0.7	...	...	...	
Burundi	7	7	7	.	.	.	2	2	2	161[z]	162[z]	159[z]	
Cabo Verde	3	3	2	100	100	100	1	2	1	75	76	74	
Cameroon	22	25	18	20	24	17	7	9	5	...	...	...	
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	
Chad	...	...	...	...	...	...	...	...	...	...	...	...	
Comoros	0.6[z]	1[z]	0.1[z]	...	...	...	-[y]	-[y]	-[y]	35[z]	...	...	
Congo	...	...	...	...	...	...	...	...	...	...	...	...	
Côte d'Ivoire	7	6	8	.	.	.	...	...	...	...	...	...	
D. R. Congo	19[z]	20[z]	17[z]	.[z]	.[z]	.[z]	...	...	...	...	...	...	
Djibouti	10	11	8	100	100	100	...	...	...	...	...	...	
Equatorial Guinea	...	...	...	...	...	...	...	...	...	...	...	...	
Eritrea	0.6	0.6	0.7	100	100	100	0.2	0.2	0.1	...	...	...	
Ethiopia	7	6	8	...	...	...	2**	2**	2**	...	...	...	
Gabon	...	...	...	...	...	...	...	...	...	...	...	...	
Gambia	...	...	...	...	...	...	...	...	...	...	...	...	
Ghana	2	3	1	...	...	...	0.5	0.7	0.4	...	...	...	
Guinea	4[z]	3[z]	4[z]	.[z]	.[z]	.[z]	0.8[z]	0.8[z]	0.8[z]	148[z]	147[z]	151[z]	
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...	...	
Kenya	...	...	...	...	...	...	...	...	...	...	...	...	
Lesotho	4	4	3	100[z]	100[z]	100[z]	1**	...	...	...	...	...	
Liberia	...	...	...	...	...	...	...	...	...	...	...	...	
Madagascar	2[z]	2[z]	1[z]	100[z]	100[z]	100[z]	0.5[z]	0.8[z]	0.3[z]	70[z]	71[z]	68[z]	
Malawi	.	.	.	...	...	...	.	.	.	...	...	...	
Mali	13	14	12	100	100	100	4	4	3	...	...	...	
Mauritania	0.6	0.6	0.5	.	.	.	0.1	0.2	0.1	...	...	...	
Mauritius	11	15	8	34	48	22	1	2	1	...	...	...	
Mozambique	5**	6**	3**	.	.	.	0.7	0.9	0.4	...	...	...	
Namibia	...	...	...	...	...	...	...	...	...	...	...	...	
Niger	8	6	11	100	100	100	0.9	0.8	0.9	...	...	...	
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	
Rwanda	18	21	15	100	100	100	...	...	...	...	...	...	
Sao Tome and Principe	3	3	2	.	.	.	5**	5**	4**	...	...	...	
Senegal	5	7	3	...	...	...	...	...	...	...	...	...	
Seychelles	4	6	2	100	100	100	2	3	0.8	...	...	...	
Sierra Leone	...	...	...	100	100	100	...	...	...	...	...	...	
Somalia	...	...	...	...	...	...	...	...	...	...	...	...	
South Africa	7[z]	8[z]	6[z]	100[z]	100[z]	100[z]	...	...	...	...	...	...	
South Sudan	...	...	...	100	100	100	...	...	...	...	...	...	
Swaziland	0.4[z]	0.5[z]	0.2[z]	100[z]	100[z]	100[z]	0.1**,[z]	0.2**,[z]	0.0**,[z]	...	...	...	

ACCESS, PARTICIPATION IN TERTIARY EDUCATION								PARTICIPATION IN EDUCATION AND TRAINING		
	Gross intake rate (GIR) to first tertiary programmes (ISCED levels 5 to 7) (%)			Total number of students enrolled in tertiary education		Gross enrolment ratio (GER) in tertiary education (%)			Participation rate of adults (25 to 64) in formal or non-formal education and training in the last 12 months[1]		
	School year ending in 2015			School year ending in 2015		School year ending in 2015			Most recent survey year 2011		
	Total	Male	Female	Total (000)	F %	Total	Male	Female	Total	Male	Female
	...	...	...	1,454[z]	57[z]	90[z]	75[z]	106[z]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	99	90	110	270	57	84	72	97	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	0.9[y]	58[y]	62*[,y]	49*[,y]	76*[,y]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	..	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	15[z]	24[z]	7[z]	263[z]	20[z]	9[z]	13[z]	4[z]	...	...	...
	...	...	...	2,068[z]	42[z]	13[z]	15[z]	11[z]	...	...	...
	18[y]	20[y]	15[y]	9[y]	41[y]	11[y]	13[y]	9[y]	...	...	...
	42	42	41	32,107	47	27	27	27	...	...	...
	67	73	61	4,803	46	72	76	68	...	...	...
	...	...	...	6[z]	61[z]	16[z]	12[z]	20[z]	...	...	...
	...	...	...	445	52	15	15**	15**	...	...	...
	...	...	...	1,872	45	10	11	9	...	...	...
	32	21	42	308	61	20	16	24	...	...	...
	11	12	10	221	45	9	10	8	...	...	...
	...	...	...	145[y]	27[y]	15[y]	22[y]	8[y]	...	...	...
	41[z]	...	...	52	59	23	19	28	...	...	...
	10	12	7	95	33	6	7	4	...	...	...
	9[z]	14[z]	5[z]	51[z]	25[z]	5[z]	8[z]	2[z]	...	...	...
	33	27	39	13	59	22	18	25	...	...	...
	...	...	...	390	43	17	20	15	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	42**[,z]	16**[,z]	3**[,z]	6**[,z]	1**[,z]	...	...	...
	13[z]	...	...	6[z]	44[z]	9[z]	10[z]	8[z]	...	...	...
	...	...	...	37[y]	43[y]	10[y]	11[y]	8[y]	...	...	...
	...	...	...	193	39	9	11	7	...	...	...
	...	...	...	443[y]	31[y]	7[y]	9[y]	4[y]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	..	...	...	...	...
	5[z]	5[z]	4[z]	13[z]	33[z]	3[z]	3**[,z]	2**[,z]	...	...	...
	...	...	...	757[z]	32[z]	8[z]	11[z]	5[z]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	418	40	16	19	13	...	...	...
	17[z]	24[z]	11[z]	118[z]	30[z]	11[z]	15[z]	7[z]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	12[z]	10[z]	15[z]	24[z]	59[z]	10[z]	8[z]	12[z]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	8[z]	9[z]	8[z]	113[z]	48[z]	5[z]	5[z]	5[z]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	5	6	3	20	33	5	7	4	...	...	...
	...	...	...	38	56	37	32	42	...	...	...
	...	...	...	175	42	6	7**	5**	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	82	44	8	9	7	...	...	...
	...	...	...	2	50	13	13	14	...	...	...
	...	...	...	145	38	10	13	8	...	...	...
	28	20	37	1	66	14	9	20	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	..	...	...	...	...	...
	...	...	...	1,019[z]	58[z]	19[z]	16[z]	23[z]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	8[y]	51[y]	5[y]	5[y]	65[y]	...	...	...

TABLE 5 *(CONTINUED)*

Country or territory	PARTICIPATION IN TECHNICAL AND VOCATIONAL EDUCATION PROGRAMMES												
	Share of technical and vocational education in total enrolment (%) by level						Percentage of youth (15 to 24) enrolled in secondary technical and vocational education (%)			Transition from upper secondary to tertiary education (ISCED levels 5, 6 and 7 combined) (%)			
	Total secondary education			Post-secondary non-tertiary education									
	School year ending in 2015			School year ending in 2015			School year ending in 2015			School year ending in 2015			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Togo	...	...	...	...	...	...	...	...	...	...	...	...	
Uganda	...	...	...	.	.	.	...	...	...	...	...	...	
United Republic of Tanzania	12y	12y	12y	44	36	54	...	...	...	...	...	...	
Zambia	...	...	...	.y	.y	.y	...	...	...	...	...	...	
Zimbabwe	.y	.y	.y	...	...	...	.y	.y	.y	...	...	...	
	Weighted average			Median			Median			Median			
World	10	11	9	76	80	66	2	3	2	...	...	...	
Caucasus and Central Asia	20	20	20	100	100	100	6	6	6	...	...	...	
Eastern and South-eastern Asia	16	17	15	40	46	.	3	3	2	...	...	...	
Eastern Asia	19	20	18	40	46	31	2	2	1	...	...	...	
South-eastern Asia	11**	12**	9**	50	50	.	4	4	3	...	...	...	
Europe and Northern America	16**	18**	15**	100	100	100	12	15	11	90	83	91	
Latin America and the Caribbean	10	9	10	.	.	.	2	2	2	...	...	...	
Caribbean	10	12	9	66	72	60	.	.	.	...	...	...	
Latin America	10	9	10	.	.	.	9	8	9	...	...	...	
Northern Africa and Western Asia	14**	15**	12**	.	.	.	2	3	1	...	...	...	
Northern Africa	13**	15**	11**	18	22	12	...	...	...	104	117	97	
Western Asia	14**	15**	13**	.	.	.	2	2	1	...	...	...	
Pacific	26**	28**	23**	.	.	.	0	0	0	...	...	...	
Southern Asia	2	3	1	99	99	98	1	1	0	57	61	54	
Sub-Saharan Africa	7**	7**	6**	100	100	100	...	...	...	...	...	...	
Countries with low income	6	7	6	93	93	93	1	1	0	...	...	...	
Countries with middle income	10	11	9	57	66	42	2	3	2	...	...	...	
Lower middle	5	6	4	80	86	53	2	3	2	...	...	...	
Upper middle	16	17	15	37	47	11	3	3	4	...	...	...	
Countries with high income	15	16	13	77	74	80	8	10	6	...	...	...	

Source: UIS database, except where noted. GIR and GER are based on the United Nations Population Division estimates, revision 2015 (United Nations, 2015), median variant.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. Data are from the 2011 Eurostat Adult Education Survey, which focuses on people aged 25 to 64 living in private households.

2. National population data were used to calculate GIR and GER due to inconsistencies in the United Nations population data or lack of United Nations population by age.

3. GIR and GER were not calculated due to inconsistencies in the United Nations population data or lack of United Nations population by age.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(-) Magnitude nil or negligible.

(.) The category is not applicable or does not exist.

(...) No data are available.

ACCESS, PARTICIPATION IN TERTIARY EDUCATION									PARTICIPATION IN EDUCATION AND TRAINING		
	Gross intake rate (GIR) to first tertiary programmes (ISCED levels 5 to 7) (%)			Total number of students enrolled in tertiary education		Gross enrolment ratio (GER) in tertiary education (%)			Participation rate of adults (25 to 64) in formal or non-formal education and training in the last 12 months[1]		
	School year ending in 2015			School year ending in 2015		School year ending in 2015			Most recent survey year 2011		
	Total	Male	Female	Total (000)	F %	Total	Male	Female	Total	Male	Female
	...	...	...	71	30	11	15	6	...	...	...
	...	...	...	165[z]	44[z]	5[z]	5[z]	4[z]	...	...	...
	...	...	...	158[y]	35[y]	4[y]	5[y]	2[y]	...	...	...
	...	...	...	...	...	...	...	...	...	...	...
	8[y]	9[y]	7[y]	136	48	8	9	8	...	...	...
	Median			Sum	% F	Weighted average			Median		
	...	...	...	212,431	51	36	34	38	...	...	...
	48	47	48	1,895	50	25	24	25	...	...	...
	...	...	...	66,813	51	40	38	43	...	...	...
	...	...	...	51,572	50	46	43	49	...	...	...
	...	...	...	15,241	54	28	25**	30**	...	...	...
	70	65	78	50,702	55	75	66**	85**	39	40	39
	...	...	...	24,894**	56**	46**	40**	53**	...	...	...
	...	...	...	936	61	29	23	36	...	...	...
	...	...	...	23,957	56	47	41	54	...	...	...
	...	...	...	17,054	49	42	42**	42**	...	...	...
	33	33	40	6,306	52	32	30**	33**	...	...	...
	...	...	...	10,748	47	52	53**	51**	...	...	...
	...	...	...	1,750	57	62**	52**	72**	...	...	...
	32	24	41	41,895	47	25	25	24	...	...	...
	...	...	...	7,428**	41**	8**	10**	7**	...	...	...
	...	...	...	4,447**	36**	8**	10**	5**	...	...	...
	...	...	...	151,849	51	33	31	35	...	...	...
	...	...	...	61,648	48	23	23	23	...	...	...
	...	...	...	90,201	52	46	43	50	...	...	...
	...	...	...	56,135	54	74	66**	82**	...	...	...

TABLE 6: SDG 4, Target 4.4 – Youth and adult skills for employment, decent jobs and entrepreneurship

By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

	ICT SKILLS ACQUISITION			ADULT EDUCATIONAL ATTAINMENT											
	Percentage of adults (15 and over) (%) with ICT skills to:[1]			Percentage of adults (25 and over) (%) who have attained at least:											
	Connect or install new devices	Copy or move a file or folder	Create electronic presentations with presentation software	Primary education (ISCED level 1 to 8)			Lower secondary education (ISCED level 2 to 8)			Upper secondary education (ISCED level 3 to 8)			Short-cycle tertiary education (ISCED level 5 to 8)		
	2015	2015	2015	2010–2015[2]			2010–2015[2]			2010–2015[2]			2010–2015[2]		
Country or territory	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Caucasus and Central Asia															
Armenia	...	...	...	99	100	99	97	98	97	92	92	92	47	45	49
Azerbaijan	...	...	...	99	99	98	96	98	94	89	92	85	25	27	24
Georgia	...	...	...	99	99	99	97	97	96	92	93	91	31	31	31
Kazakhstan	15	19	21	...	...	...	...	...	...	...	...	...	...	...	...
Kyrgyzstan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tajikistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Turkmenistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uzbekistan	...	...	...	100	100	100	100	100	100	92	94	90	55	60	51
Eastern and South-eastern Asia															
Brunei Darussalam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cambodia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
China	...	...	...	...	...	...	65	72	59	22	25	19	9	10	8
DPR Korea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hong Kong, China	...	...	...	95	98	93	78	82	76	62	64	61	22	25	19
Indonesia	...	...	...	78	82	74	49	53	44	32	36	29	9	10	9
Japan	...	...	...	100	100	100	...	...	...	81	82	79	35	37	32
Lao PDR	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Macao, China	...	...	...	88	90	85	69	71	66	45	47	43	17	18	17
Malaysia	...	...	...	91	94	88	68	71	65	51	52	50	...	...	...
Mongolia	...	...	...	95	95	96	85	84	85	68	64	71	24	20	27
Myanmar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Philippines	...	...	...	84	82	86	70	69	71	58	57	60	27	25	28
Republic of Korea	...	...	...	94	98	91	83	89	77	73	80	66	35	41	30
Singapore	19	42	23	87	90	84	79	83	76	71	74	68	43	46	40
Thailand	...	...	...	66	70	62	45	48	43	33	34	32	19	18	20
Timor-Leste	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Viet Nam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Europe and Northern America															
Albania	...	...	...	96	97	94	87	89	85	45	46	44	13	13	12
Andorra	...	...	...	96	97	96	73	73	72	48	48	47	21	21	21
Austria	54	73	40	...	...	...	...	...	...	79	86	72	27	30	24
Belarus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belgium	47	68	36	95	96	94	84	87	82	66	68	65	32	31	33
Bosnia and Herzegovina	...	...	...	80	89	72	...	...	...	61	73	50	11	11	10
Bulgaria	20	51	9	...	...	...	95	96	94	75	76	74	24	20	28
Canada	...	...	...	...	...	...	...	...	...	83	83	83	48	45	51
Croatia	33	55	24	97	99	95	89	94	85	71	79	63	18	18	18
Cyprus	35	63	28	94	96	92	79	81	77	69	71	67	35	34	36
Czechia	38	67	23	100	100	100	100	100	100	90	94	86	20	20	19
Denmark	66	77	49	...	...	...	92	93	92	78	78	78	35	30	39
Estonia	53	67	38	...	...	...	...	...	...	90	88	91	38	28	46
Finland	71	80	58	...	...	...	...	...	...	74	73	74	34	30	38
France	49	70	41	98	98	97	83	86	81	69	72	67	30	29	31
Germany	49	76	34	100	100	100	97	97	96	83	88	78	25	31	20
Greece	43	54	26	95	97	94	69	73	65	58	59	57	24	24	23
Hungary	43	65	17	100	100	100	97	98	96	75	80	71	22	20	23
Iceland	66	73	58	...	...	...	...	...	...	...	...	...	...	...	...
Ireland	38	57	25	...	...	...	83	82	85	66	64	69	32	29	34
Italy	40	56	25	95	97	94	78	83	74	49	50	48	14	13	15
Latvia	41	66	33	100	100	100	100	99	100	89	86	91	30	22	37
Liechtenstein	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lithuania[3]	42	67	34	99	99	98	94	96	92	84	86	83	33	29	36
Luxembourg	64	79	51	...	...	...	100	100	100	...	...	...	34	35	34
Malta	34	58	30	99	99	98	78	82	73	37	38	35	16	17	16
Monaco	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Montenegro	...	...	...	97	99	96	89	95	84	73	80	65	20	21	18
Netherlands	42	77	51	98	99	98	89	92	88	70	74	65	31	33	29
Norway	68	78	54	100	100	100	99	99	99	77	78	77	37	35	38
Poland	39	55	22	99	99	98	84	87	81	83	86	81	24	21	26
Portugal[3]	47	61	40	91	94	87	53	53	52	35	34	37	18	15	21
Republic of Moldova	...	...	...	99	99	99	96	97	96	75	76	74	33	28	38
Romania	12	37	5	99	99	98	89	93	87	65	70	59	14	15	14
Russian Federation	7		7	99	100	99	94	95	92	85	86	83	62	60	64
San Marino	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Serbia	...	...	...	97	99	95	89	93	85	71	77	65	20	19	20
Slovakia	40	73	25	100	100	100	99	99	99	87	91	83	19	18	20

TABLE 6 *(CONTINUED)*

Country or territory	ICT SKILLS ACQUISITION			ADULT EDUCATIONAL ATTAINMENT											
	Percentage of adults (15 and over) (%) with ICT skills to:[1]			Percentage of adults (25 and over) (%) who have attained at least:											
	Connect or install new devices	Copy or move a file or folder	Create electronic presentations with presentation software	Primary education (ISCED level 1 to 8)			Lower secondary education (ISCED level 2 to 8)			Upper secondary education (ISCED level 3 to 8)			Short-cycle tertiary education (ISCED level 5 to 8)		
	2015	2015	2015	2010–2015[2]			2010–2015[2]			2010–2015[2]			2010–2015[2]		
	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Slovenia	43	59	36	100	100	100	98	99	97	82	86	77	26	23	29
Spain	51	63	40	90	92	89	75	78	72	48	48	47	29	29	30
Sweden	64	66	56	100	100	100	90	90	90	75	76	74	32	27	36
Switzerland	...	...	...	...	...	...	97	97	97	85	89	82	37	44	30
TFYR Macedonia	24	50	16	...	...	...	...	...	...	...	...	...	...	...	...
Ukraine	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
United Kingdom	53	73	45	100	100	100	100	100	100	75	76	73	39	38	40
United States	...	...	...	99	99	99	95	95	95	88	88	89	42	41	43
	43	66	34												
Latin America and the Caribbean															
Anguilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Argentina	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aruba	...	...	...	91	92	91	61	63	59	32	32	32	...	...	...
Bahamas	...	...	...	95	95	95	89	89	89	82	81	82	23	18	27
Barbados	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belize	...	...	...	100	100	100	84	84	84	37	36	37	6	6	6
Bermuda	...	...	...	...	...	...	...	...	...	77	73	80	37	33	41
Bolivia, P.S.	...	...	...	59	64	53	52	57	47	43	47	39	24	25	23
Brazil	16	27	12	77	76	78	56	55	58	43	40	45	13	11	15
British Virgin Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	...	...	...	99	99	99	95	94	96	90	90	91	38	34	42
Chile	...	...	...	85	86	84	76	77	74	54	55	53	18	18	18
Colombia	...	...	...	76	76	76	50	49	51	45	45	46	...	...	...
Costa Rica	...	...	...	81	81	81	53	52	54	38	37	39	22	21	23
Cuba	...	...	...	91	92	90	81	83	79	57	58	57	15	13	17
Curaçao	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dominica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dominican Republic	...	...	...	67	66	68	57	54	59	35	31	38	12	10	14
Ecuador	...	...	...	83	84	81	52	52	52	42	43	42	...	...	...
El Salvador	...	...	...	56	61	53	41	45	38	27	29	25	10	11	10
Grenada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guatemala	...	...	...	62	62	61	37	36	37	27	26	27	9	10	7
Guyana	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Honduras	...	...	...	59	58	59	32	31	33	23	21	24	10	10	10
Jamaica	...	...	...	99	99	99	61	57	65	...	...	...	...	...	...
Mexico	...	...	...	79	81	78	60	61	58	33	35	32	16	17	15
Montserrat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Panama	...	...	...	83	83	82	61	60	63	43	40	46	21	18	24
Paraguay	...	...	...	75	76	74	48	49	47	38	38	38	14	12	16
Peru	...	...	...	81	86	75	62	68	57	56	61	51	21	21	21
Saint Kitts and Nevis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saint Lucia	...	...	...	...	...	...	46	43	49	40	38	43	10	8	12
Saint Martin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sint Maarten	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suriname	...	...	...	90	93	88	62	63	61	25	23	26	...	...	...
Trinidad and Tobago	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uruguay	...	...	...	89	89	90	54	52	56	29	25	32	12	10	15
Venezuela, B. R.	...	...	...	88	87	89	54	67	72	56	52	60	30	25	35
Northern Africa and Western Asia															
Algeria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bahrain	...	...	...	68	70	64	55	54	57	42	41	45	19	18	22
Egypt	1	11	0.4	...	...	...	...	...	...	...	...	...	...	...	...
Iraq	...	...	...	79	83	74	44	50	37	30	34	24	11	13	8
Israel	...	...	...	96	97	94	89	91	88	81	82	81	47	44	50
Jordan	...	...	...	85	90	80	74	78	69	41	43	40	16	19	13
Kuwait	...	...	...	62	61	64	56	54	58	30	26	36	...	...	...
Lebanon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Libya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Morocco	23	37	16	...	...	...	...	...	...	...	...	...	...	...	...
Oman	...	...	...	84	83	85	66	64	73	50	45	63	...	...	...
Palestine	...	...	...	93	96	90	60	62	59	39	40	38	23	24	23
Qatar	...	...	...	84	84	86	68	68	71	44	41	58	...	...	...
Saudi Arabia	...	...	...	81	86	74	67	70	60	49	51	46	21	21	21
Sudan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE 6 *(CONTINUED)*

	ICT SKILLS ACQUISITION			ADULT EDUCATIONAL ATTAINMENT											
	Percentage of adults (15 and over) (%) with ICT skills to:[1]			Percentage of adults (25 and over) (%) who have attained at least:											
	Connect or install new devices	Copy or move a file or folder	Create electronic presentations with presentation software	Primary education (ISCED level 1 to 8)			Lower secondary education (ISCED level 2 to 8)			Upper secondary education (ISCED level 3 to 8)			Short-cycle tertiary education (ISCED level 5 to 8)		
	2015	2015	2015	2010–2015[2]			2010–2015[2]			2010–2015[2]			2010–2015[2]		
Country or territory	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Syrian Arab Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tunisia	...	...	...	...	...	...	40	47	33	...	...	...	...	...	...
Turkey	25	37	16	88	95	82	56	67	46	37	44	30	17	20	15
United Arab Emirates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yemen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Pacific															
Australia	...	...	...	100	100	100	93	93	92	76	78	73	40	37	44
Cook Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fiji	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kiribati	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marshall Islands	...	...	...	96	96	96	92	92	92	70	72	68	...	...	...
Micronesia, F. S.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nauru	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Zealand	...	...	...	...	...	...	...	...	...	70	72	67	30	28	32
Niue	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Palau	...	...	...	99	99	98	97	97	97	88	88	88	34	30	38
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Samoa	...	...	...	99	99	99	...	...	...	72	70	75	...	...	...
Solomon Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tokelau	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tonga	...	...	...	96	96	96	88	88	88	54	53	55	6	7	5
Tuvalu	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vanuatu	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Southern Asia															
Afghanistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bangladesh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bhutan	...	...	...	20	26	15	10	13	6	6	8	3	5	7	3
India	...	...	...	51	62	40	38	47	28	27	34	19	10	13	7
Iran, Islamic Republic of	5	22	6	...	...	...	68	71	66	47	47	47	22	22	21
Maldives	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nepal	...	...	...	87	90	83	56	59	52	35	38	31	.	.	.
Pakistan	...	...	...	50	63	37	37	47	27	28	34	21	9	11	6
Sri Lanka	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sub-Saharan Africa															
Angola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Benin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Botswana	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burkina Faso	...	...	...	...	...	...	8	12	6	3	4	2	-	-	-
Burundi	...	...	...	11	14	8	6	8	4	3	5	2	1	2	1
Cabo Verde	...	...	...	52	55	49	29	31	28	20	20	20	10	9	10
Cameroon	...	...	...	36	47	26	36	47	26	18	25	11	1	2	1
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chad	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Comoros	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Côte d'Ivoire	...	...	...	...	...	...	21	27	14	11	15	7	5	7	3
D. R. Congo	...	...	...	64	78	50	51	66	37	27	39	17	9	14	5
Djibouti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Equatorial Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Eritrea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ethiopia	...	...	...	25	37	14	13	18	8	9	13	6	1	2	0.4
Gabon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gambia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ghana	...	...	...	65	73	57	54	65	45	21	27	15	3	5	2
Guinea	...	...	...	...	...	...	12	19	5	...	...	...	3	5	1
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kenya	...	...	...	51	55	47	29	32	25	22	26	18	-	-	-
Lesotho	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Liberia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madagascar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malawi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mali	...	...	...	22	29	16	12	16	7	6	9	3	2	3	1
Mauritania	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mauritius	...	...	...	67	71	63	54	59	50	44	48	40	5	7	4
Mozambique	...	...	...	23	28	17	16	19	12	5	7	4	2	3	2
Namibia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Niger	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE 6 *(CONTINUED)*

	ICT SKILLS ACQUISITION			ADULT EDUCATIONAL ATTAINMENT											
	Percentage of adults (15 and over) (%) with ICT skills to:[1]			Percentage of adults (25 and over) (%) who have attained at least:											
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	2015	2015	2015	2010–2015[2]			2010–2015[2]			2010–2015[2]			2010–2015[2]		
Country or territory	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rwanda	...	...	...	31	36	27	12	15	9	8	11	6	4	5	3
Sao Tome and Principe	...	...	...	...	...	...	39	46	32	...	...	...	...	...	...
Senegal	...	...	...	27	33	22	14	19	10	8	12	5	4	6	3
Seychelles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sierra Leone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Africa	...	...	...	82	84	81	77	79	75	65	67	63	8	8	7
South Sudan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Swaziland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Togo	...	...	...	30	11	10	18	11	10	9	11	10	...	...	...
Uganda	...	...	...	33	11	10	24	11	10	10	11	10	8	11	10
United Republic of Tanzania	...	...	...	65	71	59	11	14	9	3	5	2	2	3	1
Zambia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Zimbabwe	...	...	...	76	82	70	59	66	52	15	19	12	...	...	...
	Median	Median	Median		Median			Median			Median			Median	
World	...	...	...	...	...	...	68	71	66	50	51	50	...	...	...
Caucasus and Central Asia	...	...	...	99	99	99	97	98	97	92	93	91	39	38	40
Eastern and South-eastern Asia	...	...	...	89	92	87	69	72	69	58	57	60	23	23	23
Eastern Asia	...	...	...	95	98	93	78	82	76	65	64	66	23	23	23
South-eastern Asia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Europe and Northern America	43	66	34	99	99	98	90	93	89	75	77	73	29	28	29
Latin America and the Caribbean	...	...	...	83	84	81	56	55	58	41	40	42	...	...	...
Caribbean	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Latin America	...	...	...	81	81	78	54	52	56	38	38	38	15	15	16
Northern Africa and Western Asia	...	...	...	84	85	81	60	64	59	42	42	43	...	...	...
Northern Africa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Western Asia	...	...	...	84	85	81	63	65	59	42	42	43	19	18	22
Pacific	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Southern Asia	...	...	...	...	...	...	38	47	28	28	34	21	9	11	6
Sub-Saharan Africa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Countries with low income	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Countries with middle income	...	...	...	...	...	...	60	63	59	43	44	43	...	...	...
Lower middle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Upper middle	...	...	...	88	90	82	65	71	65	45	45	46	17	18	17
Countries with high income	...	...	...	96	98	95	84	87	82	72	74	69	30	29	32

Source: UIS database, except where noted.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. Eurostat database; ITU World Telecommunication/ICT Indicators database.

2. Data are for the most recent year available in the period specified.

3. Since ISCED 5 short-cycle tertiary education does not exist, the percentage of adults having attained at least ISCED 6 to 8 is used.

(-) Magnitude nil or negligible.

(...) No data are available.

TABLE 7: SDG 4, Target 4.5 – Gender – Eliminating gender disparity in education

By 2030, eliminate gender disparities in education and ensure equal access at all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

	GENDER DISPARITY IN PARTICIPATION IN EDUCATION				GENDER DISPARITY IN SCHOOL COMPLETION[1]			GENDER DISPARITY IN LEARNING OUTCOMES[2]	
	Gender parity in gross enrolment ratio (GER) in:				Gender disparity in completion rate in:			Gender disparity in percentage of students with minimum level of proficiency	
	Pre-primary	Primary	Secondary	Tertiary	Primary	Lower secondary	Upper secondary	End of primary education	
								Reading	Mathematics
	School year ending in 2015				2010–2015[4]			2010–2015[4]	
Country or territory	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
Caucasus and Central Asia									
Armenia	1.03	1.00	1.01	1.13	1.00	1.07	1.42	...	1.03[I]
Azerbaijan[5]	1.01*	0.98*	...	1.16*	...	...	...	1.05[I]	1.03[I]
Georgia	...	1.02	1.00	1.22	...	1.00	1.00	...	...
Kazakhstan	**1.05**	**1.00**	**1.03**	**1.24**	1.00	1.00	1.02	...	1.00[I]
Kyrgyzstan	1.01	0.99	1.02	1.31	1.00	1.01	1.04	...	...
Tajikistan	**0.88**	**1.01**	0.90[g]	**0.72**	0.99	0.91	0.67	...	...
Turkmenistan	...	0.98[z]	0.96[z]	0.64[z]	...	...	...	...	...
Uzbekistan	0.97	**0.98**	**0.98**	**0.64**	...	...	...	...	...
Eastern and South-eastern Asia									
Brunei Darussalam	1.02	1.00	1.00	1.65	...	...	...	...	...
Cambodia	...	0.99	...	0.82	1.14	0.96	0.97	...	...
China	1.01	1.00	1.03	1.19	1.02	1.15	1.02	...	...
DPR Korea	1.01	1.00	1.01	0.55	...	...	...	...	...
Hong Kong, China	...	...	0.96	1.16	...	...	...	...	...
Indonesia	1.05[z]	0.97	1.00	1.12	1.02	1.07	0.94	...	...
Japan	...	1.00[z]	1.00[z]	0.93[z]	...	...	...	...	...
Lao PDR	1.04	0.96	0.93	0.96	1.03	0.90	0.97	...	...
Macao, China	1.00	0.99	0.99	1.33	...	...	...	...	...
Malaysia	1.03	1.00	1.08	1.53	...	...	...	...	...
Mongolia	...	0.98	1.02	1.38	1.02	1.12	1.37	...	...
Myanmar	...	0.97[z]	1.03[z]	...	1.06	1.12	1.52	...	...
Philippines	...	1.00[g]	1.10[g]	1.28[z]	1.10	1.25	1.25	...	...
Republic of Korea	1.00	0.99	0.99	0.77	...	...	...	...	...
Singapore	...	...	...	...	...	...	...	...	...
Thailand	0.94	0.94	0.94	1.41	1.01	1.11	1.15	...	...
Timor-Leste	1.07	0.99	1.07	...	...	...	...	...	...
Viet Nam	0.97	0.99	...	1.00	1.01	1.10	1.17	...	...
Europe and Northern America									
Albania	...	0.97	0.94	1.40	...	...	...	...	...
Andorra	...	...	...	...	...	...	...	...	...
Austria	1.02	0.99	0.95	1.20	...	0.98	1.01	1.01[I]	1.00[I]
Belarus	0.96	1.00	0.99	1.33	1.00	1.00	1.05	...	...
Belgium	1.00	1.00	1.14	1.31	...	1.03	0.99	...	...
Bosnia and Herzegovina	...	...	...	...	1.00	1.01	1.25	...	...
Bulgaria	0.98	0.99	0.97	1.27	...	1.01	0.90	1.03[I]	1.01[I]
Canada	...	1.01[g]	1.00[g]	...	...	1.00	1.08	...	...
Croatia	0.96	1.00	1.05	1.36	...	1.02	0.98	1.01[I]	0.99[I]
Cyprus[5]	1.00*	1.00*	0.99*	1.36*	...	0.99	1.11	...	...
Czechia	0.97	1.00	1.01	1.41	...	1.00	1.00	1.01[I]	0.99[I]
Denmark	1.00	0.98	1.04	1.38	...	1.01	1.09	...	...
Estonia	...	1.00	0.99	1.53	...	1.01	1.11	...	...
Finland	1.00	1.00	1.09	1.21	...	1.00	1.09	...	...
France	1.00[z]	0.99[z]	1.01[z]	1.23[z]	...	1.01	1.14	1.00[I]	0.99[I]
Germany	1.00	0.99	0.94	0.96	...	0.99	1.04	1.01[I]	1.00[I]
Greece	...	0.99[z]	0.94[z]	1.00[z]	...	0.98	0.99	...	...
Hungary	0.97	0.99	1.00	1.25	...	1.00	0.95	1.02[I]	1.00[I]
Iceland	1.00[g]	0.99[g]	1.04[g]	1.71[g]	...	1.00	1.40	...	...
Ireland	1.04	1.01	1.03	1.09	...	1.03	1.03	...	...
Italy	0.98	0.99	0.98	1.36	...	1.00	1.10	1.01[I]	0.97[I]
Latvia	0.99	0.99	0.99	...	...	1.02	1.05	...	...
Liechtenstein[5]	1.04*	0.98*	0.78*	0.49*	...	...	...	...	
Lithuania	0.98	1.00	0.96	...	...	0.99	1.05	1.02[I]	1.01[I]
Luxembourg	0.99[z]	1.00[z]	1.02[z]	...	...	1.05	1.08	...	...
Malta	1.04	1.02	1.07	1.37	...	1.02	1.05	...	...
Monaco	...	...	...	...	...	...	...	...	...
Montenegro	0.94	0.98	1.00	...	0.98	1.01	1.44	...	...
Netherlands	1.02	0.99	1.01	...	...	0.98	1.27	...	...
Norway	1.00	1.00	0.97	1.46	...	0.99	1.12	...	...
Poland	0.99[z]	1.00[z]	0.96[z]	1.52[z]	...	1.03	1.05	...	...
Portugal	0.97[z]	0.96	0.97	1.13	...	0.98	1.27	...	...
Republic of Moldova[5]	0.99*	0.99*	1.01*	1.34*	1.00	1.04	1.17	...	...
Romania	1.00	0.98	0.99	1.23	...	1.02	1.01	1.05[I]	1.00[I]
Russian Federation	0.98	1.01	0.98	1.21	1.00	1.00	1.00	1.01[I]	1.00[I]
San Marino	...	...	...	...	...	...	...	...	...
Serbia[5]	0.98*	1.00*	1.01*	1.33*	1.00	1.03	1.17	...	1.00[I]
Slovakia	0.98	0.99	1.01	1.55[z]	...	1.00	1.01	1.01[I]	0.98[I]

	GENDER DISPARITY IN LEARNING OUTCOMES[2]		GENDER DISPARITY IN LITERACY		GENDER DISPARITY IN ADULT LITERACY AND NUMERACY SKILLS[3]	
	Gender disparity in percentage of students with minimum level of proficiency		Gender disparity in youth and adult literacy rate		Gender disparity in percentage of adults (16 and over) achieving at least a fixed level of proficiency in:	
	End of lower secondary education					
	Reading	Mathematics	Youth (15–24)	Adult (15 and over)	Literacy skills	Numeracy skills
	2010–2015[4]		2010–2016[4]		2012–2015[4]	2012–2015[4]
	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
	...	1,07[1]	1.00	1.00	...	...
	...	...	1.00	1.00	...	...
	1.64[1]	1.15[1]	1.00	1.00	...	...
	1.58[1]	1.02[1]	1.00	1.00**	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	1.00	1.00	...	...
	...	...	1.00	0.97	...	...
	...	...	...	...	...	...
	...	...	1.00	0.95	...	...
	...	...	...	...	...	...
	1.08[1]	1.02[1]	...	...	...	...
	1.35[1]	1.06[1]	1.00	0.96	...	...
	1.05[1]	0.98[1]	...	...	1.00	1.00
	...	...	0.87	0.74**	...	...
	1.12[1]	1.03[1]	1.00	0.97	...	...
	1.53[1]	1.06[1]	1.00	0.95	...	...
	...	...	1.01	1.00	...	...
	...	...	0.99	0.90**	...	...
	...	...	1.01	1.01	...	...
	1.14[1]	1.06[1]	...	...	0.99	0.98
	1.06[1]	1.02[1]	1.00	0.97	0.98	0.97
	1.39[1]	1.03[1]	1.00	0.96	...	...
	...	...	0.98	0.83	...	...
	1.13[1]	1.04[1]	...	...	...	...
	1.68[1]	1.09[1]	1.00	0.98	...	...
	...	...	1.00	1.00	...	...
	1.09[1]	0.93[1]	...	...	1.00	1.00
	...	...	...	...	...	...
	1.06[1]	0.97[1]	...	...	...	...
	...	...	1.00	0.96	...	...
	1.34[1]	1.05[1]	1.00	0.99	...	...
	1.07[1]	0.99[1]	...	...	1.00	0.98
	1.13[1]	0.94[1]	1.00	0.99	...	...
	1.41[1]	1.06[1]	1.00	0.99	1.00	0.99
	1.13[1]	1.01[1]	...	...	0.99	0.99
	1.07[1]	0.98[1]	...	...	1.01	1.00
	1.09[1]	1.02[1]	1.00	1.00	1.01	1.01
	1.12[1]	1.05[1]	...	...	1.01	1.00
	1.12[1]	1.01[1]	...	...	1.00	0.98
	1.06[1]	0.95[1]	...	...	0.99	0.98
	1.23[1]	1.04[1]	1.00	0.98	1.01	0.98
	1.13[1]	0.98[1]	...	...	...	...
	1.19[1]	1.02[1]	...	...	...	...
	1.05[1]	0.98[1]	...	...	1.01	0.99
	1.08[1]	0.94[1]	1.00	0.99	1.01	0.98
	1.18[1]	1.04[1]	1.00	1.00	...	...
	1.06[1]	0.93[1]	...	...	...	...
	1.21[1]	1.03[1]	1.00	1.00	1.01	1.00
	1.10[1]	0.98[1]	...	...	...	...
	1.26[1]	1.03[1]	1.01	1.03	...	...
	...	...	...	...	...	...
	1.29[1]	0.99[1]	1.00	0.98	...	...
	1.09[1]	1.01[1]	...	...	1.00	0.99
	1.14[1]	1.04[1]	...	...	1.00	1.00
	1.12[1]	0.97[1]	...	...	1.02	1.02
	1.08[1]	0.99[1]	1.00	0.96	...	...
	1.50[1]	1.02[1]	1.00	1.00	...	...
	1.11[1]	1.00[1]	1.00	0.99	...	...
	1.11[1]	0.99[1]	1.00	1.00	1.01	1.02
	...	...	...	...	...	...
	1.34[1]	0.95[1]	1.00	0.99	...	...
	1.22[1]	1.00[1]	...	...	1.00	1.00

TABLE 7 *(CONTINUED)*

Country or territory	GENDER DISPARITY IN PARTICIPATION IN EDUCATION				GENDER DISPARITY IN SCHOOL COMPLETION[1]			GENDER DISPARITY IN LEARNING OUTCOMES[2]	
	Gender parity in gross enrolment ratio (GER) in:				Gender disparity in completion rate in:			Gender disparity in percentage of students with minimum level of proficiency	
	Pre-primary	Primary	Secondary	Tertiary	Primary	Lower secondary	Upper secondary	End of primary education	
								Reading	Mathematics
	School year ending in 2015				2010–2015[4]			2010–2015[4]	
	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
Slovenia	0.98[z]	1.00[z]	1.00[z]	1.44[z]	...	1.00	1.04	...	...
Spain	0.99	1.01	1.00	1.18	...	1.00	1.24	...	...
Sweden	1.00	1.04	1.14	1.53	...	0.99	1.02	...	...
Switzerland	0.98[z]	1.00	0.97	1.03	...	0.99	0.94	...	...
TFYR Macedonia	0.99	0.99	0.97	1.25	0.99	0.91	0.99	...	...
Ukraine	...	1.02[z]	0.98[z]	...	...	1.00	1.01		...
United Kingdom	1.00[z]	1.00[z]	1.04[z]	1.31[z]	...	1.00	1.06	...	...
United States	0.98	1.00	1.02[z]	1.37	1.00	1.00	1.03	...	...
Latin America and the Caribbean									
Anguilla	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	0.96	0.94	1.02	...	...	...	...	...	...
Argentina	1.01[z]	1.00[z]	1.07[z]	1.62[z]	1.03	1.15	1.21	1.11[R]	0.93[R]
Aruba	0.98[z]	0.97[z]	...	2.26	...	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...	...
Barbados	1.03[z]	1.01[z]	1.03[z]	...	1.02	0.99	1.06	...	...
Belize	1.03	0.95	1.02	1.61	1.09	1.32	1.31	...	...
Bermuda	0.84	0.98	1.12	2.32	...	...	...	...	...
Bolivia, P.S.	1.00	0.97	0.98	...	1.00	...	...	...	...
Brazil[5]	0.99**	0.97*	1.05*	1.40*	1.10	1.12	1.24	1.07[R]	0.91[R]
British Virgin Islands	...	...	...	...	...	...	...	...	...
Cayman Islands	...	...	...	...	...	...	...	...	...
Chile	0.97	0.97	1.01	1.14	1.01	1.03	1.08	1.03[R]	1.01[R]
Colombia	...	0.97	1.07	1.16	1.02	1.11	1.10	1.02[R]	0.86[R]
Costa Rica	0.99	0.99	1.04	1.31	1.01	1.30	1.49	1.02[R]	0.96[R]
Cuba	1.03	0.95	1.05	1.43	1.00	1.02	1.01	...	...
Curaçao	...	0.96[y]	1.05[y]	2.33[y]	...	...	...	...	...
Dominica	0.94	0.98	0.99	...	...	...	...	...	...
Dominican Republic	1.05	0.91	1.10	1.84	1.08	1.14	1.28	1.14[R]	0.84[R]
Ecuador	**1.04**	**1.00**	**1.04**	...	1.01	1.03	1.06	1.00[R]	0.97[R]
El Salvador	1.02	0.96	1.01	1.10	1.05	1.02	1.10	...	...
Grenada	0.97[y]	0.96	1.00	1.16	...	...	...	...	...
Guatemala	1.01	0.96	0.93	1.17	0.95	0.87	0.90	1.00[R]	0.84[R]
Guyana	...	...	...	...	1.04	1.09	1.34	...	...
Haiti	...	...	...	...	1.24	1.17	0.66	...	...
Honduras	1.02[z]	0.99	1.19	1.35	1.06	1.32	1.27	1.03[R]	0.86[R]
Jamaica	1.07	...	1.07	1.73	1.00	1.01	1.06	...	...
Mexico	1.02[z]	1.00[z]	1.07[z]	1.01[z]	1.02	1.02	1.04	1.00[R]	0.98[R]
Montserrat	...	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	1.03[R]	0.89[R]
Panama	1.02[z]	0.97[z]	1.07[z]	1.49[y]	1.02	1.03	1.22	1.08[R]	1.10[R]
Paraguay	...	...	...	...	1.06	...	...	1.10[R]	0.96[R]
Peru	1.01	1.00	1.00	...	1.01	1.02	0.97	0.95[R]	0.85[R]
Saint Kitts and Nevis	0.96	1.02	1.05	2.04	...	...	...	...	...
Saint Lucia	1.06	...	0.99	1.90	1.00	1.03	1.21	...	...
Saint-Martin	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	1.01	0.98	0.97	...	...	...	...	...	...
Sint-Maarten	...	...	...	...	...	...	...	...	...
Suriname	1.08	0.98	1.27	...	1.09	1.46	1.29	...	...
Trinidad and Tobago	...	...	...	...	...	...	...	...	...
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...
Uruguay	1.02[z]	0.98[z]	1.11[z]	...	1.02	1.19	0.72	1.02[R]	0.93[R]
Venezuela, B. R.	1.00	0.97	1.08	...	1.03	...	...	...	...
Northern Africa and Western Asia									
Algeria	...	0.94	...	1.56	1.01	1.35	1.72	...	...
Bahrain	0.99	1.01	1.00	1.92	...	...	...	...	...
Egypt	0.98[z]	1.00[z]	0.99[z]	0.96	1.01	1.02	0.96	...	...
Iraq	...	...	...	...	0.91	0.99	0.94	...	...
Israel	0.99	1.01	1.01	1.38	1.00	1.03	1.11	...	...
Jordan	0.96	1.01[z]	1.06[z]	1.11	1.01	1.06	1.32	...	...
Kuwait	...	...	1.16	1.62[y]	...	...	...	...	1.10[I]
Lebanon	0.94	0.91	0.99	...	...	...	...	1.44[I]	1.07[I]
Libya	...	...	...	...	...	...	...	...	...
Morocco	0.81	0.95	...	0.96	...	...	...	...	...
Oman	1.02[y]	1.03	1.07	...	...	...	...	...	...
Palestine	0.98	1.00	1.10	1.58	1.01	1.16	1.39	...	...
Qatar	1.00	1.01	1.26	6.94	...	...	...	...	...
Saudi Arabia	1.05	1.03	0.76**,z	0.96	...	...	...	...	...
Sudan	1.35[y]	0.90[y]	0.95[y]	1.06[z]	0.97	1.05	...	...	...

	GENDER DISPARITY IN LEARNING OUTCOMES[2]		GENDER DISPARITY IN LITERACY		GENDER DISPARITY IN ADULT LITERACY AND NUMERACY SKILLS[3]	
	Gender disparity in percentage of students with minimum level of proficiency		Gender disparity in youth and adult literacy rate		Gender disparity in percentage of adults (16 and over) achieving at least a fixed level of proficiency in:	
	End of lower secondary education					
	Reading	Mathematics	Youth (15–24)	Adult (15 and over)	Literacy skills	Numeracy skills
	2010–2015[4]		2010–2016[4]		2012–2015[4]	2012–2015[4]
	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
	1.15[1]	1.00[1]	...	...	1.01	1.00
	1.08[1]	0.96[1]	1.00	0.99	1.00	0.97
	1.16[1]	1.03[1]	...	...	0.99	0.98
	1.12[1]	0.99[1]	...	...	...	...
	1.72[1]	1.06[1]	...	...	...	...
	...	1.03[1]	1.00	1.00**	...	...
	1.08[1]	0.97[1]	...	...	...	...
	1.09[1]	0.98[1]	...	...	1.00	0.97
	...	...	...	...	...	...
	...	...	...	...	...	...
	1.41[1]	0.82[1]	1.00	1.00**	...	...
	...	...	1.00	1.00	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	1.00	0.92	...	...
	1.21[1]	0.79[1]	1.01	1.01	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	1.08[1]	0.85[1]	1.00	1.00	0.95	0.83
	1.12[1]	0.83[1]	1.01	1.00	...	...
	1.13[1]	0.76[1]	1.00	1.00	...	...
	...	...	1.00	1.00	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	1.45[1]	0.95[1]	1.01	1.01	...	...
	...	...	1.00	0.98	...	...
	...	...	1.01	0.96	...	...
	...	...	...	...	...	...
	...	...	0.98	0.88	...	...
	...	...	1.01	0.99**	...	...
	...	...	...	...	...	...
	...	0.67[1]	1.02	1.00	...	...
	...	...	...	...	...	...
	1.18[1]	0.90[1]	1.00	0.98	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	0.99	0.99	...	...
	...	...	1.01	0.98	...	...
	1.09[1]	0.88[1]	1.00	0.94	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	0.99	0.96	...	...
	1.39[1]	1.19[1]	...	...	...	...
	...	...	...	...	...	...
	1.20[1]	0.89[1]	1.01	1.01	...	...
	...	...	1.01	1.00	...	...
	1.84[1]	1.18[1]	...	...	...	...
	...	1.15[1]	0.99	0.95	...	...
	...	1.08	0.96	0.81	...	...
	...	...	0.85	0.72	...	...
	1.14[1]	1.00[1]	...	...	1.00	0.97
	1.88[1]	1.10[1]	1.00	0.99	...	...
	...	1.07[1]	1.00	0.98	...	...
	1.12[1]	0.80[1]	...	...	...	...
	...	...	...	...	...	...
	...	1.00[1]	0.93	0.74**	...	...
	...	1.29[1]	1.00	0.89	...	...
	...	...	1.00	0.97	...	...
	1.48[1]	1.10[1]	1.01	1.00	...	...
	...	1.18	1.00	0.95	...	...
	...	...	...	...	...	...

TABLE 7 *(CONTINUED)*

	GENDER DISPARITY IN PARTICIPATION IN EDUCATION				GENDER DISPARITY IN SCHOOL COMPLETION[1]			GENDER DISPARITY IN LEARNING OUTCOMES[2]	
	Gender parity in gross enrolment ratio (GER) in:				Gender disparity in completion rate in:			Gender disparity in percentage of students with minimum level of proficiency	
	Pre-primary	Primary	Secondary	Tertiary	Primary	Lower secondary	Upper secondary	End of primary education	
								Reading	Mathematics
	School year ending in 2015				2010–2015[4]			2010–2015[4]	
Country or territory	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
Syrian Arab Republic	0.97[g]	0.97[g]	1.00[g]	1.14	...	...	...	...	...
Tunisia	1.00	0.97	...	1.65	1.02	1.13	1.34	...	...
Turkey	0.95	0.99	0.97	0.87	...	...	...	...	1.01[l]
United Arab Emirates	0.99	0.99	...	...	...	...	...	1.22[l]	1.04[l]
Yemen	0.88[g]	0.84[g]	0.69[g]	...	0.78	0.72	0.63	...	...
							...		
The Pacific									
Australia	0.97	1.00	0.95[z]	1.41[z]	...	1.01	1.09	1.03[N]	1.01[N]
Cook Islands[5]	1.16*	0.94*	1.08*	...	...	...	...	...	...
Fiji	...	0.99	...	...	...	...	...	...	...
Kiribati	...	1.03	...	...	...	...	...	...	...
Marshall Islands	1.01	1.00	1.10	...	...	...	...	...	...
Micronesia, F. S.	0.92	1.00	...	...	...	...	...	...	...
Nauru[5]	1.13*,[z]	0.92*,[z]	1.02*,[z]	...	...	...	...	...	...
New Zealand	1.00	1.00	1.06	1.35	...	...	...	...	...
Niue[5]	1.13*	0.82*	1.10*	...	...	...	...	...	...
Palau[5]	1.09*,[z]	**0.99***	**0.99***	1.55*,[g]	...	...	...	...	...
Papua New Guinea	...	...	...	...	...	...	...	...	...
Samoa	1.07	1.00	1.11	...	...	...	...	...	...
Solomon Islands	1.00	0.99	...	...	...	...	...	...	...
Tokelau[5]	**0.91***	**0.94***	**0.93***	...	...	...	...	...	...
Tonga	0.98[z]	0.99[z]	1.09[z]	...	...	...	...	...	...
Tuvalu[5]	0.97*	1.01*	1.28*	...	...	...	...	...	...
Vanuatu	0.99[g]	0.98	1.06	...	...	...	...	...	...
Southern Asia									
Afghanistan	...	0.69	0.56	0.28[z]	0.50	0.33	0.27	...	...
Bangladesh	1.02	1.08	1.13	0.74[z]	1.13	1.03	0.82	...	...
Bhutan	**1.07**	**1.00**	1.07[z]	0.74[g]	1.06	0.94	0.73	...	...
India	0.94	1.12	1.01	0.99	0.99	0.96	0.92	...	...
Iran, Islamic Republic of	0.98	1.05	0.99	0.89	...	...	...	...	...
Maldives	**1.00**	**1.01**	...	1.63[z]	...	...	...	...	...
Nepal	**0.97**	**1.08**	**1.07****	1.02**	0.91	0.83	...	...	...
Pakistan	...	0.85	0.79	0.87	0.92	0.82	0.85	...	...
Sri Lanka	0.99	0.98	1.05[g]	1.54	...	...	...	...	...
Sub-Saharan Africa									
Angola	...	...	...	0.79	...	...	...	...	...
Benin	1.02	0.92	0.70	0.37[g]	0.91	0.52	0.39	0.98[l]	1.00[l]
Botswana	0.98[g]	0.97[z]	...	**1.44**	...	...	...	...	...
Burkina Faso	1.00	0.96	0.92	**0.51**	0.92	0.42	0.24	0.96[l]	0.90[l]
Burundi	1.02	1.01	0.91	0.31[z]	0.93	0.52	0.55	1.22[l]	1.12[l]
Cabo Verde	0.99	0.95	1.12	1.39	...	...	...	...	...
Cameroon	1.01	0.90	0.86	0.77	0.97	0.97	0.73	1.17[l]	1.06[l]
Central African Republic	...	...	...	...	0.68	0.58	0.53	...	...
Chad	0.90[g]	0.77[g]	...	0.20**,[z]	0.78	0.55	0.37	0.78[l]	0.64[l]
Comoros	1.07[z]	0.93[z]	1.07[z]	0.81[z]	1.07	1.07	1.43	...	...
Congo	...	...	...	0.75[g]	0.95	0.88	0.96	1.11[l]	0.90[l]
Côte d'Ivoire	1.01	0.89	0.72	0.66	0.76	0.53	0.68	1.05[l]	0.79[l]
D. R. Congo	1.07[z]	0.91[z]	0.62[z]	0.46[g]	0.93	0.84	0.70	...	...
Djibouti	**1.00**	**0.89**	**0.82**	...	...	...	...	...	...
Equatorial Guinea	1.01	0.98	...	...	...	...	...	...	...
Eritrea	0.98	0.86	0.85	0.50**,[z]	...	...	...	...	...
Ethiopia	0.95	0.91	0.96	0.48[z]	1.07	0.98	0.96	...	...
Gabon	...	...	...	...	1.12	1.09	1.04	...	...
Gambia	...	**1.07**	...	...	0.94	0.96	0.85	...	...
Ghana	**1.02**	1.01	**0.97**	0.69	1.06	1.00	0.84	...	...
Guinea	...	0.85[z]	0.66[z]	0.45[z]	0.72	0.56	0.43	...	...
Guinea-Bissau	...	...	...	...	0.85	0.62	0.70	...	...
Kenya	0.98	0.99	...	...	1.07	1.13	0.85	...	...
Lesotho	1.04	0.97	1.36	1.45[z]	1.49	1.87	1.47	...	...
Liberia	0.96	0.90	0.78	...	0.90	0.80	0.53	...	...
Madagascar	1.08	1.00	0.98[z]	0.92[z]	...	...	...	...	...
Malawi	1.01	1.02	0.90	...	1.16	0.81	0.66	...	...
Mali	1.06	0.91	0.81	...	0.83	0.56	0.43	...	...
Mauritania	1.26	1.05	0.93	**0.51**	0.83	0.70	0.53	...	...
Mauritius	1.02	1.02	1.05	1.31	...	...	...	...	...
Mozambique	...	0.92**	0.92**	0.73**	0.90	0.66	0.60	...	...
Namibia	1.07[g]	0.97[g]	...	...	1.13	1.29	1.11	...	...
Niger	1.06	0.86	0.71	...	0.66	0.45	0.30	0.85[l]	0.67[l]

	GENDER DISPARITY IN LEARNING OUTCOMES[2]		GENDER DISPARITY IN LITERACY		GENDER DISPARITY IN ADULT LITERACY AND NUMERACY SKILLS[3]	
	Gender disparity in percentage of students with minimum level of proficiency		Gender disparity in youth and adult literacy rate		Gender disparity in percentage of adults (16 and over) achieving at least a fixed level of proficiency in:	
	End of lower secondary education					
	Reading	Mathematics	Youth (15–24)	Adult (15 and over)	Literacy skills	Numeracy skills
	2010–2015[4]		2010–2016[4]		2012–2015[4]	2012–2015[4]
	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
	...	0.90[1]	...	...	...	...
	1.39[1]	0.87[1]	0.99	0.84	...	...
	1.23[1]	0.95[1]	0.99	0.94	0.93	0.82
	1.46[1]	1.09[1]	...	...	...	...
	...	...	...	...	...	...
	1.12[1]	1.00[1]	...	...	1.00	0.99
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	1.01	1.00	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	1.13[1]	1.00[1]	...	...	1.01	1.00
	...	...	...	...	...	...
	...	...	1.01	1.00	...	...
	...	...	...	...	...	...
	...	...	1.00	1.00	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	1.00	1.00	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	0.52	0.39	...	...
	...	...	1.03	0.92	...	...
	...	...	0.93	0.73	...	...
	...	...	0.91	0.75	...	...
	...	1.05[1]	0.99	0.89	...	...
	...	...	1.00	1.00	...	...
	...	...	0.89	0.68	...	...
	...	...	0.82	0.64	...	...
	...	...	1.01	0.97	...	...
	...	...	0.83	0.67	...	...
	...	...	0.64	0.49**	...	...
	...	1.17[1]	...	...	...	...
	...	...	0.77	0.59	...	...
	...	...	0.88	0.78	...	...
	...	...	1.01	0.89	...	...
	...	...	0.89	0.83	...	...
	...	...	0.55	0.48**	...	...
	...	...	0.55	0.45	...	...
	...	...	0.94	0.75**	...	...
	...	...	0.90	0.84**	...	...
	...	...	0.80	0.73	...	...
	...	...	0.88	0.75	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	1.02	0.94**	...	...
	...	...	0.85	0.65**	...	...
	...	0.69[1]	0.94	0.83	...	...
	...	...	0.65	0.50	...	...
	...	...	0.70	0.50	...	...
	...	...	0.99	0.88**	...	...
	...	...	1.18	1.25**	...	...
	...	...	...	...	...	...
	...	...	0.96	0.91	...	...
	...	...	1.01	0.79**	...	...
	...	...	0.65	0.49	...	...
	...	...	...	...	...	...
	...	...	1.01	0.96	...	...
	...	...	...	...	...	...
	...	...	1.02	0.99	...	...
	...	...	0.44	0.38**	...	...

TABLE 7 *(CONTINUED)*

Country or territory	GENDER DISPARITY IN PARTICIPATION IN EDUCATION				GENDER DISPARITY IN SCHOOL COMPLETION[1]			GENDER DISPARITY IN LEARNING OUTCOMES[2]	
	Gender parity in gross enrolment ratio (GER) in:				Gender disparity in completion rate in:			Gender disparity in percentage of students with minimum level of proficiency	
	Pre-primary	Primary	Secondary	Tertiary	Primary	Lower secondary	Upper secondary	End of primary education	
								Reading	Mathematics
	School year ending in 2015				2010–2015[4]			2010–2015[4]	
	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
Nigeria	...	0.98[y]	0.93[y]	...	0.93	0.75	0.75	...	...
Rwanda	1.04	1.01	1.09	**0.76**	1.28	1.19	0.84	...	...
Sao Tome and Principe	**1.08**	**0.95**	**1.13**	1.03	1.16	1.19	1.75	...	...
Senegal	1.12	1.12	0.98	0.60	1.03	0.62	0.62	0.98[l]	0.93[l]
Seychelles	1.05	1.03	1.07	2.11	...	...	...	...	...
Sierra Leone	1.11	1.01	0.86	...	1.06	0.66	0.74	...	...
Somalia	...	...	...	...	...	...	...	...	...
South Africa	...	0.95[z]	1.27[z]	1.48[z]	1.05	1.12	1.22	...	...
South Sudan	0.95	0.71	0.54	...	0.58	0.44	0.32	...	...
Swaziland	...	0.92[z]	0.99[z]	12.44[y]	1.26	1.21	1.05	...	...
Togo	1.03	0.95	...	0.43	0.89	0.64	0.49	...	...
Uganda	1.04	1.02[y]	0.91	0.78[z]	1.21	0.87	0.64	...	...
United Republic of Tanzania	1.02	1.03	...	0.51[y]	1.20	0.90	1.01	...	...
Zambia	...	1.01[y]	...	...	1.03	0.88	0.68	...	...
Zimbabwe	1.02[y]	0.98[y]	0.98[y]	0.90	1.10	1.13	0.73	...	...
	Median	**Weighted average**			**Weighted average**			**Median**	**Median**
World	0.99	1.00	0.99	1.11	1.01	1.01	0.99	...	...
								...	...
Caucasus and Central Asia	0.99	0.99	1.00	1.04	...	...	...	...	...
Eastern and South-eastern Asia	1.01	0.99	1.01	1.13	1.02	1.14	1.05	...	...
Eastern Asia		1.00	1.02	1.13	...	...	...	...	...
South-eastern Asia	0.97	0.98	1.00**	1.19**	...	...	...	...	...
Europe and Northern America	0.99	1.00	1.00	1.28**	...	1.00	1.05	...	...
Latin America and the Caribbean	0.99	0.98	1.05	1.31**	1.04	1.07	1.13	...	...
Caribbean	0.91	0.97	1.06	1.58	...	...	...	...	...
Latin America	1.02	0.98	1.05	1.30	...	...	...	...	...
Northern Africa and Western Asia	1.00	0.95	0.94**	1.01**	0.97	1.03	1.02	...	...
Northern Africa	1.11	0.96	0.99**	1.11**	...	...	...	...	...
Western Asia	1.00	0.94	0.91**	0.96**	...	...	...	...	...
Pacific	1.10	0.97	0.94**	1.38**	...	1.01	1.09	...	...
Southern Asia	0.98	1.06	0.99	0.95	0.99	0.94	0.90	...	...
Sub-Saharan Africa	1.03	0.94	0.88**	0.70**	0.99	0.86	0.78	...	...
								...	...
Countries with low income	1.04	0.93	0.83	0.55**	0.97	0.79	0.66	...	...
Countries with middle income	1.05	1.01	1.00	1.10	1.01	1.03	0.99	...	...
Lower middle	1.03	1.03	0.99	0.99	1.00	0.97	0.93	...	...
Upper middle	0.98	0.98	1.02	1.18	1.02	1.11	1.07	...	...
Countries with high income	0.99	1.00	1.00**	1.24**	...	1.01	1.07	...	...

Source: UIS database, except where noted. Data in this table come from previous and subsequent statistical tables, where they are broken down by gender (total, male, female). Gender parity indices in this table are based on those gender breakdowns and are the ratio of female to male rates.

Note A: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

Note B: See previous and subsequent statistical tables for sources of data and detailed country notes.

1. UIS database; GEM Report team calculations based on data from national and international household surveys.

2. PASEC 2014; PIRLS 2011; PISA 2015; TERCE 2013; TIMSS 2011 and 2015. Data on learning outcomes are from nationally representative national (N), regional (R) and international (I) formative learning assessments. Information and data need to be used and interpreted with caution since the different types of assessments are not necessary comparable.

3. Data on basic skills acquisition are from Survey of Adult Skills (PIAAC 2012–2015) (OECD, 2013, 2016).

4. Data are for the most recent year available in the period specified.

5. Enrolment ratios from which GPIs are derived were calculated using national population data because of inconsistencies in the United Nations population data or lack of United Nations population by age.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(...) No data are available.

	GENDER DISPARITY IN LEARNING OUTCOMES[2]		GENDER DISPARITY IN LITERACY		GENDER DISPARITY IN ADULT LITERACY AND NUMERACY SKILLS[3]	
	Gender disparity in percentage of students with minimum level of proficiency		Gender disparity in youth and adult literacy rate		Gender disparity in percentage of adults (16 and over) achieving at least a fixed level of proficiency in:	
	End of lower secondary education					
	Reading	Mathematics	Youth (15–24)	Adult (15 and over)	Literacy skills	Numeracy skills
	2010–2015[4]		2010–2016[4]		2012–2015[4]	2012–2015[4]
	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)	GPI (F/M)
	...	...	...	...	...	...
	...	...	1.03	0.89	...	...
	...	...	0.99	0.90	...	...
	...	...	0.83	0.64	...	...
	...	...	1.01	1.01	...	...
	...	...	0.79	0.60**	...	...
	...	...	...	...	...	...
	...	1.09[1]	1.01	0.98	...	...
	...	...	...	...	...	...
	...	...	1.03	0.98**	...	...
	...	...	0.87	0.66	...	...
	...	...	0.95	0.78	...	...
	...	...	0.97	0.88	...	...
	...	...	0.95	0.88	...	...
	...	...	1.06	0.99**	...	...
	Median	Median	Weighted average		Median	Median
	...	...	0.97	0.92	...	...
	...	...			...	...
	...	...	...	...	...	...
	...	...	1.00	1.03	...	...
	...	...	1.00	1.03	...	...
	...	...	1.00	...	...	...
	...	...	...		...	...
	...	...	1.00	1.01	...	...
	...	...	1.00	0.99	...	...
	...	...	1.00	0.99	...	...
	...	...	0.96	0.85	...	...
	...	...	0.98	0.82	...	...
	...	...	0.93	0.89	...	...
	...	...	...	...	...	...
	...	...	0.95	0.79	...	...
	...	...	0.90	0.79	...	...
	...	...			...	...
	...	...	0.90	0.77	...	...
	...	...	0.97	0.91	...	...
	...	...	0.96	0.84	...	...
	...	...	1.00	0.97	...	...
	...	...	...	...	...	...

TABLE 8: SDG 4, Target 4.5 – Gender – Achieving gender equality in education

By 2030, ensure 'substantive gender equality in education through gender-sensitive school and learning processes and environments, education content and teacher training, and challenging gender discrimination and unequal social norms in education'

	GENDER EQUALITY IN EDUCATION														
	Female presence in teaching staff				Gender-sensitive national curriculum frameworks and learning environments[1]							Gender discrimination and unequal social norms		Child domestic work[7]	
	Percentage of female teachers (%)				Inclusion of gender equality issues[2] in national curriculum frameworks[3]	Percentage of schools with basic sanitation facilities or toilets (%)		Percentage of students aged 13 to 15 experiencing school-related gender-based violence by type of violence (%)				Early marriage and pregnancies		Percentage of adolescents aged 12 to 14 involved in household chores during the previous week	
	Pre-primary	Primary	Total secondary	Tertiary								Early marriage	Early pregnancies		
	School year ending in							Bullying		Physical violence		Percentage of the population aged 15 to 19 who are currently married (%)[5]	Age-specific fertility rate (births per 1,000 women aged 15 to 19)[6]	For 28 hours and more	
	2015				2005–2015[4]	Total	Of which: single-sex toilets	2010–2015[4]		2010–2015[4]		2010–2015[4]	2017	2010–2015[4]	
Country or territory	% F	% F	% F	% F		2014	2014	Total (%)	GPI (F/M)	Total	GPI (F/M)	Female		Total	GPI (F/M)
Caucasus and Central Asia															
Armenia	100	...	...	58	0	86	...	...	...	...	...	6	20	...	...
Azerbaijan	100	90	...	56	0	68	...	...	...	...	...	9	66	...	...
Georgia	...	91	80	55	...	70	...	...	...	...	...	11	33	...	...
Kazakhstan	**98**	**97**	**75**	**63**	...	85	...	...	...	...	...	6[a]	24	...	...
Kyrgyzstan	...	99	82	62	...	69	53	...	...	...	...	14[a]	38	1	1.80
Tajikistan	**98**	**76**	...	**37**	...	31	...	...	...	...	...	13[a]	37	...	...
Turkmenistan	...	...	...	50[z]	...	...	...	...	...	...	...	...	15	...	...
Uzbekistan	**96**	**91**	**60**	**42**	...	100	...	...	...	...	...	...	17	...	...
Eastern and South-eastern Asia															
Brunei Darussalam	96	77	68	47	0	...	...	23	0.86	24	0.54	3	20	...	...
Cambodia	94	53	...	16	...	82	...	22	0.99	14	0.80	16[a]	54	...	...
China	97	63	52	...	...	65	...	...	...	...	...	2	7	...	...
Democratic People's Republic of Korea	...	94	45	21	...	...	...	...	...	...	...	...	0.4	...	...
Hong Kong, China	...	78	57**	...	LOW	...	...	...	...	...	...	0.3	3	...	...
Indonesia	96[z]	62[z]	53[z]	39[z]	LOW	53	...	21	0.80	25	0.36	13[a]	48	...	...
Japan	...	...	...	...	...	...	...	...	...	...	...	0.5	4	...	...
Lao People's Democratic Republic	99	51	50**	40	...	48	...	13	0.74	10	0.73	25[a]	62	...	...
Macao, China	99	85	59	37	...	...	...	...	...	...	...	0.3	3	...	...
Malaysia	96	70	65	52	...	100	...	21	0.74	30	0.57	6	14	...	...
Mongolia	...	96	73[z]	60	...	52	...	31	0.70	44	0.36	5[a]	12	12	1.17
Myanmar	99[z]	84[z]	87[z]	...	0	23	...	50	0.95	24	0.56	13[a]	15	...	...
Philippines	...	87[y]	73[y]	...	0	52	...	48	1.03	38	0.72	10[a]	66	...	...
Republic of Korea	99[z]	79[z]	59[z]	35[z]	LOW	...	...	...	...	...	...	0.4	1	...	...
Singapore	...	...	...	35[y]	...	...	...	...	...	...	...	0.4	4	...	...
Thailand	...	73	68	62	LOW	45	...	33	0.73	29	0.55	14	45	...	...
Timor-Leste	92	...	...	...	...	65	...	31	0.64	34	0.68	8[a]	41	...	...
Viet Nam	99	78	...	49	...	72	...	26	1.00	22	0.35	10[a]	41	2	1.07
Europe and Northern America															
Albania	100	84	65	52[z]	...	30	...	...	...	...	...	7	23	...	...
Andorra	91	81	63	63	...	...	...	...	...	...	...	...	...	...	...
Austria	99	92	65	43	...	...	...	...	...	...	...	3[a]	6	...	...
Belarus	99	99	81	61	...	100	...	...	...	...	...	7[a]	15	0.0	.
Belgium	97[z]	82[z]	63[z]	48[z]	0	...	...	...	...	...	...	2[a]	7	...	...
Bosnia and Herzegovina	...	86	61	43	...	100	...	...	...	...	...	0.6[a]	6	...	...
Bulgaria	100[z]	94[z]	79[z]	48[z]	...	100	...	...	...	...	...	1	33	...	...
Canada	...	...	...	...	...	...	...	...	...	...	...	2[a]	8	...	...
Croatia	99	94	70	48	LOW	100	...	...	...	...	...	2	8	...	...
Cyprus	98	82	66	41	...	...	...	...	...	...	...	3	5	...	...
Czechia	...	...	...	...	...	...	...	...	...	...	...	0.2	9	...	...
Denmark	...	69[z]	56[z]	43	...	...	...	...	...	...	...	0.1	4	...	...
Estonia	...	92[y]	77[y]	...	LOW	...	...	...	...	...	...	0.4	10	...	...
Finland	97[z]	79[z]	66[z]	50[z]	...	...	...	...	...	...	...	0.4	6	...	...
France	83[y]	83[y]	59[y]	37[y]	LOW	...	...	...	...	...	...	3[a]	8	...	...
Germany	96	87	62	38	...	...	...	...	...	...	...	0.3[a]	5	...	...
Greece	99[z]	70[z]	58[z]	33[z]	...	...	...	...	...	...	...	2[a]	6	...	...
Hungary	100	97	70	42	LOW	...	...	...	...	...	...	0.6[a]	17	...	...
Iceland	94[y]	82[y]	...	...	LOW	...	...	...	...	...	...	0.4[a]	4	...	...
Ireland	...	...	...	...	LOW	...	...	...	...	...	...	0.3	9	...	...
Italy	99	96	71	37	...	...	...	...	...	...	...	0.3	6	...	...
Latvia	100	93	82	56	...	...	...	...	...	...	...	0.8	12	...	...
Liechtenstein	100	79	54	34	...	...	...	...	...	...	...	0.0[a]	...	...	...
Lithuania	99	97	81	56	LOW	...	...	...	...	...	...	0.0	8	...	...
Luxembourg	96[z]	75[z]	53[z]	...	HIGH	...	...	...	...	...	...	1[a]	5	...	...
Malta	92	90	66	35	0	...	...	...	...	...	...	0.5	15	...	...
Monaco	96	85	59	...	...	...	...	...	...	...	...	...	...	...	...
Montenegro	...	...	...	...	...	95	...	...	...	...	...	2[a]	11	0.0	.
Netherlands	87	86	52	44	...	...	...	...	...	...	...	0.1[a]	3	...	...
Norway	...	75	63	45	0	...	...	...	...	...	...	0.1[a]	6	...	...
Poland	98	85	69	44	...	...	...	...	...	...	...	1[a]	12	...	...
Portugal	99	80	70	44	0	...	...	...	...	...	...	0.6	8	...	...
Republic of Moldova	...	98	78	57	...	70	...	...	...	...	...	10[a]	20	...	...

	GENDER EQUALITY IN EDUCATION														
	Female presence in teaching staff				Gender-sensitive national curriculum frameworks and learning environments[1]							Gender discrimination and unequal social norms		Child domestic work[7]	
	Percentage of female teachers (%)				Inclusion of gender equality issues[2] in national curriculum frameworks[3]	Percentage of schools with basic sanitation facilities or toilets (%)		Percentage of students aged 13 to 15 experiencing school-related gender-based violence by type of violence (%)				Early marriage and pregnancies		Percentage of adolescents aged 12 to 14 involved in household chores during the previous week	
	Pre-primary	Primary	Total secondary	Tertiary				Bullying		Physical violence		Early marriage	Early pregnancies		
	School year ending in											Percentage of the population aged 15 to 19 who are currently married (%)[5]	Age-specific fertility rate (births per 1,000 women aged 15 to 19)[6]	For 28 hours and more	
	2015				2005–2015[4]	Total	Of which: single-sex toilets	2010–2015[4]		2010–2015[4]		2010–2015[4]	2017	2010–2015[4]	
Country or territory	% F	% F	% F	% F		2014	2014	Total (%)	GPI (F/M)	Total	GPI (F/M)	Female		Total	GPI (F/M)
Romania	100	89	71	49	...	90	...	...	...	...	...	7	32	...	...
Russian Federation	...	99[z]	...	58[y]	...	100	...	...	...	...	...	8[a]	20	...	...
San Marino	...	...	...	...	...	...	...	...	...	...	...	0	...	...	...
Serbia	98	86	65	45	LOW	95	...	...	...	...	...	4[a]	17	2	1.07
Slovakia	100	90	74	45	...	...	...	...	...	...	...	1	19	...	...
Slovenia	98[y]	97[y]	73[y]	40[y]	...	...	...	...	...	...	...	0.3	3	...	...
Spain	93	76	57	42	...	...	...	...	...	...	...	4[a]	8	...	...
Sweden	96	77	64	44	LOW	...	...	...	...	...	...	0.3[a]	6	...	...
Switzerland	97[z]	82[z]	...	34[z]	...	...	...	...	...	...	...	0.4[a]	2	...	...
The former Yugoslav Rep. of Macedonia	...	82[z]	58[z]	50[z]	...	...	...	...	...	...	...	4[a]	16	0.3	.
Ukraine	...	99[z]	80	...	...	100	...	...	...	...	...	7[a]	20	0.5	3.00
United Kingdom	...	80[z]	63	44	0	...	...	...	...	...	...	3[a]	11	...	...
United States	94[z]	87[z]	62[z]	49[z]	...	...	...	...	...	...	...	1	15	...	...
Latin America and the Caribbean															
Anguilla	...	...	...	...	...	100	...	26	1.36	30	0.60	...	...	...	...
Antigua and Barbuda	100	93	73	...	...	100	...	...	...	...	...	...	40	...	...
Argentina	...	...	...	...	0	68	...	25	0.98	34	0.56	13[a]	64	0.5	...
Aruba	...	...	...	62	...	...	...	...	...	...	...	0.8	18	...	2.67
Bahamas	...	...	...	...	...	...	...	24	0.89	40	0.81	2[a]	25	...	...
Barbados	94[z]	84[z]	...	...	...	100	...	13	0.71	38	0.59	1[a]	34	0.0	.
Belize	98	73	63	50	LOW	21	32	31	1.03	36	0.70	3	62	2	0.93
Bermuda	100	...[z]	...	60	...	...	...	...	...	...	...	0.1	...	...	...
Bolivia, Plurinational States of	96	66	52	...	...	74	...	30	0.89	33	0.46	12[a]	69	...	...
Brazil	95[z]	90[z]	65[z]	45[z]	0	98	...	...	...	...	...	4	66	...	...
British Virgin Islands	99	90	66	55	...	100	...	...	...	...	...	...	...	...	...
Cayman Islands[9]	...	88[y]	...	...	...	...	...	...	...	...	...	1	...	...	...
Chile	...	81[y]	59[y]	43[y]	LOW	90	...	15	0.88	29	0.50	6[a]	46	...	...
Colombia	96	77	51	37	...	100	...	...	...	...	...	13[a]	43	...	...
Costa Rica	94	79	57	...	...	53	...	...	...	...	...	9[a]	54	1	0.53
Cuba	...	82	63	56	...	100	...	...	...	...	...	16[a]	43	...	...
Curaçao	...	...	...	...	...	...	...	27	0.98	23	0.56	...	33	...	...
Dominica	100	86	73	...	LOW	100	...	...	...	...	...	...	...	...	...
Dominican Republic	95	79	68	43	LOW	60	...	...	...	...	...	28[a]	95	2.4	1.67
Ecuador	**95**	**75**	**57**	37[z]	...	54	...	...	...	...	...	20[a]	74	...	...
El Salvador	94	75	54	37	LOW	67	...	23	1.16	26	0.50	...	64	2.1	7.40
Grenada	100	80	66	47	LOW	100	...	...	...	...	...	...	26	...	...
Guatemala	...	64	48	...	MEDIUM	48	50	23	0.75	23	0.45	20[a]	77	...	...
Guyana	...	...	...	...	...	72	...	38	0.91	38	0.49	13	86	1.1	0.64
Haiti	...	...	...	...	0	60	...	...	...	...	...	11	37	1.1	4.50
Honduras	84	74	59	41	LOW	67	46	32	1.00	28	0.56	23[a]	61	...	...
Jamaica	88	89	70	...	...	80	85	40	0.97	50	0.65	3[a]	55	0.2	1.00
Mexico	95[z]	68[z]	...	...	LOW	69	69	...	...	...	...	15[a]	60	1.4	0.29
Montserrat	...	98[z]	74[z]	...	...	100	...	...	...	...	...	0.0	...	...	...
Nicaragua	...	...	...	...	MEDIUM	25	...	...	...	...	...	...	85	...	...
Panama	94[z]	77[z]	60[z]	47[y]	LOW	87	85	...	...	...	...	18[a]	71	...	...
Paraguay	...	...	...	...	HIGH	72	...	...	...	...	...	...	55	...	...
Peru	96	68	45	...	LOW	51	55	47	1.03	37	0.41	11[a]	46	...	...
Saint Kitts and Nevis	100	91	70	40	...	100	...	23	0.82	38	0.71	...	...	...	...
Saint Lucia	100[z]	87	72	55	...	100	...	...	...	...	...	5[a]	52	0.2	.
Saint Martin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saint Vincent and the Grenadines	100	82	67	...	...	100	...	...	...	...	...	...	48	...	...
Sint Maarten	...	...	58[z]	50	...	...	...	...	...	...	...	0.6	...	...	...
Suriname	99	94	73	...	...	65	68	25	0.98	21	0.53	2	44	0.0	.
Trinidad and Tobago	...	...	...	...	...	100	...	15	0.73	36	0.61	2	28	...	...
Turks and Caicos Islands	...	92[z]	60	...	...	100	...	...	...	...	...	...	...	...	...
Uruguay	...	...	...	...	LOW	100	...	19	1.15	26	0.41	11[a]	54	...	...
Venezuela, Bolivarian Republic of	...	...	...	...	0	89	...	...	...	...	...	...	78	...	...
Northern Africa and Western Asia															
Algeria	...	69	...	43	...	100	...	52	1.15	48	0.58	...	10	0.5	1.50
Bahrain	100	75	57	33	...	100	...	29	0.64	43	0.57	5	13	...	...
Egypt	98[z]	59[z]	45[z]	44[z]	...	65	...	70	0.99	45	0.47	14	49	1.4	0.81
Iraq	...	...	...	...	LOW	73	...	28	0.68	37	0.45	19	88	...	...
Israel[10]	...	85[z]	50[z]	...	...	41	...	...	...	...	...	2	8	4	2.68
Jordan	100	83[z]	48[z]	31	...	99	20	...	...	...	...	6	20	0.2	.
Kuwait	100	90	55	...	...	100	...	32	0.77	43	0.54	...	8	...	...
Lebanon	98[z]	87[z]	66[z]	48[z]	...	100	...	25	0.47	49	0.44	...	11	...	7.75
Libya	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...
Morocco	...	55	...	...	...	50	...	38	0.72	40	0.46	11	30	...	...
Oman	98	...	...	35	...	100	...	42	0.87	48	0.74	3	5	...	...

TABLE 8 *(CONTINUED)*

	GENDER EQUALITY IN EDUCATION														
	Female presence in teaching staff				Gender-sensitive national curriculum frameworks and learning environments[1]							Gender discrimination and unequal social norms		Child domestic work[7]	
	Percentage of female teachers (%)				Inclusion of gender equality issues[2] in national curriculum frameworks[3]	Percentage of schools with basic sanitation facilities or toilets (%)		Percentage of students aged 13 to 15 experiencing school-related gender-based violence by type of violence (%)				Early marriage and pregnancies		Percentage of adolescents aged 12 to 14 involved in household chores during the previous week	
	Pre-primary	Primary	Total secondary	Tertiary		Total	Of which: single-sex toilets	Bullying		Physical violence		Early marriage	Early pregnancies		
	School year ending in											Percentage of the population aged 15 to 19 who are currently married (%)[5]	Age-specific fertility rate (births per 1,000 women aged 15 to 19)[6]	For 28 hours and more	
	2015				2005–2015[4]			2010–2015[4]		2010–2015[4]		2010–2015[4]	2017	2010–2015[4]	
Country or territory	% F	% F	% F	% F		2014	2014	Total (%)	GPI (F/M)	Total	GPI (F/M)	Female		Total	GPI (F/M)
Palestine	100	72	52	25	0	...	...	...	...	...	...	9	56	1.6	7.00
Qatar	100	85	54	35	LOW	94	...	42	0.71	51	0.61	...	10	...	...
Saudi Arabia	100	52	51[z]	40	...	85	...	...	...	...	...	...	7	...	...
Sudan	97[y]	...	...	31[z]	...	100	...	...	...	...	...	21	64	4	2.68
Syrian Arab Republic	98[y]	...	...	37	...	...	...	...	...	...	...	...	37	...	...
Tunisia	76	60	...	48[z]	...	...	60	...	...	...	...	1	7	0.2	.
Turkey	95[z]	58[z]	49[z]	43[z]	...	99	...	...	...	...	...	7	24	...	...
United Arab Emirates	100	90	...	34	...	100	...	23	0.80	47	0.57	...	32	...	...
Yemen	...	...	...	...	...	53	...	42	0.71	44	0.48	17	58	...	...
The Pacific															
Australia	...	...	...	44[y]	LOW	...	...	...	...	...	...	0.5	13	...	...
Cook Islands	100	90	56	40	0	...	...	31	1.08	31	0.75	...	...	...	...
Fiji	...	...	...	...	0	95	...	30	0.78	34	0.56	...	47	...	...
Kiribati	...	82[z]	...	...	LOW	4	...	37	0.76	35	0.66	15	13	...	...
Marshall Islands	...	...	...	...	...	10	...	...	...	...	...	...	...	...	...
Micronesia (Federated States of)	...	56**	...	...	0	...	...	...	...	...	...	...	11	...	...
Nauru	100[z]	93[z]	58[z]	...	0	...	...	39	0.95	45	0.87	...	...	...	...
New Zealand	98[z]	84[z]	62[z]	49[z]	0	...	...	...	...	...	...	...	22	...	...
Niue	100	100	57	...	...	100	...	36	...	33	...	...	...	...	...
Palau	100[z]	**90**	**57**	54[y]	...	100	...	...	...	...	...	...	...	...	...
Papua New Guinea	...	...	...	...	LOW	...	...	...	...	...	...	...	53	...	...
Samoa	96	...	...	...	0	...	...	74	0.88	68	0.85	7[a]	22	...	...
Solomon Islands	84	42	33	...	...	67	66	67	1.06	53	0.95	...	43	...	...
Tokelau	...	...	...	...	LOW	...	...	41	1.01	75	0.68	2	...	...	...
Tonga	100[z]	72[z]	60[z]	...	...	...	...	50	1.08	49	1.05	...	14	...	...
Tuvalu	96	97	82	...	MEDIUM	60	...	27	0.37	71	0.86	...	...	...	...
Vanuatu	96	57	42	...	...	69	70	67	0.98	51	0.70	...	41	...	...
Southern Asia															
Afghanistan	...	35	33	11[z]	0	63	43	44	1.06	41	0.67	68[a]	60	4	5.64
Bangladesh	...	60	21[y]	18[z]	...	68	...	24	0.64	21	0.38	44[a]	81	...	...
Bhutan	98	41	39[z]	...	MEDIUM	78	73	30	0.93	43	0.67	15[a]	15	0.9	3.25
India	...	49	43	39	LOW	84	59	...	...	...	...	21	19	...	...
Iran, Islamic Republic of	...	65	55	31	...	86	...	...	...	...	...	21	25	...	...
Maldives	**96**	**74**	...	...	0	73	...	30	0.97	32	0.55	5	4	...	...
Nepal	**90**	**42**	**22****	...	MEDIUM	85	76	51	0.81	40	0.78	23	69	7	3.22
Pakistan	...	50	57**	37	LOW	63	...	...	...	...	...	13	37	...	...
Sri Lanka	...	86	...	...	...	91	90	...	...	...	...	...	12	...	...
Sub-Saharan Africa															
Angola	...	...	...	25	...	54	...	...	...	...	...	...	153	...	...
Benin	74	24	12	...	...	78	4	49	0.92	31	0.85	16[a]	76	19	2.58
Botswana	98**[,y]	74[y]	...	**37**	...	50	...	...	...	...	...	...	26	...	...
Burkina Faso	84	45	17	**14**	...	79	40	...	...	...	...	31[a]	102	...	...
Burundi	82	52	21	11[z]	...	71	61	...	...	...	...	8[a]	26	...	...
Cabo Verde	100	69	45	40	...	100	86	...	...	...	...	...	72	...	...
Cameroon	97	54	35	20**[,z]	...	40	26	...	...	...	...	20[a]	93	7	3.94
Central African Republic	...	...	...	...	...	61	45	...	...	...	...	55[a]	86	3	2.67
Chad	81[y]	...	...	...	...	41	9	...	...	...	...	38[a]	115	16	2.31
Comoros	...	43[y]	10[z]	...	...	54	4	...	...	...	...	13[a]	62	4	2.21
Congo	...	...	...	...	...	35	15	...	...	...	...	18[a]	110	3	2.94
Côte d'Ivoire	97	28	15	18	LOW		46	...	...	...	...	21[a]	136	3	4.89
Democratic Rep. of the Congo	95[z]	28[z]	12[z]	8[y]	0	82	29	...	...	...	...	21[a]	121	9	3.07
Djibouti	36	**26**	**25**	...	LOW	89	86	...	...	...	...	...	20	...	...
Equatorial Guinea	90	44	...	...	...	43	14	...	...	...	...	22[a]	103	...	...
Eritrea	97	36	21	...	...	66	64	...	...	...	...	...	48	...	...
Ethiopia	...	...	...	12[z]	...	77	41	...	...	...	...	19[a]	50	...	...
Gabon	...	...	...	...	...	61	...	...	...	...	...	10[a]	89	...	...
Gambia	49	**37**	...	...	LOW	73	57	...	...	...	...	25[a]	110	...	...
Ghana	**83**	**40**	**25**	21	LOW	64	58	54	...	27	0.79	8[a]	63	...	...
Guinea	...	30[z]	...	3[z]	...	75	63	...	...	...	...	34[a]	135	5	2.58
Guinea-Bissau	...	...	...	...	...	32	...	...	...	...	...	...	80	6	2.80
Kenya	80	50**	42**	...	...	21	...	...	...	...	...	12[a]	88	...	...
Lesotho	98	76	56	50[z]	MEDIUM	40	...	...	...	...	...	18[a]	95	...	...
Liberia	47	13	5	...	...	82	...	...	...	...	...	15[a]	100	...	...
Madagascar	92	56	44[z]	31[z]	...	30	...	...	...	...	...	...	109	...	...
Malawi	89	42**	31**	...	...	26	...	...	...	...	...	24[a]	132	5	3.24
Mali	88	30	16	...	...	65	25	...	...	...	...	42[a]	170	6	2.97
Mauritania	81[z]	38	11	7[y]	...	32	13	47	0.96	58	0.73	26	75	6	3.28

	GENDER EQUALITY IN EDUCATION														
	Female presence in teaching staff				Gender-sensitive national curriculum frameworks and learning environments[1]							Gender discrimination and unequal social norms		Child domestic work[7]	
												Early marriage and pregnancies			
	Percentage of female teachers (%)				Inclusion of gender equality issues[2] in national curriculum frameworks[3]	Percentage of schools with basic sanitation facilities or toilets (%)		Percentage of students aged 13 to 15 experiencing school-related gender-based violence by type of violence (%)				Early marriage	Early pregnancies	Percentage of adolescents aged 12 to 14 involved in household chores during the previous week	
	Pre-primary	Primary	Total secondary	Tertiary								Percentage of the population aged 15 to 19 who are currently married (%)[5]	Age-specific fertility rate (births per 1,000 women aged 15 to 19)[6]		
	School year ending in							Bullying		Physical violence				For 28 hours and more	
	2015				2005–2015[4]	Total	Of which: single-sex toilets	2010–2015[4]		2010–2015[4]		2010–2015[4]	2017	2010–2015[4]	
Country or territory	% F	% F	% F	% F		2014	2014	Total (%)	GPI (F/M)	Total	GPI (F/M)	Female		Total	GPI (F/M)
Mauritius	100**	76	62	...	LOW	100	100	36	0.70	36	0.45	7[a]	28	...	...
Mozambique	...	43	21**	26[z]	...	50	...	45	1.03	40	0.87	37[a]	126	...	...
Namibia	...	...	...	...	LOW	81	...	47	0.95	36	0.66	4[a]	74	...	...
Niger	90	50	20	...	LOW	29	15	...	...	...	...	60[a]	196	4	2.23
Nigeria	...	...	...	...	...	32	...	...	...	...	...	30[a]	104	1	1.44
Rwanda	80	54	30	**17**	MEDIUM	94	...	...	...	...	...	3[a]	23	...	...
Sao Tome and Principe	94	**55**	**33**	28	...	90	83	...	...	...	...	23[a]	80	9	2.18
Senegal	77	32	27	8	...	69	55	...	...	...	...	25[a]	70	12	3.53
Seychelles	100	88	58	49	LOW	100	100	47	1.12	34	0.66	...	55	...	...
Sierra Leone	82	27	13	...	...	62	...	...	...	...	...	20[a]	111	0.8	0.78
Somalia	...	...	...	...	...	45	...	...	...	...	...	...	97	...	...
South Africa	79**,[y]	49**,[z]	...	...	0	100	...	...	...	...	...	6[a]	40	...	...
South Sudan	53	15**	13**	...	MEDIUM	40	...	...	...	...	...	40[a]	54	...	...
Swaziland	...	70[z]	49[z]	57	...	81	72	32	0.94	19	0.52	4[a]	54	0.1	.
Togo	95	16	...	6	...	25	...	...	...	...	...	13[a]	92	5	1.12
Uganda	86	42	24[z]	...	...	75	...	...	...	...	...	18[a]	97	...	...
United Republic of Tanzania	...	51[z]	...	...	LOW	11	...	27	1.12	31	0.85	21[a]	114	...	...
Zambia	...	...	...	...	MEDIUM	50	...	...	...	...	...	17[a]	78	...	...
Zimbabwe	93[y]	56[y]	46[y]	30		42	...	...	...	...	...	22[a]	106	...	...
	Weighted average					Median	Median	Median		Median		Median	Weighted Average	Median	
World	93**	64	53**	42**	...	73	...	...	...	...	...	7	42	...	...
														...	...
Caucasus and Central Asia	98**	91	67	56**	...	70	...	...	...	...	...	10	28	...	...
Eastern and South-eastern Asia	97	66	53	...	...	53	...	26	0.95	25	0.48	6	22	...	...
Eastern Asia	97	64	50	...	...	...	...	...	...	...	...	0.5	7	...	...
South-eastern Asia	97**	70**	59**	50**	...	53	...	25	0.91	25	0.50	10	45	...	...
Europe and Northern America	96**	87**	67	47	...	...	...	...	...	...	...	1	13	...	...
Latin America and the Caribbean	96**	78**	58**	41**	...	88	...	...	...	...	...	9	62	...	...
Caribbean	94**,[y]	70	61	51	...	100	...	...	...	...	...	2	57	...	...
Latin America	96	79**	58**	40**	...	69	...	25	0.96	29	0.54	12	62	...	...
Northern Africa and Western Asia	92**	61**	47**	40**	...	99	...	38	0.72	45	0.53	8	40	...	...
Northern Africa	84**	61**	43**	38**	...	83	...	52	1.15	45	0.47	13	41	...	...
Western Asia	98**	62**	49**	40**	...	99	...	31	0.71	45	0.54	6	39	...	...
Pacific	...	71**,[y]		44	...	...	...	39	0.96	49	0.95	...	27	...	...
Southern Asia	...	51	44	36	...	78	...	30	0.95	40	0.70	21	29	...	...
Sub-Saharan Africa	75**	44	31**	23**	...	61	46	...	...	...	...	20	97	...	...
Countries with low income	81**	40**	23**	17**	...	63	42	...	...	...	...	22	91	...	...
Countries with middle income	89**	63	53	43**	...	69	...	...	...	...	...	11	38	...	...
Lower middle	93**	57	48	40	...	65	...	...	...	...	...	14	43	...	...
Upper middle	97	68	57**	45**	...	81	...	...	...	...	...	7	30	...	...
Countries with high income	95**	81**	60**	41**	...	...	...	...	...	...	...	0.6	16	...	...

Source: UIS database, except where noted.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. UNESCO-IBE (2016); UNICEF-WASH (2017); Global School-based Student Health Survey.

2. Key terms are (a) gender equality, (b) gender equity, (c) empowerment of girls/women, (d) gender sensitive(ity) and (e) gender parity. The degree of inclusion of the issue in curricula is assessed as LOW if 1 or 2 of the 5 items are covered, MEDIUM if 3 are covered and HIGH if 4 or 5 are covered; 0 indicates no inclusion of any items.

3. Curricula referred to are for primary education, lower secondary education or both.

4. Data are for the most recent year available in the period specified.

5. United Nations, Department of Economic and Social Affairs, Population Division: World Marriage Data 2015 (POP/DB/Marr/Rev2015); GEM Report team calculations for averages.

6. The fertility indicators are from the United Nations Population Division estimates, revision 2015 (United Nations, 2015). They are based on the median variant and refer to the period 2015-2020.

7. UNICEF-MICS 4 and 5, country reports. Child domestic work refers to household chores such as cooking, cleaning and caring for children, as well as collecting firewood and fetching water.

(a) Includes consensual unions.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(...) No data are available.

TABLE 9: SDG 4, Target 4.5 – Equity – Eliminating disparities in school completion and learning outcomes

By 2030, eliminate gender disparities in education and ensure equal access at all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

	DISPARITY IN SCHOOL COMPLETION[1]							
	Primary completion rate and disparity by location and wealth				Lower secondary completion rate and disparity by location and wealth			
	Location	Wealth	Completion rate (%) of the poorest students		Location	Wealth	Completion rate (%) of the poorest students	
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females
Country or territory	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015
Caucasus and Central Asia								
Armenia	1.00	0.99	99	100	0.98	0.94	88	98
Azerbaijan	...	...	...	...	...	...	...	...
Georgia	...	...	...	...	...	...	...	...
Kazakhstan	1.00	1.01	100	100	1.00	0.99	100	99
Kyrgyzstan	1.00	0.98	98	98	0.96	0.91	88	92
Tajikistan	0.99	0.98	98	97	0.95	0.88	89	77
Turkmenistan	...	...	...	...	...	...	...	...
Uzbekistan	...	...	...	...	...	...	...	...
Eastern and South-eastern Asia								
Brunei Darussalam	...	...	...	...	...	...	...	...
Cambodia	0.83	0.52	42	54	0.53	0.26	15	19
China	0.99	0.97	94	98	0.88	0.93	74	85
Democratic People's Republic of Korea	...	...	...	...	...	...	...	...
Hong Kong, China	...	...	...	...	...	...	...	...
Indonesia	0.95	0.88	86	88	0.78	0.55	53	50
Japan	...	...	...	...	...	...	...	...
Lao People's Democratic Republic	0.71	0.29	30	26	0.39	0.04	5	1
Macao, China	...	...	...	...	...	...	...	...
Malaysia	...	...	...	...	...	...	...	...
Mongolia	0.97	0.94	92	97	0.72	0.54	46	62
Myanmar	0.90	0.68	61	63	0.47	0.17	17	9
Philippines	0.94	0.70	63	84	0.82	0.40	...	...
Republic of Korea	...	...	...	...	...	...	...	...
Singapore	...	...	...	...	...	...	...	...
Thailand	1.00	0.99	97	99	0.98	0.80	69	85
Timor-Leste	...	...	...	...	...	...	...	...
Viet Nam	0.98	0.89	86	88	0.88	0.57	51	61
Europe and Northern America								
Albania	...	...	...	...	...	...	...	...
Andorra	...	...	...	...	...	...	...	...
Austria	...	...	...	...	1.02	0.94	98	90
Belarus	1.00	1.00	100	100	1.00	1.00	100	99
Belgium	...	...	...	...	1.04	0.84	76	89
Bosnia and Herzegovina	1.02	0.99	100	98	0.94	0.89	89	89
Bulgaria	...	...	...	...	0.93	0.79	79	79
Canada	...	...	...	...	...	...	...	...
Croatia	...	...	...	...	1.03	0.99	98	100
Cyprus	...	...	...	...	1.01	0.96	100	92
Czechia	...	...	...	...	1.00	1.00	100	100
Denmark	...	...	...	...	1.00	1.00	99	100
Estonia	...	...	...	...	1.01	1.00	97	97
Finland	...	...	...	...	1.00	1.00	100	100
France	...	...	...	...	0.99	0.97	96	98
Germany	...	...	...	...	1.00	0.96	89	94
Greece	...	...	...	...	0.99	0.99	100	97
Hungary	...	...	...	...	0.99	0.96	97	95
Iceland	...	...	...	...	1.00	1.00	100	100
Ireland	...	...	...	...	0.98	1.00	94	98
Italy	...	...	...	...	1.00	0.99	98	98
Latvia	...	...	...	...	0.98	0.95	91	99
Liechtenstein	...	...	...	...	...	...	...	...
Lithuania	...	...	...	...	1.00	1.03	98	100
Luxembourg	...	...	...	...	1.07	0.85	78	88
Malta	...	...	...	...	...	0.99	97	100
Monaco	...	...	...	...	...	...	...	...
Montenegro	0.99	0.96	100	92	0.97	0.84	85	81
Netherlands	...	...	...	...	...	0.95	94	92
Norway	...	...	...	...	1.00	0.99	99	99
Poland	...	...	...	...	1.00	0.97	92	99
Portugal	...	...	...	...	1.00	0.87	87	88
Republic of Moldova	0.99	0.98	98	97	0.97	0.79	...	...
Romania	...	...	...	...	0.95	0.91	90	92
Russian Federation	0.99	1.00	100	100	1.01	1.01	100	100
San Marino	...	...	...	...	...	...	...	...
Serbia	1.01	0.89	91	86	0.96	0.73	70	76
Slovakia	...	...	...	...	1.00	1.00	100	99
Slovenia	...	...	...	...	...	1.00	100	100
Spain	...	...	...	...	1.02	0.91	89	87

	Upper secondary completion rate and disparity by location and wealth					DISPARITY IN LEARNING OUTCOMES		
	Location	Wealth	Completion rate (%) of the poorest students			Wealth parity index in percentage of pupils at end of primary education achieving minimum proficiency level in:		
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Reference surveys and years	Reading	Mathematics	Reference surveys and years
	2010–2015	2010–2015	2010–2015	2010–2015		2010–2015	2010–2015	
	0.56	0.37	18	42	DHS 2010	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.97	0.91	91	89	MICS 2015	...	...	...
	0.94	0.89	76	84	MICS 2014	...	...	...
	0.76	0.68	66	42	DHS 2012	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.31	0.09	5	4	DHS 2014	...	...	...
	0.70	0.79	59	63	CFPS 2014	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.54	0.26	24	20	2012 DHS	...	...	...
	...	...	...	...	...	...	...	...
	0.24	0.02	1	1	MICS 2011-12	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.47	0.29	14	45	MICS 2010	...	...	...
	0.32	0.04	1	2	DHS 2015	...	...	...
	...	...	...	...	DHS 2013	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.78	0.37	23	41	MICS 2012	...	...	...
	...	...	...	...	...	...	...	...
	0.68	0.21	19	19	MICS 2013	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	1.07	0.79	64	80	EU-SILC 2014	...	...	...
	0.93	0.78	73	76	MICS 2012	...	...	...
	0.99	0.78	74	77	EU-SILC 2014	...	...	...
	0.81	0.50	35	61	MICS 2011	...	...	...
	0.78	0.41	50	33	EU-SILC 2014	...	...	...
	0.94	0.78	67	78	SLID 2010	...	...	...
	0.97	0.94	93	89	EU-SILC 2014	...	...	...
	1.02	0.93	78	99	EU-SILC 2014	...	...	...
	1.03	0.90	91	85	EU-SILC 2014	...	...	...
	0.77	0.94	78	86	EU-SILC 2014	...	...	...
	0.88	0.76	63	80	EU-SILC 2014	...	...	...
	1.02	0.98	84	88	EU-SILC 2014	...	...	...
	1.03	0.83	72	85	EU-SILC 2014	...	...	...
	1.04	0.83	75	77	EU-SILC 2014	...	...	...
	0.94	0.83	85	81	EU-SILC 2014	...	...	...
	0.96	0.70	68	65	EU-SILC 2014	...	...	...
	0.89	1.04	54	88	EU-SILC 2014	...	...	...
	0.97	0.93	92	95	EU-SILC 2014	...	...	...
	0.96	0.83	68	83	EU-SILC 2014	...	...	...
	0.87	0.73	75	...	EU-SILC 2014	...	...	...
	...	...	...	...	...	...	...	...
	0.92	0.95	89	...	EU-SILC 2014	...	...	...
	1.13	0.59	54	47	EU-SILC 2014	...	...	...
	...	0.73	...	...	EU-SILC 2014	...	...	...
	...	...	...	...	...	...	...	...
	0.78	0.44	30	31	MICS 2013	...	...	...
	...	0.94	76	88	EU-SILC 2014	...	...	...
	1.16	0.93	75	82	EU-SILC 2014	...	...	...
	0.97	0.85	78	91	EU-SILC 2014	...	...	...
	0.98	0.49	40	46	EU-SILC 2014	...	...	...
	0.59	0.14	10	16	MICS 2012	...	...	...
	0.84	0.62	62	60	EU-SILC 2014	...	...	...
	0.89	0.92	90	80	RLMS-HES 2013	...	...	...
	...	...	...	...	...	...	...	...
	0.84	0.49	42	50	MICS 2014	...	...	...
	1.02	0.80	74	78	EU-SILC 2014	...	...	...
	...	0.90	85	87	EU-SILC 2014	...	...	...
	0.91	0.48	46	47	EU-SILC 2014	...	...	...

TABLE 9 *(CONTINUED)*

Country or territory	DISPARITY IN SCHOOL COMPLETION[1]							
	Primary completion rate and disparity by location and wealth				Lower secondary completion rate and disparity by location and wealth			
	Location	Wealth	Completion rate (%) of the poorest students		Location	Wealth	Completion rate (%) of the poorest students	
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females
	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015
Sweden	...	...	...	...	1.00	1.02	100	99
Switzerland	...	...	...	...	1.00	1.00	100	100
The former Yugoslav Rep. of Macedonia	0.99	0.95	97	93	0.85	0.61	73	44
Ukraine	1.00	1.00	100	100	1.00	0.99	98	100
United Kingdom	...	...	...	...	1.00	1.00	100	100
United States	...	...	98	98	...	0.98	...	...
Latin America and the Caribbean								
Anguilla	...	...	...	...	...	...	...	...
Antigua and Barbuda	...	...	...	...	...	...	...	...
Argentina	...	0.97	95	96		0.72	57	70
Aruba	...	...	...	...	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...
Barbados	1.00	0.98	...	...	1.01	0.97	...	...
Belize	0.87	0.66	59	70	0.59	0.19	17	13
Bermuda	...	...	...	...	...	...	...	...
Bolivia, Plurinational States of	...	0.95	90	94	...	...	...	...
Brazil	0.88	0.78	69	82	0.81	0.70	61	75
British Virgin Islands	...	...	...	...	...	...	...	...
Cayman Islands	...	...	...	...	...	...	...	...
Chile	1.00	0.97	95	97	0.89	0.88	78	81
Colombia	0.92	0.88	87	89	0.68	0.55	49	57
Costa Rica	0.92	0.92	90	91	0.70	0.38	29	42
Cuba	1.01	...	...	...	1.00	...	...	...
Curaçao	...	...	...	...	...	...	...	...
Dominica	...	...	...	...	...	...	...	...
Dominican Republic	0.91	0.78	70	86	0.89	0.62	54	68
Ecuador	0.98	0.95	95	95	...	...	...	...
El Salvador	0.89	0.73	67	75	0.72	0.49	47	46
Grenada	...	...	...	...	...	...	...	...
Guatemala	0.83	0.60	60	55	0.55	0.18	22	10
Guyana	1.01	0.95	91	97	0.87	0.74	65	74
Haiti	0.50	0.21	12	20	0.39	0.12	5	9
Honduras	0.85	0.77	71	75	0.53	0.17	12	17
Jamaica	1.00	0.98	98	98	1.00	0.95	91	94
Mexico	0.96	0.93	92	93	0.86	0.67	66	65
Montserrat	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	...
Panama	0.88	0.88	87	89	0.76	0.58	58	53
Paraguay	...	0.89	77	89	...	...	...	...
Peru	0.92	0.92	91	92	0.73	0.57	56	55
Saint Kitts and Nevis	...	...	...	...	...	...	...	...
Saint Lucia	1.00	0.97	...	98	1.00	0.95	...	94
Saint-Martin	...	...	...	...	...	...	...	...
Saint Vincent and the Grenadines	...	...	...	...	...	...	...	...
Sint-Maarten	...	...	...	...	...	...	...	...
Suriname	0.79	0.53	43	57	0.55	0.16	11	12
Trinidad and Tobago	...	...	...	...	...	...	...	...
Turks and Caicos Islands	...	...	...	...	...	...	...	...
Uruguay	1.03	0.96	93	97	0.98	0.26	24	21
Venezuela, Bolivarian Republic of	...	0.92	89	93	...	...	...	...
Northern Africa and Western Asia								
Algeria	0.96	0.87	87	85	0.76	0.48	30	46
Bahrain	...	...	...	...	...	...	...	...
Egypt	0.97	0.89	87	87	0.89	0.74	70	71
Iraq	0.71	0.44	49	29	0.54	0.21	21	8
Israel	1.00	1.00	100	100	1.02	0.95	92	100
Jordan	1.01	0.96	93	97	1.05	0.79	73	82
Kuwait	...	...	...	...	...	...	...	...
Lebanon	...	...	...	...	...	...	...	...
Libya	...	...	...	...	...	...	...	...
Morocco	...	...	...	...	...	...	...	...
Oman	...	...	...	...	...	...	...	...
Palestine	1.00	0.99	98	100	1.03	0.82	69	84
Qatar	...	...	...	...	...	...	...	...
Saudi Arabia	...	...	...	...	...	...	...	...
Sudan	0.71	0.45	45	41	0.53	0.26	21	17
Syrian Arab Republic	...	...	...	...	...	...	...	...
Tunisia	0.92	0.84	80	85	0.73	0.46	41	46
Turkey	...	...	...	...	...	...	...	...
United Arab Emirates	...	...	...	...	...	...	...	...

	Upper secondary completion rate and disparity by location and wealth					DISPARITY IN LEARNING OUTCOMES		
	Location	Wealth	Completion rate (%) of the poorest students			Wealth parity index in percentage of pupils at end of primary education achieving minimum proficiency level in:		
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Reference surveys and years	Reading	Mathematics	Reference surveys and years
	2010–2015	2010–2015	2010–2015	2010–2015		2010–2015	2010–2015	
	0.96	0.93	89	93	EU-SILC 2014	...	...	...
	1.24	0.64	62	57	EU-SILC 2014	...	...	...
	0.45	0.14	11	12	MICS 2011	...	...	...
	0.93	0.84	82	86	MICS 2012	...	...	...
	0.96	0.95	80	85	EU-SILC 2014	...	...	...
	...	0.88	84	87	CPS-ASEC 2013	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
		0.54	38	51	EPH 2012	0.82	0.61	TERCE 2013
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	1.05	0.92	87	...	MICS 2011-12	...	...	...
	0.58	0.07	1	5	MICS 2011	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.66	0.44	33	43	PNAD 2015	0.79	0.51	TERCE 2013
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.51	0.55	33	37	CASEN 2011	0.95	0.81	TERCE 2013
	0.55	0.41	35	44	DHS 2015	0.88	0.52	TERCE 2013
	0.67	0.15	9	18	MICS 2011	0.92	0.64	TERCE 2013
	0.94	...	...	...	MICS 2014	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.69	0.25	20	28	MICS 2014	0.62	0.34	TERCE 2013
	...	...	...	...	ENEMDU 2013	0.61	0.45	TERCE 2013
	0.45	0.12	8	9	MICS 2014	...	...	...
	...	...	...	...	...	...	...	...
	0.43	0.06	7	2.9	DHS 2014	0.67	0.36	TERCE 2013
	0.86	0.32	18	31	MICS 2014	...	...	...
	0.21	0.03	1	0.6	DHS 2012	...	...	...
	0.42	0.10	6	10	DHS 2011-12	0.71	0.57	TERCE 2013
	0.94	0.57	55	54	MICS 2011	...	...	...
	0.62	0.35	35	24	ENIGH 2012	0.78	0.68	TERCE 2013
	...	...	...	...	...	...	...	...
	...	...	...	...	...	0.66	0.37	TERCE 2013
	0.53	0.21	23	16	MICS 2013	0.50	0.27	TERCE 2013
	...	...	...	...	PEPH 2014	0.44	0.35	TERCE 2013
	0.57	0.38	40	32	DHS 2012	0.60	0.47	TERCE 2013
	...	...	...	...	...	...	...	...
	0.99	0.64	65	58	MICS 2012	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.42	0.08	3	4	MICS 2010	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.49	0.01	0.9	1	MICS 2013	0.86	0.65	TERCE 2013
	...	...	...	...	VEHM 2013	...	...	...
	0.68	0.34	11	22	MICS 2012-13	...	...	...
	...	...	...	...	...	...	...	...
	0.60	0.37	27	27	DHS 2014	...	...	...
	0.39	0.13	6	4	MICS 2011	...	...	...
	1.04	0.85	71	...	HES 2012	...	...	...
	0.99	0.45	26	...	DHS 2012	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	1.04	0.63	37	62	MICS 2014	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.30	0.08	4	3	MICS 2014	...	...	...
	...	...	...	...	...	...	...	...
	0.49	0.23	14	22	MICS 2011-12	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...

TABLE 9 *(CONTINUED)*

	DISPARITY IN SCHOOL COMPLETION[1]							
	Primary completion rate and disparity by location and wealth				Lower secondary completion rate and disparity by location and wealth			
	Location	Wealth	Completion rate (%) of the poorest students		Location	Wealth	Completion rate (%) of the poorest students	
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females
Country or territory	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015
Yemen	0.72	0.40	48	20	0.58	0.27	29	9
The Pacific								
Australia	...	...	...	...	...	...	97	96
Cook Islands	...	...	...	...	...	...	...	...
Fiji	...	...	...	...	...	...	...	...
Kiribati	...	...	...	...	...	...	...	...
Marshall Islands	...	...	...	...	...	...	...	...
Micronesia (Federated States of)	...	...	...	...	...	...	...	...
Nauru	...	...	...	...	...	...	...	...
New Zealand	...	...	...	...	...	...	...	...
Niue	...	...	...	...	...	...	...	...
Palau	...	...	...	...	...	...	...	...
Papua New Guinea	...	...	...	...	...	...	...	...
Samoa	...	...	...	...	...	...	...	...
Solomon Islands	...	...	...	...	...	...	...	...
Tokelau	...	...	...	...	...	...	...	...
Tonga	...	...	...	...	...	...	...	...
Tuvalu	...	...	...	...	...	...	...	...
Vanuatu	...	...	...	...	...	...	...	...
Southern Asia								
Afghanistan	0.51	0.30	31	8	0.41	0.17	15	0.0
Bangladesh	0.99	0.70	57	68	0.94	0.40	30	27
Bhutan	0.67	0.47	41	44	0.46	0.21	22	9
India	0.94	0.87	86	82	0.87	0.76	73	67
Iran, Islamic Republic of	...	...	...	...	...	...	...	...
Maldives	...	...	...	...	...	...	...	...
Nepal	0.85	0.62	65	54	0.73	0.40	49	26
Pakistan	0.71	0.27	30	16	0.62	0.14	18	5
Sri Lanka	...	...	...	...	...	...	...	...
Sub-Saharan Africa								
Angola	...	...	...	...	...	...	...	...
Benin	0.76	0.41	36	28	0.44	0.10	9	3
Botswana	...	...	...	...	...	...	...	...
Burkina Faso	0.36	0.11	11	10	0.14	0.04	1	0.7
Burundi	0.64	0.24	24	22	0.26	0.12	8	0.5
Cabo Verde	...	...	...	...	...	...	...	...
Cameroon	0.63	0.25	33	16	0.36	0.12	14	3.6
Central African Republic	0.40	0.17	16	8	0.07	0.01	0.8	0.1
Chad	0.35	0.27	19	12	0.15	0.12	8	2
Comoros	0.80	0.53	...	0.66	0.66	0.31	20	18
Congo	0.64	0.46	47	37	0.30	0.11	10	4
Côte d'Ivoire	0.39	0.24	22	10	0.19	0.04	2	2
Democratic Rep. of the Congo	0.67	0.53	55	42	0.50	0.32	34	21
Djibouti	...	...	...	...	...	...	...	...
Equatorial Guinea	...	...	...	...	...	...	...	...
Eritrea	...	...	...	...	...	...	...	...
Ethiopia	0.41	0.26	16	21	0.15	0.04	0.9	2
Gabon	0.54	0.46	41	45	0.55	0.21	19	9
Gambia	0.61	0.57	54	44	0.42	0.36	29	25
Ghana	0.75	0.51	42	43	0.61	0.36	28	26
Guinea	0.42	0.17	17	7	0.20	0.11	11	2
Guinea-Bissau	0.30	0.20	16	12	0.20	0.11	9	2
Kenya	0.88	0.65	61	65	0.78	0.45	41	43
Lesotho	0.73	0.54	28	62	0.49	0.14	5	10
Liberia	0.35	0.19	11	11	0.19	0.07	5	2
Madagascar	...	...	...	...	...	...	...	...
Malawi	0.67	0.44	29	40	0.32	0.09	7	5
Mali	0.52	0.31	25	15	0.23	0.07	7	0.7
Mauritania	0.60	0.24	23	14	0.36	0.08	7	2
Mauritius	...	...	...	...	...	...	...	...
Mozambique	0.38	0.15	21	5	0.18	0.02	2	...
Namibia	0.84	0.72	59	80	0.45	0.27	22	24
Niger	0.32	0.14	10	6	0.05	0.05	3	...
Nigeria	0.62	0.22	27	14	0.49	0.12	18	4
Rwanda	0.76	0.48	26	38	0.49	0.24	11	12
Sao Tome and Principe	0.92	0.67	60	66	0.83	0.20	10	14
Senegal	0.60	0.44	33	28	0.42	0.21	14	4
Seychelles	...	...	...	...	...	...	...	...
Sierra Leone	0.66	0.50	41	47	0.37	0.21	21	10

	Upper secondary completion rate and disparity by location and wealth					DISPARITY IN LEARNING OUTCOMES		
	Location	Wealth	Completion rate (%) of the poorest students			Wealth parity index in percentage of pupils at end of primary education achieving minimum proficiency level in:		
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Reference surveys and years	Reading	Mathematics	Reference surveys and years
	2010–2015	2010–2015	2010–2015	2010–2015		2010–2015	2010–2015	
	0.49	0.18	17	3	DHS 2013	...	...	...
	...	0.80	80	69	HES/SIH 2010	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.36	0.10	5	0.4	MICS 2010-11	...	...	...
	0.61	0.10	4	3	DHS 2014	...	...	...
	0.42	0.11	10	2	MICS 2010	...	...	...
	0.54	0.39	28	21	HDS 2011	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	DHS 2011	...	...	...
	0.42	0.07	6	1	DHS 2012-13	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...		...	...	...
	0.24	0.01	1	...	DHS 2011-12	...	...	...
	...	...	...	...	...	...	...	...
	0.02		...	...	DHS 2010	...	...	...
	0.10	0.01	...	0.3	DHS 2010	...	...	...
	...	...	...	...	...	...	...	...
	0.17	0.04	1.3	2	MICS 2014	...	...	...
	0.04	0.02	0.9	...	MICS 2010	...	...	...
	0.08	0.02	2	...	DHS 2014	...	...	...
	0.55	0.21	8	9	DHS 2012	...	...	...
	0.06	0.01	1	...	DHS 2011-12	...	...	...
	0.11	0.02	1	...	DHS 2011-12	...	...	...
	0.29	0.12	10	4	DHS 2013-14	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.15	0.01	0.9	...	DHS 2011	...	...	...
	0.15	0.00	0.3	...	DHS 2012	...	...	...
	0.33	0.24	15	8	DHS 2013	...	...	...
	0.61	0.26	26	12	DHS 2014	...	...	...
	0.10	0.05	4	...	DHS 2012	...	...	...
	0.13	0.05	3	0.5	MICS 2014	...	...	...
	0.52	0.16	17	7	DHS 2014	...	...	...
	0.26	0.01	...	0.9	DHS 2014	...	...	...
	0.20	0.05	2	0.6	DHS 2013	...	...	...
	...	...	...	...	...	...	...	...
	0.26	0.05	3	...	DHS 2010	...	...	...
	0.18	0.01	0.6	...	DHS 2012-13	...	...	...
	0.34	0.05	2	2	MICS 2011	...	...	...
	...	...	...	...	...	...	...	...
	0.08	...	...	...	DHS 2011	...	...	...
	0.41	0.11	8	7	DHS 2013	...	...	...
	0.02	0.06	1	...	DHS 2012	...	...	...
	0.48	0.09	14	2	DHS 2013	...	...	...
	0.30	0.08	2	4	DHS 2014-15	...	...	...
	0.43	...	...	...	MICS 2014	...	...	...
	0.13	0.03	2	...	DHS 2015	...	...	...
	...	...	...	...	...	...	...	...
	0.13	0.04	2	1	DHS 2013	...	...	...

TABLE 9 *(CONTINUED)*

	DISPARITY IN SCHOOL COMPLETION[1]							
	Primary completion rate and disparity by location and wealth				Lower secondary completion rate and disparity by location and wealth			
	Location	Wealth	Completion rate (%) of the poorest students		Location	Wealth	Completion rate (%) of the poorest students	
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females
Country or territory	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015	2010–2015
Somalia	...	...	...	...	...	...	...	...
South Africa	0.95	0.90	85	93	0.91	0.75	62	79
South Sudan	0.48	0.14	10	3	0.40	0.08	4	2
Swaziland	0.77	0.50	33	56	0.68	0.38	23	28
Togo	0.67	0.48	46	34	0.29	0.11	7	2
Uganda	0.48	0.22	15	14	0.33	0.06	3	3
United Republic of Tanzania	0.77	0.58	46	60	0.35	0.11	7	5
Zambia	0.72	0.47	43	45	0.45	0.22	23	15
Zimbabwe	0.86	0.76	67	80	0.70	0.50	40	51
	Weighted average		Weighted average		Weighted average		Weighted average	
World	0.86	0.73	72	71	0.75	0.61	54	54
Caucasus and Central Asia	...	...	...	...	...	...	...	...
Eastern and South-eastern Asia	0.97	0.91	88	92	0.84	0.75	65	72
Eastern Asia	...	...	...	...	...	...	...	...
South-eastern Asia	...	...	...	...	...	...	...	...
Europe and Northern America	...	...	99	98	1.00	0.97	95	96
Latin America and the Caribbean	0.90	0.85	80	86	0.79	0.62	56	63
Caribbean	...	...	...	...	...	...	...	...
Latin America	...	...	...	...	...	...	...	...
Northern Africa and Western Asia	0.86	0.69	69	63	0.73	0.49	44	42
Northern Africa	...	...	...	...	...	...	...	...
Western Asia	...	...	...	...	...	...	...	...
Pacific	...	...	...	...	...	0.97	97	96
Southern Asia	0.91	0.76	75	71	0.83	0.63	60	53
Sub-Saharan Africa	0.61	0.37	34	31	0.41	0.18	17	13
Countries with low income	0.56	0.36	31	28	0.33	0.14	12	8
Countries with middle income	0.91	0.79	77	77	0.81	0.64	58	58
Lower middle	0.88	0.72	70	68	0.77	0.54	53	47
Upper middle	0.96	0.92	89	93	0.86	0.82	69	78
Countries with high income	...	...	...	...	...	0.95	89	92

Sources: UIS database; GEM Report team calculations, based on data from national and international and household surveys.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. National averages of completion rates are presented in Statistical Tables 2 (primary) and 3 (lower and upper secondary).

2. Location parity index is the ratio of completion rate of students living in rural areas to that of their urban counterparts.

3. Wealth parity index is the ratio of completion rate of students living in the poorest 20% of households to that of those living in the richest 20% of households.

(...) No data are available.

	Upper secondary completion rate and disparity by location and wealth					DISPARITY IN LEARNING OUTCOMES		
	Location	Wealth	Completion rate (%) of the poorest students			Wealth parity index in percentage of pupils at end of primary education achieving minimum proficiency level in:		
	Location parity index[2]	Wealth parity index[3]	Poorest males	Poorest females	Reference surveys and years	Reading	Mathematics	Reference surveys and years
	2010–2015	2010–2015	2010–2015	2010–2015		2010–2015	2010–2015	
	...	...	...	...	...	...	...	...
	0.69	0.29	19	23	GHS 2013	...	...	...
	0.38	0.08	3	...	MICS 2010	...	...	...
	0.55	0.18	7	10	MICS 2010	...	...	...
	0.14	0.03	2	...	DHS 2013-14	...	...	...
	0.20	0.04	3	1.0	DHS 2011	...	...	...
	0.21	0.01	0.4	...	DHS 2015	...	...	...
	0.27	0.02	3	0.4	DHS 2013-14	...	...	...
	0.15	0.01	0.9	...	MICS 2014	...	...	...
	Weighted average		Weighted average			Median	Median	
	0.55	0.40	32	33	...	...	...	...
					...	...	...	...
	...	...	...	...	...	...	...	...
	0.65	0.60	45	48	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.95	0.84	77	81	...	...	...	...
	0.60	0.38	31	34	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	0.54	0.27	18	16	...	...	...	...
	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	...	0.80	80	69	...	...	...	...
	0.53	0.31	23	16	...	...	...	...
	0.30	0.08	8	5	...	...	...	...
	0.19	0.05	3	2	...	...	...	...
	0.58	0.40	31	29	...	...	...	...
	0.52	0.27	21	15	...	...	...	...
	0.69	0.63	49	52	...	...	...	...
	...	0.81	73	79	...	...	...	...

TABLE 10: SDG 4, Target 4.6 – Youth and adult literacy and numeracy

By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

	YOUTH AND ADULT LITERACY[1]						BASIC SKILLS ACQUISITION[3]			
	Youth literacy (15 to 24)			Adult literacy (15 and over)			Percentage of population of a given age group achieving at least a fixed level of proficiency (%) in:			
							Literacy skills		Numeracy skills	
	Youth literacy rate (%)	Number of youth illiterates		Adult literacy rate (%)	Number of adult illiterates		Youth (16 to 24)	Adults (16 and over)	Youth (16 to 24)	Adults (16 and over)
	2010–2016[2]	2010–2016[2]		2010–2016[2]	2010–2016[2]		2012-2015[2]		2012-2015[2]	
Country or territory	Total	Total (000)	% F	Total	Total (000)	% F	Total	Total	Total	Total
Caucasus and Central Asia										
Armenia	100	0.8	37	100	6	62	...	...	...	...
Azerbaijan	100	0.9	67	100	16	69	...	...	...	...
Georgia	100	2	45	100	14	63	...	...	...	...
Kazakhstan	100**	3**	71**	100**	27**	63**	...	...	...	...
Kyrgyzstan	...	...	...	...	...	...	...	...	...	...
Tajikistan	...	...	...	...	...	...	...	...	...	...
Turkmenistan	...	...	...	...	...	...	...	...	...	...
Uzbekistan	100	-	-	100	3	76	...	...	...	...
Eastern and South-eastern Asia										
Brunei Darussalam	99	0.5	35	96	12	66	...	...	...	...
Cambodia	...		...	...	...	...	...	...	...	...
China	100	843	54	95	53,767	...	...	...	...	...
DPR Korea	...	...	...	...	...	...	...	...	...	...
Hong Kong, China	...	...	...	...	...	...	...	...	...	...
Indonesia	100	147	51	95	8,724	69	...	...	...	...
Japan	...	...	...	...	...	...	100	99	99	99
Lao PDR	72**	407**	59**	58**	1,684**	62**	...	...	...	...
Macao, China	100	0.1	32	97	18	75	...	...	...	...
Malaysia	98	90	47	93	1,400	66	...	...	...	...
Mongolia	98	9	35	98	35	...	...	...	...	...
Myanmar	85**	1,483**	51**	76**	9,607**	60**	...	...	...	...
Philippines	98	364	31	96	2,371	45	...	...	...	...
Republic of Korea	...	...	...	...	...	...	99	98	99	96
Singapore	100	0.5	40	97	142	79	99	90	98	87
Thailand	98	166	46	93	3,978	63	...	...	...	...
Timor-Leste	80	43	52	58	259	56	...	...	...	...
Viet Nam	...	...	...	...	...	...	...	...	...	...
Europe and Northern America										
Albania	99	4	59	97	64	70	...	...	...	...
Andorra	100	-	-	100	...	...	...	...	...	...
Austria	...	...	...	...	...	...	98	98	98	97
Belarus	...	...	...	...	...	...	...	...	...	...
Belgium	...	...	...	...	...	...	...	...	...	...
Bosnia and Herzegovina	100	2	48	97	98	86	...	...	...	...
Bulgaria	98	18	53	98	105	63	...	...	...	...
Canada	...		...	...	...	...	97	96	96	94
Croatia	100	1	47	99	32	80	...	...	...	...
Cyprus	100	0.3	42	99	12	72	99	98	97	97
Czechia	...	...	...	...	...	...	99	98	98	98
Denmark	...	...	...	...	...	...	98	96	98	97
Estonia	100	0.1	39	100	1	43	99	98	99	98
Finland	...	...	...	...	...	...	99	97	98	97
France	...	...	...	...	...	...	98	95	95	91
Germany	...	...	...	...	...	...	99	97	97	95
Greece	99	16	44	97	273	67	95	95	94	94
Hungary	...	...	...	...	...	...	...	...	...	...
Iceland	...	...	...	...	...	...	...	...	...	...
Ireland	...	...	...	...	...	...	98	96	95	93
Italy	100	8	46	99	590	64	97	94	94	92
Latvia	100	0.4	39	100	2	49	...	...	...	...
Liechtenstein	...	...	...	...	...	...	...	...	...	...
Lithuania	100	0.6	45	100	5	50	99	98	99	97
Luxembourg	...		...	...	...	...	...	...	...	...
Malta	99	0.6	26	93	23	39	...	...	...	...
Monaco	...	...	...	...	...	...	...	...	...	...
Montenegro	99	0.7	58	98	8	82	...	...	...	...
Netherlands	...	...	...	...	...	...	99	97	98	97
Norway	...	...	...	...	...	...	98	97	96	96
Poland	...	...	...	...	...	...	99	96	97	94
Portugal	99	6	45	94	497	68	...	...	...	...
Republic of Moldova	99	4	38	99	30	66	...	...	...	...
Romania	99	24	49	99	236	67	...	...	...	...
Russian Federation	100	62	41	100	384	61	99	98	99	98
San Marino	...	...	...	...	...	...	...	...	...	...
Serbia	100	3	48	99	85	79	...	...	...	...
Slovakia	...	...	...	...	...	...	98	98	97	97
Slovenia	...	...	...	...	...	...	98	94	98	93
Spain	100	16	51	98	687	68	97	93	95	90
Sweden	...	...	...	...	...	...	98	96	97	96

	YOUTH AND ADULT LITERACY[1]						BASIC SKILLS ACQUISITION[3]			
	Youth literacy (15 to 24)			Adult literacy (15 and over)			Percentage of population of a given age group achieving at least a fixed level of proficiency (%) in:			
							Literacy skills		Numeracy skills	
	Youth literacy rate (%)	Number of youth illiterates		Adult literacy rate (%)	Number of adult illiterates		Youth (16 to 24)	Adults (16 and over)	Youth (16 to 24)	Adults (16 and over)
	2010–2016[2]	2010–2016[2]		2010–2016[2]	2010–2016[2]		2012-2015[2]		2012-2015[2]	
Country or territory	Total	Total (000)	% F	Total	Total (000)	% F	Total	Total	Total	Total
Switzerland	...	...	...	...	...	...	...	...	...	...
TFYR Macedonia	...	...	...	...	...	...	...	...	...	...
Ukraine	100**	2**	28**	100**	10**	89**	...	...	...	...
United Kingdom	...	...	...	...	...	...	...	...	...	...
United States	...	...	...	...	...	...	98	96	93	91
Latin America and the Caribbean										
Anguilla	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	...	...	...	...	...	...	...	...	...	...
Argentina	99**	48**	37**	98**	621**	51**	...	...	...	...
Aruba	99	0.1	38	97	3	55	...	...	...	...
Bahamas	...	...	...	...	...	...	...	...	...	...
Barbados	...	...	...	...	...	...	...	...	...	...
Belize	...	...	...	...	...	...	...	...	...	...
Bermuda	...	...	...	...	...	...	...	...	...	...
Bolivia, P.S.	99	12	49	92	541	77	...	...	...	...
Brazil	99	394	32	92	13,044	49	...	...	...	...
British Virgin Islands	...	...	...	...	...	...	...	...	...	...
Cayman Islands	...	...	...	...	...	...	...	...	...	...
Chile	99	26	47	96	519	53	89	80	80	69
Colombia	99	122	36	94	2,102	50	...	...	...	...
Costa Rica	99	7	42	97	91	48	...	...	...	...
Cuba	100	2	40	100	23	41	...	...	...	...
Curaçao	...	...	...	...	...	...	...	...	...	...
Dominica	...	...	...	...	...	...	...	...	...	...
Dominican Republic	98	46	41	92	591	49	...	...	...	...
Ecuador	99	28	45	94	658	60	...	...	...	...
El Salvador	98	25	39	88	539	62	...	...	...	...
Grenada	...	...	...	...	...	...	...	...	...	...
Guatemala	94	186	60	81	1,880	66	...	...	...	...
Guyana	97**	5**	44**	86**	77**	52**	...	...	...	...
Haiti	...		...	...	...	...	...	...	...	...
Honduras	96	69	35	89	622	51	...	...	...	...
Jamaica	...	...	...	...	...	...	...	...	...	...
Mexico	99	246	46	94	5,056	60	...	...	...	...
Montserrat	...	...	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	...	...	...
Panama	98	15	56	94	152	55	...	...	...	...
Paraguay	98	22	40	95	227	57	...	...	...	...
Peru	99	62	58	94	1,342	76	...	...	...	...
Saint Kitts and Nevis	...	...	...	...	...	...	...	...	...	...
Saint Lucia	...	...	...	...	...	...	...	...	...	...
Saint Martin	...	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	...	...	...	...	...	...	...	...	...	...
Sint-Maarten	...	...	...	...	...	...	...	...	...	...
Suriname	98	2	58	93	27	64	...	...	...	...
Trinidad and Tobago	...		...	...	...	...	...	...	...	...
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...	...
Uruguay	99	6	35	99	40	40	...	...	...	...
Venezuela, B. R.	99	68	36	97	654	49	...	...	...	...
Northern Africa and Western Asia										
Algeria	...	...	...	...	...	...	...	...	...	...
Bahrain	98	3	57	95	55	54	...	...	...	...
Egypt	92	1,284	59	75	14,804	65	...	...	...	...
Iraq	52	3,159	53	44	10,907	57	...	...	...	...
Israel	...		...	...	...	...	96	92	90	89
Jordan	99	12	43	98	92	61	...	...	...	...
Kuwait	99	4	41	96	134	53	...	...	...	...
Lebanon	...	...	...	...	...	...	...	...	...	...
Libya	...	...	...	...	...	...	...	...	...	...
Morocco	91**	544**	69**	69**	7,295**	69**	...	...	...	...
Oman	99	9	31	93	232	64	...	...	...	...
Palestine	99	6	55	97	89	77	...	...	...	...
Qatar	99	4	6	98	42	25	...	...	...	...
Saudi Arabia	99	39	54	94	1,198	64	...	...	...	...
Sudan	...	...	...	...	...	...	...	...	...	...
Syrian Arab Republic	...	...	...	...	...	...	...	...	...	...
Tunisia	96	68	55	79	1,793	68	...	...	...	...
Turkey	99	66	81	96	2,618	85	94	87	88	80
United Arab Emirates	...	...	...	...	...	...	...	...	...	...
Yemen	...	...	...	...	...	...	...	...	...	...
The Pacific										
Australia	...	...	...	...	...	...	98	97	96	94
Cook Islands	...	...	...	...	...	...	...	...	...	...

TABLE 10 *(CONTINUED)*

	YOUTH AND ADULT LITERACY[1]						BASIC SKILLS ACQUISITION[3]			
	Youth literacy (15 to 24)			Adult literacy (15 and over)			Percentage of population of a given age group achieving at least a fixed level of proficiency (%) in:			
							Literacy skills		Numeracy skills	
	Youth literacy rate (%)	Number of youth illiterates		Adult literacy rate (%)	Number of adult illiterates		Youth (16 to 24)	Adults (16 and over)	Youth (16 to 24)	Adults (16 and over)
	2010–2016[2]	2010–2016[2]		2010–2016[2]	2010–2016[2]		2012-2015[2]		2012-2015[2]	
Country or territory	Total	Total (000)	% F	Total	Total (000)	% F	Total	Total	Total	Total
Fiji	...	...	...	...	...	...	...	...	...	...
Kiribati	...	...	...	...	...	...	...	...	...	...
Marshall Islands	98	0.1	41	98	0.6	52	...	...	...	...
Micronesia, F. S.	...	...	...	...	...	...	...	...	...	...
Nauru	...	...	...	...	...	...	...	...	...	...
New Zealand	...	...	...	...	...	...	98	97	96	95
Niue	...	...	...	...	...	...	...	...	...	...
Palau	99	0.0*	29*	97	0.5*	51*	...	...	...	...
Papua New Guinea	...	...	...	...	...	...	...	...	...	...
Samoa	99	0.3	34	99	1	44	...	...	...	...
Solomon Islands	...	...	...	...	...	...	...	...	...	...
Tokelau	...	...	...	...	...	...	...	...	...	...
Tonga	99	0.1	42	99	0.4	47	...	...	...	...
Tuvalu	...	...	...	...	...	...	...	...	...	...
Vanuatu	...	...	...	...	...	...	...	...	...	...
Southern Asia										
Afghanistan	47	2,947	62	32	10,373	59	...	...	...	...
Bangladesh	92	2,460	41	73	31,525	55	...	...	...	...
Bhutan	87	19	61	57	223	56	...	...	...	...
India	86	32,620	62	69	265,568	65	...	...	...	...
Iran, Islamic Republic of	98	273	55	85	9,113	66	...	...	...	...
Maldives	99	0.5	37	99	4	47	...	...	...	...
Nepal	85	823	69	60	6,989	67	...	...	...	...
Pakistan	73	10,145	62	57	51,636	63	...	...	...	...
Sri Lanka	98	60	38	91	1,323	59	...	...	...	...
Sub-Saharan Africa										
Angola	77	1,048	66	66	4,240	71	...	...	...	...
Benin	52**	948**	62**	33**	3,816**	59**	...	...	...	...
Botswana	...	...	...	...	...	...	...	...	...	...
Burkina Faso	50	1,728	56	35	6,189	58	...	...	...	...
Burundi	80	425	64	62	2,274	61	...	...	...	...
Cabo Verde	98	2	35	87	49	69	...	...	...	...
Cameroon	81	812	62	71	3,319	62	...	...	...	...
Central African Republic	36**	570**	59**	37**	1,659**	...**	...	...	...	...
Chad	31	2,013	56	22	5,885	56	...	...	...	...
Comoros	72**	42**	53**	49**	219**	57**	...	...	...	...
Congo	81**	147**	62**	79**	491**	67**	...	...	...	...
Côte d'Ivoire	53	2,093	56	44	7,116	55	...	...	...	...
D. R. Congo	100	2,278	69	77	9,758	75	...	...	...	...
Djibouti	...	...	...	...	...	...	...	...	...	...
Equatorial Guinea	...	...	...	...	...	...	...	...	...	...
Eritrea	...	...	...	...	...	...	...	...	...	...
Ethiopia	...	...	...	...	...	...	...	...	...	...
Gabon	89**	37**	45**	82**	177**	57**	...	...	...	...
Gambia	61**	142**	57**	42**	578**	59**	...	...	...	...
Ghana	86	699	59	71	4,203	63	...	...	...	...
Guinea	46	1,285	59	32	4,725	58	...	...	...	...
Guinea-Bissau	60	142	64	46	571	65	...	...	...	...
Kenya	87**	1,184**	51**	79**	5,487**	62**	...	...	...	...
Lesotho	87**	65**	22**	77**	315**	33**	...	...	...	...
Liberia	...	...	...	...	...	...	...	...	...	...
Madagascar	77	1,046	53	72	3,622	56	...	...	...	...
Malawi	73**	960**	49**	62**	3,548**	60**	...	...	...	...
Mali	49	1,688	60	33	6,129	59	...	...	...	...
Mauritania	...	...	...	...	...	...	...	...	...	...
Mauritius	98	4	38	93	75	65	...	...	...	...
Mozambique	...	...	...	...	...	...	...	...	...	...
Namibia	94	27	42	88	164	54	...	...	...	...
Niger	24**	2,332**	58**	15**	7,366**	55**	...	...	...	...
Nigeria	...	...	...	...	...	...	...	...	...	...
Rwanda	82	384	47	68	1,985	60	...	...	...	...
Sao Tome and Principe	97	1	56	90	10	75	...	...	...	...
Senegal	56	1,246	56	43	4,576	61	...	...	...	...
Seychelles	99	0.2	29	94	4	45	...	...	...	...
Sierra Leone	57**	521**	59**	32**	2,364**	57**	...	...	...	...
Somalia	...	...	...	...	...	...	...	...	...	...
South Africa	99	112	34	94	2,169	60	...	...	...	...
South Sudan	...	...	...	...	...	...	...	...	...	...
Swaziland	94**	19**	40**	83**	123**	54**	...	...	...	...
Togo	84	228	68	64	1,521	69	...	...	...	...
Uganda	84	1,162	56	70	5,362	65	...	...	...	...
United Republic of Tanzania	86	1,455	54	78	6,425	62	...	...	...	...
Zambia	89	317	60	83	1,251	67	...	...	...	...
Zimbabwe	90**	311**	36**	89**	1,004**	53**	...	...	...	...

Country or territory	YOUTH AND ADULT LITERACY[1]						BASIC SKILLS ACQUISITION[3]			
	Youth literacy (15 to 24)			Adult literacy (15 and over)			Percentage of population of a given age group achieving at least a fixed level of proficiency (%) in:			
							Literacy skills		Numeracy skills	
	Youth literacy rate (%)	Number of youth illiterates		Adult literacy rate (%)	Number of adult illiterates		Youth (16 to 24)	Adults (16 and over)	Youth (16 to 24)	Adults (16 and over)
	2010–2016[2]	2010–2016[2]		2010–2016[2]	2010–2016[2]		2012-2015[2]		2012-2015[2]	
	Total	Total (000)	% F	Total	Total (000)	% F	Total	Total	Total	Total
	Weighted average	Sum	% F	Weighted average	Sum	% F	Median		Median	
World	91	101,921	57	86	749,931	63	...	...	...	...
Caucasus and Central Asia	...	...	...	...	...	...	...	...	...	...
Eastern and South-eastern Asia	99	3,624	49	96	74,499	69	...	...	...	...
Eastern Asia	100	557	50	97	41,701	74	...	...	...	...
South-eastern Asia	97	3,067	49	93	32,799	63	...	...	...	...
Europe and Northern America	...	...	...	...	...	...	...	...	...	...
Latin America and the Caribbean	98	1,794	43	94	30,714	55	...	...	...	...
Caribbean	93	438	48	87	3,695	53	...	...	...	...
Latin America	99	1,355	41	94	27,019	55	...	...	...	...
Northern Africa and Western Asia	89	8,797	58	80	65,736	64	...	...	...	...
Northern Africa	90	3,853	53	74	40,057	65	...	...	...	...
Western Asia	89	4,944	62	85	25,679	64	...	...	...	...
Pacific	...	...	...	...	...	...	...	...	...	...
Southern Asia	89	38,885	57	72	369,383	64	...	...	...	...
Sub-Saharan Africa	75	47,888	57	65	199,784	61	...	...	...	...
							...	...	...	...
Countries with low income	73	35,597	57	61	148,431	61	...	...	...	...
Countries with middle income	93	65,780	57	86	589,360	64	...	...	...	...
Lower middle	89	59,113	57	76	486,433	63	...	...	...	...
Upper middle	98	6,667	52	95	102,926	66	...	...	...	...
Countries with high income	...	...	...	...	...	...	...	...	...	...

Sources: UIS database, except where noted.

Note A: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

Note B: UIS literacy estimates (**) presented in the table were generated using the UIS Global Age-specific Literacy Projections model.

Note C: The population used to generate the number of illiterates is from the United Nations Population Division estimates, revision 2015 (United Nations, 2015). It is based on the median variant. For countries with national observed literacy data, the population corresponding to the year of the census or survey was used. For countries with UIS estimates, populations used are for the year of the estimates.

1. Literacy data presented in these columns are based on conventional assessment methods – either self- and third-party declarations or educational attainment proxies – and thus should be interpreted with caution; they are not based on any test and may overestimate actual literacy levels.

2. Data are for the most recent year available in the period specified. For literacy data, see the introduction to the statistical tables and the table of metadata on literacy statistics (published on the GEM Report website) for a broader explanation of national literacy definitions, assessment methods, and sources and years of data.

3. Data on basic skills acquisition are from the Survey of Adult Skills (PIAAC 2012-2015) (OECD, 2013, 2016).

(a) Literacy data are based on direct reading tests in national and international household surveys.

(*) For country level data: national estimate.

(**) For country level data: UIS estimate/projection; for regional and other country-grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of population for the region or other country grouping).

(...) No data are available.

TABLE 11: SDG 4, Target 4.7 – Education for sustainable development and global citizenship

By 2030, ensure all learners acquire knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

Country or territory	PROMOTING SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP IN CURRICULA					KNOWLEDGE ACQUISITION ON SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP					
	Inclusion in national curricular frameworks of issues relating to global citizenship and sustainable development[1, 2]				Percentage of schools providing life skills-based HIV/AIDS education[7]	Percentage of students and youth with adequate understanding of issues relating to global citizenship and sustainable development					
	Gender equality[3]	Human rights[4]	Sustainable development[5]	Global citizenship[6]		Scientific literacy[9, 10]			HIV/AIDS and sexuality education[7]		
	2005–2015[8]	2005–2015[8]	2005–2015[8]	2005–2015[8]	2009–2010[8]	2015			2010–2016[8]		
						Total	Male	Female	Total	Male	Female
Caucasus and Central Asia											
Armenia	0	MEDIUM	LOW	LOW	...	...	...	...	20	23	19
Azerbaijan	0	MEDIUM	0	LOW	100	...	...	...	15	...	...
Georgia	...	...	...	...	...	49	45	54	...	...	...
Kazakhstan[11]	...	...	...	...	81	58	55	61	...	...	...
Kyrgyzstan	...	...	...	...	84	...	...	...	23	29	22
Tajikistan	...	...	...	...	5	...	...	...	54	59	48
Turkmenistan	...	...	...	...	...	...	...	...	...	...	...
Uzbekistan	...	...	...	...	100	...	...	...	13	14	11
Eastern and South-eastern Asia											
Brunei Darussalam	0	LOW	0	LOW	...	...	...	...	...	...	...
Cambodia	...	...	...	...	34	...	...	...	40	46	38
China	...	...	...	...	...	...	...	...	...	...	...
DPR Korea	...	...	...	...	...	...	...	...	...	...	...
Hong Kong, China	LOW	MEDIUM	MEDIUM	LOW	...	91	89	92	...	...	...
Indonesia	LOW	LOW	0	0	...	44	43	45	11	10	11
Japan	...	...	...	...	100	90	91	90	...	...	...
Lao PDR	...	...	...	...	74	...	...	...	25	28	24
Macao, China	...	...	...	...	...	92	90	94	...	...	...
Malaysia[11]	...	...	...	...	...	54	51	58	41	40	42
Mongolia	...	...	...	...	...	...	...	...	18	19	16
Myanmar	0	LOW	LOW	LOW	...	...	...	...	17	16	18
Philippines	0	0	0	0	...	...	...	...	...	...	18
Republic of Korea	LOW	LOW	LOW	LOW	...	86	83	89	...	...	...
Singapore	...	...	...	...	100	90	90	91	...	...	...
Thailand	LOW	MEDIUM	MEDIUM	LOW	...	53	50	55	46	45	46
Timor-Leste	...	...	...	...	0.3	...	...	...	14	20	12
Viet Nam	...	...	...	...	...	94	93	95	42	44	41
Europe and Northern America											
Albania	...	...	...	...	...	58	51	65	...	...	...
Andorra	...	...	...	...	...	...	...	...	...	...	...
Austria	...	...	...	...	...	79	81	78	...	...	...
Belarus	...	...	...	...	13	...	...	...	55	51	56
Belgium	0	MEDIUM	LOW	LOW	...	80	81	80	...	...	...
Bosnia and Herzegovina	...	...	...	...	...	...	...	...	47	47	48
Bulgaria	...	...	...	...	17	62	58	66	23	21	25
Canada	...	...	...	...	...	89	88	90	...	...	...
Croatia	LOW	MEDIUM	MEDIUM	LOW	5	75	75	75	...	...	...
Cyprus	...	...	...	...	...	58	53	63	...	...	...
Czechia	...	...	...	...	59	79	79	80	...	...	...
Denmark	...	...	...	...	...	84	84	84	...	...	...
Estonia	LOW	HIGH	MEDIUM	LOW	...	91	90	92	...	...	...
Finland	...	...	...	...	100	89	86	92	...	...	...
France	LOW	MEDIUM	MEDIUM	LOW	...	78	77	79	...	...	...
Germany	...	...	...	...	...	83	84	82	...	...	...
Greece	...	...	...	...	...	67	64	71	38	27	50
Hungary	LOW	LOW	LOW	LOW	...	74	74	74	...	...	...
Iceland	LOW	HIGH	MEDIUM	LOW	...	75	74	76	...	...	...
Ireland	LOW	LOW	LOW	LOW	...	85	84	85	...	...	...
Italy	...	...	...	...	...	77	79	75	...	...	...
Latvia	...	...	...	...	...	83	80	86	...	...	...
Liechtenstein[11]	...	...	...	...	...	90	92	87	...	...	...
Lithuania	LOW	LOW	LOW	LOW	...	75	73	78	71	72	68
Luxembourg	HIGH	LOW	0	LOW	100	74	74	74	...	...	...
Malta	0	HIGH	LOW	LOW	...	68	65	70	...	...	...
Monaco	...	...	...	...	...	...	...	...	...	...	...
Montenegro	...	...	...	...	27	49	47	51	...	...	...
Netherlands	...	...	...	...	...	82	81	82	...	...	...
Norway	0	MEDIUM	LOW	LOW	...	81	80	83	...	...	...
Poland	...	...	...	...	...	84	84	84	...	...	...
Portugal	0	MEDIUM	MEDIUM	LOW	...	83	82	83	...	...	...
Republic of Moldova	...	...	...	...	0	58	56	60	...	28	36
Romania	...	...	...	...	67	62	60	63	...	...	...
Russian Federation	...	...	...	...	92	82	82	82	37	35	39
San Marino	...	...	...	...	...	...	...	...	...	...	...
Serbia[11]	LOW	HIGH	LOW	MEDIUM	...	65	63	67	...	...	...
Slovakia	...	...	...	...	...	69	68	71	...	...	...
Slovenia	...	...	...	...	...	85	84	86	...	...	...
Spain	...	...	...	...	...	82	82	82	...	...	...

Country or territory	PROMOTING SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP IN CURRICULA					KNOWLEDGE ACQUISITION ON SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP					
	Inclusion in national curricular frameworks of issues relating to global citizenship and sustainable development[1, 2]				Percentage of schools providing life skills-based HIV/AIDS education[7]	Percentage of students and youth with adequate understanding of issues relating to global citizenship and sustainable development					
	Gender equality[3]	Human rights[4]	Sustainable development[5]	Global citizenship[6]		Scientific literacy[9, 10]			HIV/AIDS and sexuality education[7]		
	2005–2015[8]	2005–2015[8]	2005–2015[8]	2005–2015[8]	2009–2010[8]	2015			2010–2016[8]		
						Total	Male	Female	Total	Male	Female
Sweden	LOW	HIGH	HIGH	LOW	100	78	77	80	60	59	61
Switzerland	...	...	...	...	...	82	81	82	...	...	...
TFYR Macedonia	...	...	...	...	...	37	33	42	...	...	...
Ukraine	...	...	...	...	59	...	...	...	23	25	21
United Kingdom	0	LOW	LOW	0	...	83	83	83	...	...	...
United States	...	...	...	...	...	80	79	80	...	...	...
Latin America and the Caribbean											
Anguilla	...	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	...	...	...	...	100	...	...	...	...	...	...
Argentina[11]	0	LOW	0	LOW	...	49	48	51	...	...	...
Aruba	...	...	...	...	...	...	...	...	...	...	...
Bahamas	...	...	...	...	78	...	...	...	4	6	3
Barbados	...	...	...	...	85	...	...	...	46	45	48
Belize	LOW	LOW	LOW	0	38	...	...	...	76	76	77
Bermuda	...	...	...	...	...	...	...	...	...	...	...
Bolivia, P.S.	...	...	...	...	...	...	...	...	...	...	...
Brazil	0	HIGH	LOW	LOW	...	43	44	43	...	...	...
British Virgin Islands	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	...	...	...	...	...	...	...	...	...	...	...
Chile	LOW	HIGH	MEDIUM	LOW	...	65	68	63	82	78	85
Colombia[12]	...	...	...	...	...	51	53	49	29	27	30
Costa Rica	...	...	...	...	...	54	59	49	...	...	...
Cuba	...	...	...	...	...	...	...	...	60	59	61
Curaçao	...	...	...	...	...	...	...	...	...	...	...
Dominica	LOW	MEDIUM	LOW	LOW	100	...	...	...	...	...	...
Dominican Republic	LOW	MEDIUM	MEDIUM	MEDIUM	8	14	15	14	45	44	45
Ecuador	...	...	...	...	63	...	...	...	...	...	...
El Salvador	LOW	HIGH	MEDIUM	LOW	100	...	...	...	37	34	40
Grenada	LOW	LOW	LOW	LOW	94	...	...	...	...	...	...
Guatemala	MEDIUM	HIGH	MEDIUM	MEDIUM	2	...	...	...	22	22	22
Guyana	...	...	...	...	...	...	...	...	49	40	52
Haiti	0	LOW	0	LOW	13	...	...	...	32	28	35
Honduras	LOW	HIGH	MEDIUM	LOW	11	...	...	...	33	35	33
Jamaica	...	...	...	...	44	...	...	...	...	...	...
Mexico	LOW	HIGH	LOW	LOW	...	52	54	51	...	...	...
Montserrat	...	...	...	...	...	...	...	...	...	...	...
Nicaragua	MEDIUM	HIGH	MEDIUM	LOW	88	...	...	...	...	...	...
Panama	LOW	MEDIUM	MEDIUM	LOW	...	...	...	...	...	...	...
Paraguay	HIGH	MEDIUM	LOW	LOW	...	...	...	...	...	...	...
Peru	LOW	HIGH	MEDIUM	LOW	...	42	44	39	...	...	...
Saint Kitts and Nevis	...	...	...	...	45	...	...	...	...	...	...
Saint Lucia	...	...	...	...	59	...	...	...	...	...	...
Saint Martin	...	...	...	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	...	...	...	...	100	...	...	...	...	...	...
Sint Maarten	...	...	...	...	...	...	...	...	...	...	...
Suriname	...	...	...	...	0	...	...	...	...	...	...
Trinidad and Tobago	...	...	...	...	...	54	50	59	...	...	...
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...	...	...
Uruguay	LOW	HIGH	LOW	LOW	90	59	60	59	...	...	...
Venezuela, B. R.	0	HIGH	LOW	LOW	100				...	...	...
Northern Africa and Western Asia											
Algeria	...	...	...	...	...	29	26	33	...	...	...
Bahrain	...	...	...	...	...	...	...	...	...	...	...
Egypt	...	...	...	...	...	...	...	...	...	...	...
Iraq	LOW	HIGH	MEDIUM	LOW	...	...	...	...	...	...	...
Israel	...	...	...	...	13	69	67	70	...	...	...
Jordan	...	...	...	...	...	50	41	60	...	...	...
Kuwait	...	...	...	...	...	...	...	...	...	...	...
Lebanon	...	...	...	...	...	37	38	37	...	...	...
Libya	...	...	...	...	...	...	...	...	...	...	...
Morocco	...	...	...	...	...	...	...	...	22	25	20
Oman	...	...	...	...	100	...	...	...	...	...	...
Palestine	0	LOW	LOW	LOW	...	...	...	...	...	...	...
Qatar	LOW	MEDIUM	MEDIUM	LOW	...	50	45	56	21	25	16
Saudi Arabia	...	...	...	...	...	...	...	...	...	...	...
Sudan	...	...	...	...	13	...	...	...	...	...	...
Syrian Arab Republic	...	...	...	...	...	...	...	...	...	...	...
Tunisia	...	...	...	...	...	34	35	33	...	...	...
Turkey	...	...	...	...	...	56	54	57	...	...	...
United Arab Emirates	...	...	...	...	...	58	51	65	...	...	...
Yemen	...	...	...	...	4	...	...	...	...	...	...
The Pacific											
Australia	LOW	HIGH	MEDIUM	MEDIUM	...	82	81	83	...	...	...
Cook Islands	0	LOW	LOW	LOW	...	...	...	...	...	...	...
Fiji	0	MEDIUM	MEDIUM	LOW	...	...	...	...	...	...	...

TABLE 11 *(CONTINUED)*

Country or territory	PROMOTING SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP IN CURRICULA					KNOWLEDGE ACQUISITION ON SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP					
	Inclusion in national curricular frameworks of issues relating to global citizenship and sustainable development[1, 2]				Percentage of schools providing life skills-based HIV/AIDS education[7]	Percentage of students and youth with adequate understanding of issues relating to global citizenship and sustainable development					
	Gender equality[3]	Human rights[4]	Sustainable development[5]	Global citizenship[6]		Scientific literacy[9, 10]			HIV/AIDS and sexuality education[7]		
	2005–2015[8]	2005–2015[8]	2005–2015[8]	2005–2015[8]	2009–2010[8]	2015			2010–2016[8]		
						Total	Male	Female	Total	Male	Female
Kiribati	LOW	0	LOW	0	...	...	...	...	...	...	...
Marshall Islands	...	...	...	...	...	...	...	...	...	...	...
Micronesia, F. S.	0	LOW	LOW	LOW	...	...	...	...	...	...	...
Nauru	0	0	LOW	LOW	...	...	...	...	...	...	...
New Zealand	0	LOW	MEDIUM	LOW	...	83	82	84	...	...	...
Niue	...	...	...	...	...	...	...	...	...	...	...
Palau	...	...	...	...	...	...	...	...	...	...	...
Papua New Guinea	LOW	MEDIUM	MEDIUM	LOW	100	...	...	...	...	...	...
Samoa	0	LOW	MEDIUM	0	...	...	...	...	5	6	5
Solomon Islands	...	...	...	...	...	...	...	...	...	...	...
Tokelau	LOW	LOW	MEDIUM	0	...	...	...	...	...	...	...
Tonga	...	...	...	...	...	...	...	...	...	...	...
Tuvalu	MEDIUM	MEDIUM	HIGH	MEDIUM	100	...	...	...	...	...	...
Vanuatu	...	...	...	...	8	...	...	...	...	...	...
Southern Asia											
Afghanistan	0	LOW	LOW	LOW	1	...	...	...	2	6	1
Bangladesh	...	...	...	...	...	...	...	...	...	...	...
Bhutan	MEDIUM	LOW	MEDIUM	MEDIUM	...	...	...	...	23	...	...
India	LOW	HIGH	HIGH	LOW	31	...	...	...	40	44	35
Iran, Islamic Republic of	...	...	...	...	...	...	...	...	18	21	16
Maldives	0	MEDIUM	MEDIUM	LOW	...	...	...	...	...	...	...
Nepal	MEDIUM	MEDIUM	LOW	MEDIUM	8	...	...	...	28	34	26
Pakistan	LOW	HIGH	LOW	LOW	...	...	...	...	4	5	4
Sri Lanka	...	...	...	...	...	...	...	...	...	...	...
Sub-Saharan Africa											
Angola	...	...	...	...	...	...	...	...	...	...	...
Benin	...	...	...	...	...	...	...	...	24	31	22
Botswana	...	...	...	...	100	...	...	...	...	...	...
Burkina Faso	...	...	...	...	10	...	...	...	32	36	31
Burundi	...	...	...	...	66	...	...	...	45	47	44
Cabo Verde	...	...	...	...	100	...	...	...	...	...	...
Cameroon	...	...	...	...	...	...	...	...	35	43	32
Central African Republic	...	...	...	...	27	...	...	...	19	25	17
Chad	...	...	...	...	75	...	...	...	13	15	11
Comoros	...	...	...	...	27	...	...	...	20	24	19
Congo	...	...	...	...	...	...	...	...	21	28	14
Côte d'Ivoire	LOW	HIGH	LOW	LOW	2	...	...	...	18	25	16
D. R. Congo	0	LOW	LOW	LOW	68	...	...	...	20	25	19
Djibouti	LOW	0	LOW	LOW	38	...	...	...	11	13	9
Equatorial Guinea	...	...	...	...	...	...	...	...	18	18	19
Eritrea	...	...	...	...	31	...	...	...	28	34	25
Ethiopia	...	...	...	...	38	...	...	...	28	34	24
Gabon	...	...	...	...	...	...	...	...	32	36	30
Gambia	LOW	HIGH	MEDIUM	LOW	...	...	...	...	29	30	28
Ghana	LOW	LOW	LOW	LOW	79	...	...	...	22	27	20
Guinea	...	...	...	...	82	...	...	...	26	34	23
Guinea-Bissau	...	...	...	...	...	...	...	...	22	22	23
Kenya	...	...	...	...	100	...	...	...	57	64	54
Lesotho	MEDIUM	HIGH	LOW	LOW	88	...	...	...	36	31	38
Liberia	...	...	...	...	2	...	...	...	33	29	36
Madagascar	...	...	...	...	...	...	...	...	...	...	...
Malawi	...	...	...	...	...	...	...	...	42	44	41
Mali	...	...	...	...	49	...	...	...	26	33	24
Mauritania	...	...	...	...	...	...	...	...	...	...	...
Mauritius	LOW	HIGH	HIGH	LOW	...	...	...	...	32	30	4
Mozambique	...	...	...	...	...	...	...	...	35	52	30
Namibia	LOW	MEDIUM	MEDIUM	LOW	...	...	...	...	58	51	62
Niger	LOW	0	LOW	0	82	...	...	...	17	25	14
Nigeria	...	...	...	...	23	...	...	...	27	34	24
Rwanda	MEDIUM	0	MEDIUM	LOW	...	...	...	...	65	64	65
Sao Tome and Principe	...	...	...	...	...	...	...	...	43	43	42
Senegal	...	...	...	...	...	...	...	...	28	33	27
Seychelles	LOW	HIGH	LOW	LOW	...	...	...	...	...	...	...
Sierra Leone	...	...	...	...	...	...	...	...	29	30	29
Somalia	...	...	...	...	...	...	...	...	...	...	...
South Africa	0	HIGH	LOW	0	100	...	...	...	...	...	...
South Sudan	MEDIUM	HIGH	LOW	0	...	...	...	...	...	...	...
Swaziland	...	...	...	...	85	...	...	...	50	51	49
Togo	...	...	...	...	0.06	...	...	...	26	32	23
Uganda	...	...	...	...	...	...	...	...	38	40	38
United Republic of Tanzania	LOW	LOW	0	LOW	...	...	...	...	43	47	40
Zambia	MEDIUM	LOW	MEDIUM	LOW	...	...	...	...	44	47	42
Zimbabwe	...	...	...	...	100	...	...	...	46	47	46

Country or territory	PROMOTING SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP IN CURRICULA					KNOWLEDGE ACQUISITION ON SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP					
	Inclusion in national curricular frameworks of issues relating to global citizenship and sustainable development[1, 2]				Percentage of schools providing life skills-based HIV/AIDS education[7]	Percentage of students and youth with adequate understanding of issues relating to global citizenship and sustainable development					
	Gender equality[3]	Human rights[4]	Sustainable development[5]	Global citizenship[6]		Scientific literacy[9, 10]			HIV/AIDS and sexuality education[7]		
	2005–2015[8]	2005–2015[8]	2005–2015[8]	2005–2015[8]	2009–2010[8]	2015			2010–2016[8]		
						Total	Male	Female	Total	Male	Female
					Median					Median	
World	...	...	...	...	...	...	...	...	...	...	...
Caucasus and Central Asia	...	...	...	...	...	...	...	...	20	23	19
Eastern and South-eastern Asia	...	...	...	...	...	...	...	...	25	28	21
Eastern Asia	...	...	...	...	...	...	...	...	...	...	...
South-eastern Asia	...	...	...	...	...	...	...	...	32	34	24
Europe and Northern America	...	...	...	...	...	...	...	...	...	...	...
Latin America and the Caribbean	...	...	...	...	...	...	...	...	...	...	...
Caribbean	...	...	...	...	...	...	...	...	...	...	...
Latin America	...	...	...	...	...	...	...	...	...	...	...
Northern Africa and Western Asia	...	...	...	...	...	...	...	...	...	...	...
Northern Africa	...	...	...	...	...	...	...	...	...	...	...
Western Asia	...	...	...	...	...	...	...	...	...	...	...
Pacific	...	...	...	...	...	...	...	...	...	...	...
Southern Asia	...	...	...	...	...	...	...	...	21	...	...
Sub-Saharan Africa	...	...	...	...	67	...	...	...	29	33	27
Countries with low income	...	...	...	...	...	...	...	...	28	33	26
Countries with middle income	...	...	...	...	...	...	...	...	...	...	...
Lower middle	...	...	...	...	...	...	...	...	23	28	22
Upper middle	...	...	...	...	...	...	...	...	...	...	...
Countries with high income	...	...	...	...	...	...	...	...	...	...	...

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. *Source:* UNESCO-IBE (2016).

2. Curricula referred to are for primary education, lower secondary education or both.

3. Key terms are (a) gender equality, (b) gender equity, (c) empowerment of girls/women, (d) gender sensitive(ity) and (e) gender parity. The degree of inclusion of the issue in curricula is assessed as LOW if 1 or 2 of the 5 items are covered, MEDIUM if 3 are covered and HIGH if 4 or 5 are covered; 0 indicates no inclusion of any items.

4. Key terms are (a) human rights, rights and responsibilities (children's rights, cultural rights, indigenous rights, women's rights, disability rights); (b) freedom (of expression, of speech, of press, of association or organization) and civil liberties; (c) social justice; (d) democracy/democratic rule, democratic values/principles; and (e) human rights education. The degree of inclusion of the issue in curricula is assessed as LOW if 1 or 2 of the 5 items are covered, MEDIUM if 3 are covered and HIGH if 4 or 5 are covered; 0 indicates no inclusion of any items.

5. Key terms are (a) sustainable, sustainability, sustainable development; (b) economic sustainability, sustainable growth, sustainable production/consumption, green economy; (c) social sustainability (social cohesion and sustainability); (d) environmental sustainability/environmentally sustainable; (e) climate change/variability (global warming, carbon emissions/footprint); (f) renewable energy/fuels, alternative energy sources (solar, tidal, wind, wave, geothermal, biomass); (g) ecosystems, ecology (biodiversity, biosphere, biomes, loss of diversity); (h) waste management, recycling; (i) education for sustainable development, sustainability education, education for sustainability; (j) environmental education/studies, education for the environment, education for environmental sustainability. The degree of inclusion of the issue in curricula is assessed as LOW if 1 to 4 of the 10 items are covered, MEDIUM if 5 to 7 items are covered and HIGH if 8 to 10 items are covered; 0 indicates no inclusion of any items.

6. Key terms are (a) globalization; (b) global citizen(ship)/culture/identity/community; (c) global-local thinking, local-global (think global[ly] act local[ly], glocal); (d) multicultural(ism)/intercultural(ism) (and hyphenated forms); (e) migration, immigration, mobility, movement of people; (f) global competition/competitiveness, globally competitive, international competitiveness; (g) global inequality(ies)/disparity(ies); h) national/local citizenship/culture/identity(ies)/culture(s)/heritage, global citizenship education; and (i) education for global citizenship. The degree of inclusion of the issue in curricula is assessed as LOW if 1 to 4 of these items are covered, MEDIUM if 5 to 7 are covered and HIGH if 8 or 9 are covered; 0 indicates no inclusion of any items.

7. Data are from UNAIDS (2011), 2015 UNAIDS AIDSInfo Online Database and DHS StatCompiler. For more detailed country notes see these sources.

8. Data are for the most recent year available in the period specified. For details see relevant sources.

9. Data are from PISA 2015: Annex B1 (2016). PISA defines scientific literacy as (a) scientific knowledge and its use to identify questions, acquire new knowledge, explain scientific phenomena and draw evidence-based conclusions about science-related issues; (b) understanding of the characteristic features of science as a form of human knowledge and enquiry; (c) awareness of how science and technology shape the material, intellectual and cultural environments; and (d) willingness to engage in science-related issues, and with the ideas of science, as a reflective citizen. Scientific literacy is used in this table as a proxy measure of knowledge of environmental science, and geoscience and of sustainable development/sustainability more broadly, given the correlation between the two.

10. Refers to the percentage of 15-year-old students performing at or above level 2 of proficiency in scientific literacy.

11. Data on scientific literacy refer to 2012.

12. Data on the understanding of issues relating to HIV/AIDS and sexuality education are for people aged 13-24 years.

(...) No data are available.

TABLE 12: SDG 4, Means of implementation 4.a and 4.b – Education facilities, learning environments, internationally mobile tertiary students and scholarships

By 2030, build and upgrade education facilities that are child, disability and gender sensitive and provide effective learning environments. By 2020, substantially expand globally the number of scholarships available to developing countries.

	INCLUSIVE AND EFFECTIVE LEARNING ENVIRONMENTS						
	Education facilities						
	Water, sanitation and hygiene in schools[1]				Information, communication and technology		
	Percentage of schools (%) with:				Percentage of schools (%) with:		
	Basic drinking water	Basic sanitation or toilets	Of which: single-sex toilets	Basic handwashing facilities	Electricity	Internet used for pedagogical purposes	Computers used for pedagogical purposes
					School year ending in	School year ending in	School year ending in
	2014	2014	2014	2014	2015	2015	2015
Country or territory							
Caucasus and Central Asia							
Armenia	93	86	...	...	100[x]	...	100[x]
Azerbaijan[4]	5	68	...	...	100[x]	27[x]	84[x]
Georgia	75	70	...	...	100[x]	100[x]	100[x]
Kazakhstan[4]	85	85	...	...	...	...	100*[,x]
Kyrgyzstan[4]	30	69	53	...	100[x]	6[x]	86[x]
Tajikistan	51	31	...	...	...	...	...
Turkmenistan	...	...	...	...	...	...	...
Uzbekistan	100	100	...	...	...	...	...
Eastern and South-eastern Asia							
Brunei Darussalam	...	...	...	...	...	...	...
Cambodia	57	82	...	...	...	...	3*[,x]
China	99	65	...	...	...	...	...
DPR Korea	...	...	...	...	...	...	...
Hong Kong, China[4]	...	...	...	...	100[x]	100[x]	100[x]
Indonesia	89	53	...	...	...	...	...
Japan	...	...	...	...	...	...	...
Lao PDR	58	48	...	...	...	...	...
Macao, China	...	...	...	...	...	...	...
Malaysia[4]	100	100	...	...	100[w]	91[w]	100[w]
Mongolia	48	52	...	...	91[x]	...	100[x]
Myanmar	59	23	...	...	...	...	5[x]
Philippines	95	52	...	...	...	...	...
Republic of Korea	...	...	...	...	100**[,x]	100**[,x]	100**[,x]
Singapore[4,5]	...	...	...	...	100[w]	100[w]	100[w]
Thailand	60	45	...	...	...	98*[,x]	98*[,x]
Timor-Leste	54	65	...	...	...	...	...
Viet Nam	72	72	...	...	...	...	...
Europe and Northern America							
Albania	51	30	...	...	...	...	...
Andorra	...	...	...	...	...	...	...
Austria	...	...	...	...	...	...	...
Belarus[5]	100	100	...	...	100[y]	...	...
Belgium	...	...	...	...	...	...	...
Bosnia and Herzegovina	100	100	...	...	...	...	...
Bulgaria	100	100	...	...	...	...	...
Canada	...	...	...	...	...	...	...
Croatia	100	100	...	...	...	...	...
Cyprus	...	...	...	...	...	...	...
Czechia	...	...	...	...	...	...	...
Denmark	...	...	...	...	...	...	...
Estonia	...	...	...	...	...	...	...
Finland	...	...	...	...	...	...	...
France	...	...	...	...	...	...	...
Germany	...	...	...	...	...	...	...
Greece	...	...	...	...	...	...	...
Hungary	...	...	...	...	...	...	...
Iceland	...	...	...	...	...	...	...
Ireland	...	...	...	...	...	...	...
Italy	...	...	...	...	...	...	...
Latvia	...	...	...	...	...	...	...
Liechtenstein	...	...	...	...	...	...	...
Lithuania	...	...	...	...	...	...	...
Luxembourg	...	...	...	...	...	...	...
Malta	...	...	...	...	...	...	...
Monaco	...	...	...	...	...	...	...
Montenegro	95	95	...	...	...	...	...
Netherlands	...	...	...	...	...	...	...
Norway	...	...	...	...	...	...	...
Poland	...	...	...	...	...	...	...
Portugal	...	...	...	...	...	...	...
Republic of Moldova	51	70	...	...	...	...	...
Romania	90	90	...	...	...	...	...
Russian Federation	100	100	...	...	...	...	...
San Marino	...	...	...	...	...	...	...

	INTERNATIONALLY MOBILE STUDENTS IN TERTIARY EDUCATION				SCHOLARSHIPS	
	Student international mobility				Volume of official development assistance flows on education for scholarships	Volume of official development assistance flows on education for scholarships and imputed student costs
	Internationally mobile students (inbound)		Internationally mobile students (outbound)			
	Number enrolled in tertiary education (000)	Inbound mobility rate (%)[2]	Number enrolled in tertiary education (000)	Outbound mobility ratio (%)[3]	Total gross disbursements (000)	Total gross disbursements (000)
	School year ending in	School year ending in	School year ending in	School year ending in	Constant 2015 US$	Constant 2015 US$
	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total		
	4	4.1	8**	7.1**	4	11
	4	2.1	40**	19.5**	2	9
	5	3.7	9**	6.9**	3	17
	13	**2.0**	78**	**12.5****	3	13
	13	4.8	9**	3.6**	3	7
	2	**0.6**	16**	**6.3****	2	3
	0.1[z]	0.2[z]	51**	106.8[z]	0.9	2
	0.7	**0.3**	28**	**10.5****	4	10
	0.5	4.9	3**	32.1**	...	...
	...	...	5**	2.4**	13	16
	123	0.3	801	1.8	18	317
	...	...	2**	0.3**	0.9	1
	32	10.7	35**	11.6**	...	...
	...	...	42**	0.8**	66	96
	133[z]	3.4[z]	30**	0.9[z]	...	...
	0.3	0.2	3**	2.7**	11	12
	12	39.7	3**	8.5**	...	...
	60	7.4	64**	7.9**	4	14
	1	0.7	10**	5.4**	10	16
	...	...	7**	....	12	13
	...	...	15**	0.4[z]	14	16
	55	1.7	108**	3.3**	...	...
	49[y]	19.2[y]	24**	8.7**,[y]	...	...
	12[z]	0.5[z]	28**	1.3**	5	12
	...	...	4**	...	8	9
	3	0.1	64**	2.6**	44	88
	3	1.7	24**	15.2**	4	19
	0.2	41.7	1**	253.8**	...	...
	68	15.9	17**	4.0**	...	...
	16	3.3	29**	6.0**	10	26
	56	11.2	13**	2.6**	...	...
	8	7.5	11**	10.2**	2	26
	12	4.2	25**	8.9**	...	...
	151[y]	...	50**	...	...	...
	0.8	0.5	9**	5.4**	...	...
	7	17.6	16**	42.0**	...	...
	42	10.5	12**	3.1**	...	...
	32	10.3	5**	1.6**	...	...
	3	5.2	4**	8.0**	...	...
	23	7.7	9**	3.1**	...	...
	235[z]	9.8[z]	81**	3.3[z]	...	...
	229	7.7	116**	3.9**	...	...
	28[y]	4.2[y]	37**	5.3[z]	...	...
	22	7.1	10**	3.4**	...	...
	1[y]	6.5[y]	3**	14.8**,[y]	...	...
	16	7.4	16**	7.3**	...	...
	90	5.0	57**	3.1**	...	...
	5	6.1	6**	7.1**	...	...
	0.7	87.6	1.0**	132.5**	...	...
	5	3.5	12**	8.5**	...	...
	3[z]	...	10**	...	...	...
	0.8	6.2	1**	9.4**	...	...
	...	...	0.3**	...	...	...
	...	...	5**	...	0.7	3
	86	10.2	15**	1.8**	...	...
	10	3.5	19**	6.9**	...	...
	35[z]	2.0[z]	24**	1.4[z]	...	...
	17	5.0	12**	3.6**	...	...
	3	2.5	20**	18.2**	20	28
	23	4.3	33**	6.2**	...	...
	213	3.4	56**	0.9**	...	...
	...	...	0.8**	...	...	...

TABLE 12 *(CONTINUED)*

Country or territory	INCLUSIVE AND EFFECTIVE LEARNING ENVIRONMENTS						
	Education facilities						
	Water, sanitation and hygiene in schools[1]				Information, communication and technology		
	Percentage of schools (%) with:				Percentage of schools (%) with:		
	Basic drinking water	Basic sanitation or toilets	Of which: single-sex toilets	Basic handwashing facilities	Electricity	Internet used for pedagogical purposes	Computers used for pedagogical purposes
					School year ending in	School year ending in	School year ending in
	2014	2014	2014	2014	2015	2015	2015
Serbia	95	95	...	...	...	...	...
Slovakia	...	...	...	...	...	...	...
Slovenia	...	...	...	...	...	...	...
Spain	...	...	...	...	...	...	...
Sweden	...	...	...	...	...	...	...
Switzerland	...	...	...	...	...	...	...
TFYR Macedonia	...	...	...	...	...	...	...
Ukraine	100	100	...	...	...	...	...
United Kingdom	...	...	...	...	...	...	...
United States	...	...	...	...	...	...	...
Latin America and the Caribbean							
Anguilla[4]	100	100	...	...	100[v]	100[v]	100[v]
Antigua and Barbuda	100	100	...	...	100[v]	...	...
Argentina	71	68	...	...	...	...	...
Aruba	...	...	...	...	100[v]	...	100[v]
Bahamas	...	...	...	...	...	...	...
Barbados	100	100	...	...	...	...	...
Belize	64	21	32	...	...	...	...
Bermuda	...	...	...	...	...	...	...
Bolivia, P.S.	93	74	...	...	...	...	...
Brazil	94	98	...	...	...	38[v]	46[v]
British Virgin Islands	100	100	...	...	100[v]	100[v]	100[v]
Cayman Islands[4]	...	...	...	...	100[v]	100[v]	100[v]
Chile[4]	90	90	...	...	...	70*[,y]	82*[,y]
Colombia[5]	73	100	...	...	94[w]	...	88[w]
Costa Rica	73	53	...	64	...	...	...
Cuba[5]	100	100	...	...	100[v]	...	100[v]
Curaçao	...	...	...	...	100[v]	...	...
Dominica	100	100	...	...	100[v]	...	75[v]
Dominican Republic	47	60	...	...	...	...	...
Ecuador	58	54	...	...	...	18[v]	54[v]
El Salvador	100	67	...	...	...	...	61[v]
Grenada	100	100	...	...	100[v]	...	...
Guatemala	70	48	50	...	...	...	...
Guyana	72	72	...	...		...	...
Haiti	60	60	...	...	...	...	...
Honduras	66	67	46	...	...	...	...
Jamaica	88	80	85	...	100[v]	...	...
Mexico	94	69	69	...	...	...	...
Montserrat	100	100	...	...	100[v]	60[v]	60[v]
Nicaragua	50	25	...	...	...	...	...
Panama	90	87	85	...	...	...	...
Paraguay	64	72	...	...	...	...	16*[,y]
Peru	64	51	55	...	...	...	...
Saint Kitts and Nevis	100	100	...	...	100[v]	100[v]	100[v]
Saint Lucia	100	100	...	...	100[v]	58[v]	61[v]
Saint-Martin	...	...	...	...	...	...	...
Saint Vincent/Grenadines	100	100	...	...	100[v]	68[v]	...
Sint-Maarten	...	...	...	...	100[v]	...	100[v]
Suriname	80	65	68	...	...	...	...
Trinidad and Tobago	100	100	...	...	...	...	...
Turks and Caicos Islands	100	100	...	...	100[v]	7[v]	100[v]
Uruguay	100	100	...	...	...	...	...
Venezuela, B. R.	95	89	...	...	...	...	...
Northern Africa and Western Asia							
Algeria	95	100	...	...	...	...	...
Bahrain	100	100	...	...	...	...	...
Egypt	25	65	...	...	...	...	98[v]
Iraq	95	73	...	...	...	...	...
Israel	62	41	...	...	...	...	...
Jordan	66	99	20	...	...	73[w]	89[w]
Kuwait	100	100	...	...	...	...	...
Lebanon	97	100	...	...	...	...	...
Libya	...	...	...	...	...	...	...
Morocco	100	50	...	...	...	...	...
Oman	100	100	...	...	100[v]	77[w]	100[w]

	INTERNATIONALLY MOBILE STUDENTS IN TERTIARY EDUCATION				SCHOLARSHIPS	
	Student international mobility				Volume of official development assistance flows on education for scholarships	Volume of official development assistance flows on education for scholarships and imputed student costs
	Internationally mobile students (inbound)		Internationally mobile students (outbound)			
	Number enrolled in tertiary education (000)	Inbound mobility rate (%)[2]	Number enrolled in tertiary education (000)	Outbound mobility ratio (%)[3]	Total gross disbursements (000)	Total gross disbursements (000)
	School year ending in	School year ending in	School year ending in	School year ending in	Constant 2015 US$	Constant 2015 US$
	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total		
	10	4.1	14**	5.7**	5	25
	11	5.6[z]	31**	16.2[z]	...	...
	2[z]	2.7[z]	3**	2.8[z]	...	...
	56[y]	2.9[y]	33**	1.7**	...	...
	27	6.2	17**	4.1**	...	...
	51	17.2	12**	4.2**	...	...
	2	3.5	5**	7.6**	2	10
	58	3.2	60**	3.4**	11	76
	429[z]	18.2	31**	1.3[z]	...	...
	907	4.6	68**	0.3**	...	...
	...	...	0.4**	...	...	...
	...	...	0.5**	...	0.1	0.01
	...	...	8**	0.3[z]	4	10
	0.3	27.6	0.1**	8.5**	...	...
	...	...	3**	...	...	...
	...	...	1**	...	...	...
	...	...	0.8**	9.7**	0.4	0.4
	0.2	17.6	2**	176.0**	...	...
	...	...	10**	...	1	4
	20	0.2	41**	0.5**	15	66
	...	...	0.4**	44.4**	...	...
	...	...	0.5**	...	...	...
	4	0.3	9**	0.8**	4	14
	4	0.2	28**	1.2**	8	35
	...	...	2**	1.1**	2	4
	...	...	2**	0.9**	1	3
	...	...	0.1**	0.6**,[y]	...	...
	...	...	0.7**	...	0.2	0.4
	10	2.1	4**	0.9**	0.8	2
	3[z]	...	14**	2.0**,[y]	2	9
	0.7	0.4	4**	2.1**	0.9	3
	6	68.2	0.5**	5.0**	0.3	0.3
	...	...	3**	0.9**	1	3
	...	...	1**	...	0.9	0.9
	...	...	10**	...	3	8
	1	0.8	4**	2.1**	0.9	2
	...	...	4**	5.6**	1	1
	8[y]	0.2[y]	30**	0.8[z]	8	36
	...	...	0.03**	...	0.1	0.1
	...	...	2**	...	0.8	2
	...	...	3**	2.2**,[y]	0.9	2
	...	...	3**	...	0.9	2
	...	...	17**	...	4	14
	2[z]	73.2[z]	0.4**	12.6**	...	...
	0.5	19.4	1.0**	35.8**	0.5	0.6
	...	...	...	...	...	...
	...	...	0.7**	...	0.4	0.5
	0.07	36.1	0.1**	46.9**	...	...
	...	...	0.9**	...	0.6	0.7
	...	...	4**	...	...	...
	...	...	0.2**	53.5**	...	...
	...	...	3**	1.7**	1	2
	...	...	17**	...	1	8
	8	0.6	21**	1.6**	15	85
	5	13.9	5**	13.8**	...	...
	48[z]	1.9[z]	26**	0.9**	14	43
	...	...	29**	...	5	14
	10[z]	2.8[z]	13**	3.6**	...	...
	40	12.9	22**	7.1**	4	18
	...	...	22**	20.1**,[y]	...	...
	21	9.9	14**	6.7**	3	25
	...	...	10**	...	1	6
	14[z]	1.8[z]	44**	5.0**	20	138
	4	2.8	15**	11.6**	...	...

TABLE 12 *(CONTINUED)*

Country or territory	INCLUSIVE AND EFFECTIVE LEARNING ENVIRONMENTS						
	Education facilities						
	Water, sanitation and hygiene in schools[1]				Information, communication and technology		
	Percentage of schools (%) with:				Percentage of schools (%) with:		
	Basic drinking water	Basic sanitation or toilets	Of which: single-sex toilets	Basic handwashing facilities	Electricity	Internet used for pedagogical purposes	Computers used for pedagogical purposes
					School year ending in	School year ending in	School year ending in
	2014	2014	2014	2014	2015	2015	2015
Palestine[6]	...	...	...	...	100[x]	21[x]	64[x]
Qatar[5]	96	94	...	...	100[w]	61[w]	100[w]
Saudi Arabia	89	85	...	...	...	...	...
Sudan	100	100	...	...	...	...	...
Syrian Arab Republic	...	...	...	...	...	...	...
Tunisia	70	...	60	...	...	...	...
Turkey	99	99	...	...	...	...	...
United Arab Emirates	100	100	...	...	...	...	...
Yemen	53	53	...	...	...	...	...
The Pacific							
Australia	...	...	...	...	...,	...	...
Cook Islands	...	...	...	...	...,	...	...
Fiji	100	95	...	...	...,	...	...
Kiribati	3	4	...	...	...,	...	...
Marshall Islands	20	10	...	...	...,	...	...
Micronesia, F. S.	...	...	...	...	...,	...	...
Nauru	...	...	...	...	...,	...	...
New Zealand	...	...	...	...	100[w]	...	...
Niue	100	100	...	...	...,	...	...
Palau	100	100	...	...	...,	...	...
Papua New Guinea	...	...	...	...	...,	...	...
Samoa	95	...	...	...	...,	...	...
Solomon Islands	50	67	66	...	...,	...	...
Tokelau	...	...	...	...	...,	...	...
Tonga	...	...	...	...	...,	...	...
Tuvalu	71	60	...	...	...,	...	...
Vanuatu	84	69	70	...	...,	...	...
Southern Asia							
Afghanistan	53	63	43	12	...	...	...
Bangladesh	87	68	...	...	...	...	...
Bhutan[4]	84	78	73	...	...	66[x]	...
India	75	84	59	42	...	...	...
Iran, Islamic Republic of	89	86	...	...	...	32[x]	72[x]
Maldives[4,5]	97	73	...	...	100[x]	40**[,x]	40**[,x]
Nepal	87	85	76	...	...	...	3[w]
Pakistan	62	63	...	...		...	...
Sri Lanka	86	91	90	...	82[w]	18[w]	60[w]
Sub-Saharan Africa							
Angola	7	54	...	0	...	...	
Benin	33	78	4	...	...	...	
Botswana[5]	50	50	...	13		...	83[x]
Burkina Faso	48	79	40	...		...	...
Burundi	37	71	61	10	...	...	...
Cabo Verde	95	100	86	...	...	...	...
Cameroon[5]	31	40	26	...	...	...	6**[,y]
Central African Republic	25	61	45	...	...	...	...
Chad	14	41	9	...	...	...	...
Comoros	46	54	4	...	...	...	...
Congo	34	35	15	...	...	...	...
Côte d'Ivoire	77		46	...	...	...	...
D. R. Congo	20	82	29	...	...	...	...
Djibouti	86	89	86	...		...	...
Equatorial Guinea	61	43	14	...	...	...	...
Eritrea	62	66	64	...	...	...	...
Ethiopia	40	77	41	7		...	...
Gabon	66	61	...	...	...	...	...
Gambia	95	73	57	...	...	...	22**[,z]
Ghana	57	64	58	...	...	...	...
Guinea	19	75	63	...	...	...	...
Guinea-Bissau	28	32	...	...	...	...	...
Kenya	46	21	...	...	...	...	...
Lesotho	30	40	...	...	...	...	...
Liberia	60	82	...	...	6[z]	...	...
Madagascar[5]	27	30	...	...	...	...	-[y]
Malawi	90	26	...	4	...	...	...

	INTERNATIONALLY MOBILE STUDENTS IN TERTIARY EDUCATION				SCHOLARSHIPS	
	Student international mobility				Volume of official development assistance flows on education for scholarships	Volume of official development assistance flows on education for scholarships and imputed student costs
	Internationally mobile students (inbound)		Internationally mobile students (outbound)			
	Number enrolled in tertiary education (000)	Inbound mobility rate (%)[2]	Number enrolled in tertiary education (000)	Outbound mobility ratio (%)[3]	Total gross disbursements (000)	Total gross disbursements (000)
	School year ending in	School year ending in	School year ending in	School year ending in	Constant 2015 US$	Constant 2015 US$
	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total		
	-	-	26**	11.9**	6	19
	11	37.7	5**	18.3**	...	...
	73	4.8	86**	5.7**	...	...
	...	....	11**	1.5[z]	3	5
	...	...	38**	5.0**	8	50
	6	2.0	18**	5.7**	14	76
	72	1.2	46**	0.8**	9	80
	73	46.9	11**	6.8**	...	...
	...	...	20**	...	2	17
	294	18.3[z]	12**	0.8[z]	...	...
	...	...	0.2**	...	0.2	0.2
	...	...	1**	...	6	6
	...	...	1**	...	3	3
	...	...	0.2**	...	0.1	0.1
	...	...	0.4**	...	0.2	0.2
	...	...	0.2**	....	0.7	0.7
	57	21.1	5**	1.9**	...	...
	...	...	0.0**	...	0.1	0.1
	0.2[y]	22.8[y]	0.0**	3.9**[,y]	0.1	0.2
	...	...	1**	...	27	27
	...	...	0.8**	...	6	6
	...	...	3**	...	6	6
	...	...	0.1**	...	...	...
	...	...	1**	...	3	3
	...	...	0.4**	...	2	2
	...	...	2**	...	3	3
	-[z]	-[z]	24**	7.3[z]	7	11
	...	...	33**	1.4[z]	14	31
	...	...	4**	41.8**[,y]	6	6
	42	0.1	254**	0.8**	16	119
	14	0.3	51**	1.1**	6	71
	...	...	2**	36.4[z]	4	4
	...	...	39**	8.8**	7	19
	...	...	47**	2.5**	15	43
	1.0	0.3	18**	5.8**	9	11
	...	...	12**	5.3**	2	4
	...	...	5**	2.8**[,y]	2	11
	1	**2.6**	3**	**6.7****	2	2
	2[y]	2.9[y]	4**	**4.5****	1	7
	2[z]	3.2[z]	2**	4.3[z]	1	3
	0.2	1.3	3**	24.2**	1	9
	...	...	24**	6.0**	8	71
	...	...	1**	...	1	3
	...	...	6**	12.9**[,z]	1	4
	-[z]	-[z]	5**	75.7[z]	5	10
	0.3[y]	0.9[y]	8**	22.3**[,y]	4	12
	3	1.8	8**	4.1**	4	20
	5[y]	1.2[y]	9**	1.4**[,y]	3	8
	...	...	2**	...	1	5
	...	...	1**	...	0.2	0.4
	...	...	2**	13.4[z]	0.1	0.6
	...	...	6**	0.8[z]	7	12
	...	...	6**	...	2	15
	...	...	2**	...	1.0	1.2
	18	4.3	12**	2.8**	6	12
	...	...	6**	5.1[z]	2	17
	...	...	2**	...	0.4	2
	...	...	13**	...	8	14
	0.09[z]	0.4[z]	3**	12.4[z]	0.8	0.9
	...	...	0.9**	...	0.9	1
	2[z]	1.8[z]	4**	3.7[z]	3	13
	...	...	2**	...	2	2

TABLE 12 *(CONTINUED)*

Country or territory	INCLUSIVE AND EFFECTIVE LEARNING ENVIRONMENTS						
	Education facilities						
	Water, sanitation and hygiene in schools[1]				Information, communication and technology		
	Percentage of schools (%) with:				Percentage of schools (%) with:		
	Basic drinking water	Basic sanitation or toilets	Of which: single-sex toilets	Basic handwashing facilities	Electricity	Internet used for pedagogical purposes	Computers used for pedagogical purposes
					School year ending in	School year ending in	School year ending in
	2014	2014	2014	2014	2015	2015	2015
Mali	55	65	25	...	...	...	...
Mauritania	22	32	13	...	...	...	...
Mauritius	100	100	100	...	100[z]	...	99[z]
Mozambique	68	50	...	...	...	...	...
Namibia	82	81	...	...	...	...	...
Niger	13	29	15	...	...	...	...
Nigeria	72	32	...	...	...	...	...
Rwanda	89	94	...	37	...	...	...
Sao Tome and Principe	89	90	83	...	...	...	...
Senegal	57	69	55	...	...	...	...
Seychelles[6]	100	100	100	...	100[x]	...	...
Sierra Leone	23	62	...	...	...	...	...
Somalia	58	45	...	...	...	...	...
South Africa	97	100	...	...	...	...	...
South Sudan	47	40	...	...	...	...	...
Swaziland	65	81	72	...	...	...	...
Togo	47	25	...	...	...	...	...
Uganda	74	75	...	37	...	...	...
United Republic of Tanzania	61	11	...	1	...	...	...
Zambia	87	50	...	...	...	...	11[x]
Zimbabwe	52	42	...	...	...	...	...
	Median	**Median**	**Median**	**Median**	**Median**	**Median**	**Median**
World[8]	76	73	...	...	...	...	...
Caucasus and Central Asia	75	70	...	...	...	...	...
Eastern and South Eastern Asia	60	53	...	...	...	...	...
Eastern Asia	...	...	...	...	...	...	...
South-eastern Asia	60	53	...	...	...	...	...
Europe and Northern America	...	...	...	...	...	...	...
Latin America and the Caribbean	93.5	88	...	...	...	...	...
Caribbean	100	100	...	...	...	...	...
Latin America	73	69	...	...	...	...	...
Northern Africa and Western Asia	96	99	...	...	...	...	...
Northern Africa	95	83	...	...	...	...	...
Western Asia	97	99	...	...	...	...	...
Pacific	84	...	...	...	...	...	...
Southern Asia	86	78	...	...	...	...	...
Sub-Saharan Africa	56	61	46	...	...	...	...
Countries with low income	50	63	42	...	...	...	...
Countries with middle income	76	69	...	...	...	...	...
Lower middle	70	65	...	...	...	...	...
Upper middle	89	81	...	...	...	...	...
Countries with high income	...	...	...	...	...	...	...

Sources: UIS database; GEM Report team calculations for inbound and outbound mobility rates.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. UNICEF-WASH in Schools (March 2017). The data reported are estimates and do not fully reflect the definition of "basic" services; they are based on currently available national data, which refer to 13 different indicators used across the countries, ranging from access to any facility to improved and functional facilities.

2. Number of students from abroad studying in a given country, expressed as a percentage of total tertiary enrolment in that country.

3. Number of students from a given country abroad studying abroad, expressed as a percentage of total tertiary enrolment in that country.

4. The percentage of schools with internet refers to public institutions only.

5. The percentage of schools with computers refers to public institutions only.

6. The percentage of schools with electricity refers to public institutions only.

7. The percentage of schools with internet and computers refers to West Bank schools only.

8. Values for total aid to scholarships for regional and other country groups do not always sum up to world totals because some aid to scholarships is not allocated by region or country.

Data in bold are for the school year ending in 2016.

	INTERNATIONALLY MOBILE STUDENTS IN TERTIARY EDUCATION				SCHOLARSHIPS	
	Student international mobility				Volume of official development assistance flows on education for scholarships	Volume of official development assistance flows on education for scholarships and imputed student costs
	Internationally mobile students (inbound)		Internationally mobile students (outbound)			
	Number enrolled in tertiary education (000)	Inbound mobility rate (%)[2]	Number enrolled in tertiary education (000)	Outbound mobility ratio (%)[3]	Total gross disbursements (000)	Total gross disbursements (000)
	School year ending in	School year ending in	School year ending in	School year ending in	Constant 2015 US$	Constant 2015 US$
	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total		
	...	...	6**	...	3	13
	0.4	**2.0**	4**	**20.7****	1	6
	2	4.0	6**	17.0**	2	7
	2	1.4	2**	1.3**	3	4
	3[z]	...	5**	...,	1	2
	...	...	3**	...	1	4
	...	...	76**	...	5	16
	0.6	**0.7**	6**	**6.8****	4	7
	...	...	0.7**	31.3**	0.5	2
	23	15.8	11**	7.9**	6	36
	-	-	0.4**	42.3**	0.9	1
	...	...	1**	...	0.9	1
	...	...	5**	...	0.3	0.8
	43[z]	4.2[z]	7**	0.7[z]	8	11
	...	...	0.4**	...	0.5	0.5
	0.0	0.5[y]	3**	...	1	1
	...	...	4**	5.3**	2	8
	...	...	5**	3.0[z]	6	7
	...	...	6**	3.8**,[y]	8	9
	...	...	5**	...	3	3
	0.6	0.5	17**	12.4**	3	5
	Sum	**Weighted average**	**Sum**	**Weighted average**	**Sum**	**Sum**
	4,607	2.2	4,076	1.9	1156	3096
	39	2.0	238	12.6	25	74
	491	0.7	1,248	1.9	206	612
	356	0.7	987	1.9	30	335
	135	0.9**	261	1.7	177	277
	3,009	5.9	1,036	2.0	77	241
	97	0.4**	239	1.0	82	257
	47	5.0	37	4.0	9	16
	50	0.2	202	0.8	73	240
	410	2.4	484	2.8	124	597
	76	1.2**	130	2.1	67	354
	333	3.1	354	3.3	43	228
	360	20.5	30	1.7	61	61
	59	0.1	473	1.1	84	316
	142	1.9**	328	4.4	139	411
	69	1.5	201	4.5	87	228
	1,058	0.7	2,710	1.8	625	2221
	249	0.4	1,025	1.7	447	1192
	810	0.9	1,685	1.9	178	1030
	3,480	6.2	1,166	2.1	12	28

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(x) Data are for the school year ending in 2012.

(w) Data are for the school year ending in 2011.

(v) Data are for the school year ending in 2010.

(-) Magnitude nil or negligible.

(...) No data are available.

TABLE 13: SDG 4, Means of implementation 4.c – Teaching staff, teacher qualifications and training in pre-primary, primary and secondary education

By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

	PRE-PRIMARY EDUCATION										PRIMARY EDUCATION				
	Teaching staff	Teacher qualifications			Teacher training			Pupil/ teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			
	Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			
	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			
	2015	2015			2015			2015	2015	2015	2015	2015			
Country or territory	Total (000)	Total	Male	Female	Total	Male	Female				Total (000)	Total	Male	Female	
Caucasus and Central Asia															
Armenia	7	...	...	...	80	100	80	9	...	11	...	...	...	...	
Azerbaijan	10	63	73	63	91	100	91	11	18	13	41	...	...	...	
Georgia	...	...	...	...	...	...	...	...	...	...	32	...	...	...	
Kazakhstan	**87**	**100**	**100**	**100**	**100**	**100**	**100**	**10**	**10**	**10**	**69**	**100**	**100**	**100**	
Kyrgyzstan	...	...	...	...	...	...	...	...	...	...	17	74	74	74	
Tajikistan	**7**	**66**	**90**	**66**	**100**	**100**	**100**	**13**	**19**	**13**	**32**	**96**	**97**	**96**	
Turkmenistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Uzbekistan	**58**	**98**	...	...	...	...	...	**11**	**11**	...	**111**	**98**	...	...	
Eastern and South-eastern Asia															
Brunei Darussalam	0.8	100	100	100	59	88	58	17	17	29	4	100	100	100	
Cambodia	6	100	100	100	100	100	100	31	31	31	48	100	100	100	
China	2,032	88	66	89	...	...	...	20	23	...	5889	96	97	95	
DPR Korea	33	...	...	...	...	...	...	10	...	...	66	...	...	...	
Hong Kong, China	...	...	...	...	...	...	...	...	...	...	24	100	100	100	
Indonesia	428[z]	...	...	...	...	...	...	13[z]	...	...	1802[z]	...	...	...	
Japan	113[z]	...	...	...	...	...	...	25[z]	...	...	408[z]	...	...	...	
Lao PDR	10	46	40	46	89	95	89	18	39	20	35	86	84	88	
Macao, China	0.9	100	100	100	98	100	98	16	16	16	2	100	100	100	
Malaysia	61	100	100	100	100	100	100	15	15	15	270	100	100	100	
Mongolia	...	...	...	...	...	...	...	...	...	...	9	100	100	100	
Myanmar	16[z]	...	...	...	48[z]	...	...	28[z]	...	58[z]	188[z]	...	...	...	
Philippines	...	...	...	...	...	...	...	...	...	...	461[y]	99[y]	98[y]	100[y]	
Republic of Korea	93[z]	...	...	...	...	...	...	14[z]	...	...	166[z]	...	...	...	
Singapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Thailand	...	...	...	...	...	...	...	...	...	...	301	100	100	100	
Timor-Leste	0.6	...	...	...	...	...	...	31	...	...		...	...	...	
Viet Nam	216	99	97	99	99	97	99	17	18	18	392	100	99	100	
Europe and Northern America															
Albania	4	76	.	76	...	...	...	18	24	...	10	75	59	79	
Andorra	0.2	100	100	100	100	100	100	13	13	13	0.4	100	100	100	
Austria	21	...	...	...	...	...	...	11	...	...	31	...	...	...	
Belarus	43	43	7	44	92	87	92	8	18	8	22	100	100	100	
Belgium	34[z]	...	...	...	...	...	...	13[z]	...	...	69[z]	...	...	...	
Bosnia and Herzegovina	...	...	...	...	...	...	...	...	...	...	9	...	...	...	
Bulgaria	19[z]	...	...	...	...	...	...	13[z]	...	...	15[z]	...	...	...	
Canada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Croatia	8	...	...	...	...	...	...	13	...	...	12	...	...	...	
Cyprus	2	...	...	...	...	...	...	13	...	...	5	...	...	...	
Czechia	26[y]	...	...	...	...	...	...	14[y]	...	...	26[y]	...	...	...	
Denmark	...	...	...	...	...	...	...	...	...	...	44[z]	...	...	...	
Estonia	...	...	...	...	...	...	...	...	...	...	7[y]	...	...	...	
Finland	17[z]	...	...	...	...	...	...	12[z]	...	...	26[z]	...	...	...	
France	126[y]	...	...	...	...	...	...	20[y]	...	...	229[y]	...	...	...	
Germany	282	...	...	...	...	...	...	8	...	...	236	...	...	...	
Greece	14[z]	...	...	...	...	...	...	12[z]	...	...	67[z]	...	...	...	
Hungary	26	...	...	...	...	...	...	12	...	...	36	...	...	...	
Iceland	3[y]	...	...	...	...	...	...	5[y]	...	...	3[y]	...	...	...	
Ireland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Italy	132	...	...	...	...	...	...	12	...	...	237	...	...	...	
Latvia	8	...	...	...	...	...	...	10	...	...	11	...	...	...	
Liechtenstein	0.1	...	...	...	...	...	...	8	...	...	0.3	...	...	...	
Lithuania	11	...	...	...	...	...	...	9	...	...	8	...	...	...	
Luxembourg	2[z]	...	...	...	...	...	...	10[z]	...	...	4[z]	...	...	...	
Malta	0.7	...	...	...	...	...	...	12	...	...	2	...	...	...	
Monaco	0.0	...	...	...	...	...	...	22	...	...	0.2	...	...	...	
Montenegro	...	...	...	...	...	...	...	...	...	...		...	...	...	
Netherlands	33	...	...	...	...	...	...	16	...	...	104	...	...	...	
Norway	...	...	...	...	...	...	...	...	...	...	49	...	...	...	
Poland	91	...	...	...	...	...	...	...	...	...	220	...	...	...	
Portugal	15	...	...	...	...	...	...	17	...	...	49	...	...	...	
Republic of Moldova	...	...	...	...	...	...	...	...	...	...	8	...	...	...	
Romania	35	...	...	...	...	...	...	16	...	...	50	...	...	...	
Russian Federation	...	...	...	...	...	...	...	...	...	...	289[z]	...	...	...	
San Marino	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Serbia	13	100	100	100	...	...	...	12	12	...	18	100	100	100	
Slovakia	13	...	...	...	...	...	...	12	...	...	14	...	...	...	

	PRIMARY EDUCATION						SECONDARY EDUCATION									
	Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]
	Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]					
	School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in
	2015			2015	2015	2015tt	2015	2015			2015			2015	2015	2015
	Total	Male	Female				Total (000)	Total	Male	Female	Total	Male	Female			
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	99	...	...	13	...	14	...	...	...	...	...	...	...	...	...	...
	...	...	...	9	...	...	38	...	...	...	...	...	...	7	...	...
	100	**100**	**100**	**19**	**19**	**19**	**252**	**100**	**100**	**100**	**100**	**100**	**100**	**7**	**7**	**7**
	...	...	...	26	35	...	52	74[y]	53[y]	78[y]	...	...	...	12	17[y]	...
	100	**100**	**100**	**22**	**23**	**22**	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	**20**	**21**	...	**375**	**95**	...	...	...	...	...	**10**	**11**	...
	82	78	83	10	10	12	5	96	95	96	91	89	91	9	9	10
	100	100	100	46	46	46	...	...	...	...	...	...	...	...	...	...
	...	...	...	16	17	...	6,234	91	90	92	...	...	...	14	15	...
	...	...	...	21	...	...	123	...	...	...	...	...	...	17	...	...
	96	95	97	14	14	14	30**	100**	100**	100**	97**	96**	97**	13**	13**	13
	...	...	...	17[z]	...	...	1,460[z]	...	...	...	...	...	...	15[z]	...	...
	...	...	...	16[z]	...	...	...	...	...	...	...	...	...	...	...	...
	98	99	98	24	28	25	34**	80**	...	...	99**	...	...	19**	23**	19
	96	94	97	14	14	15	3	100	100	100	87	86	88	11	11	13
	100	100	100	12	12	12	249	100	100	100	100	100	100	12	12	12
	100[z]	100[z]	100[z]	28	28	27[z]	21[z]	98[z]	93[z]	100[z]	100[z]	100[z]	100[z]	...	...	...
	100[z]	...	...	28[z]	...	28[z]	100[z]	...	...	...	94[z]	...	...	32[z]	...	34
	100[y]	100[y]	100[y]	31[y]	32[y]	31[y]	268[y]	100[y]	100[y]	100[y]	100[y]	100[y]	100[y]	27[y]	27[y]	27
	...	...	...	17[z]	...	...	240[z]	...	...	...	...	...	...	15[z]	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	17	17	17	240	100	100	100	100	100	100	28	28	28
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	19	19	19	...	...	...	...	...	...	...	...	...	...
	...	...	...	19	25	...	23	95	92	96	...	...	...	14	14	...
	100	100	100	10	10	10	0.5	100	100	100	100	100	100	8	8	8
	...	...	...	11	...	...	72	...	...	...	...	...	...	10	...	...
	99	99	99	18	18	18	77	99	99	99	96	95	96	8	8	9
	...	...	...	11[z]	...	...	128[z]	...	...	...	...	...	...	9[z]	...	...
	...	...	...	17	...	...	27	...	...	...	...	...	...	10	...	...
	...	...	...	18[z]	...	...	39[z]	...	...	...	...	...	...	13[z]	...	...
	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...
	...	...	...	14	...	...	51	...	...	...	...	...	...	7	...	...
	...	...	...	12	...	...	6	...	...	...	...	...	...	10	...	...
	...	...	...	19[y]	...	...	69[y]	...	...	...	...	...	...	12[y]	...	...
	...	...	...	11[z]	...	...	49[z]	...	...	...	...	...	...	11[z]	...	...
	...	...	...	11[y]	...	...	10[y]	...	...	...	...	...	...	8[y]	...	...
	...	...	...	13[z]	...	...	42[z]	...	...	...	...	...	...	13[z]	...	...
	...	...	...	18[y]	...	...	457[y]	...	...	...	...	...	...	13[y]	...	...
	...	...	...	12	...	...	586	...	...	...	...	...	...	12	...	...
	...	...	...	9[z]	...	...	80[z]	...	...	...	...	...	...	8[z]	...	...
	...	...	...	11	...	...	80	...	...	...	...	...	...	10	...	...
	...	...	...	10[y]	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	12	...	...	408	...	...	...	...	...	...	11	...	...
	...	...	...	11	...	...	15	...	...	...	...	...	...	8	...	...
	...	...	...	8	...	...	0.3	...	...	...	...	...	...	10	...	...
	...	...	...	13	...	...	33	...	...	...	...	...	...	8	...	...
	...	...	...	8[z]	...	...	5[z]	...	...	...	...	...	...	9[z]	...	...
	...	...	...	12	...	...	4	...	...	...	...	...	...	8	...	...
	...	...	...	13	...	...	0.4	...	...	...	...	...	...	8	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	12	...	...	112	...	...	...	...	...	...	14	...	...
	...	...	...	9	...	...	51	...	...	...	...	...	...	9	...	...
	...	...	...	...	...	...	273	...	...	...	...	...	...	9[z]	...	...
	...	...	...	13	...	...	78	...	...	...	...	...	...	10	...	...
	100	100	100	17	...	17	25	...	...	...	...	...	...	9	...	...
	...	...	...	19	...	...	129	...	...	...	...	...	...	12	...	...
	...	...	...	20[z]	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	15	15	...	65	100	100	100	...	...	...	8	8	...
	...	...	...	15	...	...	41	...	...	...	...	...	...	11	...	...

TABLE 13 *(CONTINUED)*

	PRE-PRIMARY EDUCATION										PRIMARY EDUCATION				
	Teaching staff	Teacher qualifications			Teacher training			Pupil/ teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			
	Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			
	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			
	2015	2015			2015			2015	2015	2015	2015	2015			
Country or territory	Total (000)	Total	Male	Female	Total	Male	Female				Total (000)	Total	Male	Female	
Slovenia	6[y]	...	...	...	...	...	...	9[y]	...	...	6[y]	...	...	...	
Spain	100	...	...	...	...	...	...	14	...	...	228	...	...	...	
Sweden	79	...	...	...	...	...	...	6	...	...	65	...	...	...	
Switzerland	14[z]	...	...	...	...	...	...	12[z]	...	...	48[z]	...	...	...	
TFYR Macedonia	...	...	...	...	...	...	...	...	...	...	7[z]	...	...	...	
Ukraine	...	...	...	...	...	...	...	...	...	...	100[z]	85[z]	82[z]	85[z]	
United Kingdom	74[z]	...	...	...	...	...	...	20[z]	...	...	272[z]	...	...	...	
United States	634[z]	...	...	...	...	...	...	14[z]	...	...	1688[z]	...	...	...	
Latin America and the Caribbean															
Anguilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Antigua and Barbuda	0.4	100	.	100	65	.	65	8	8	12	0.7	100	100	100	
Argentina	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Aruba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Bahamas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Barbados	0.3[z]	100[z]	100[z]	100[z]	...	...	...	17[z]	17[z]	...	1[z]	100[z]	100[z]	100[z]	
Belize	0.5	60	22	60	40	78	40	16	28	41	3	29	30	28	
Bermuda	0.0[z]	100[z]	100[z]	100[z]	100[z]	.[z]	100[z]	9[z]	9[z]	9[z]	0.4	100[z]	100[z]	100[z]	
Bolivia, P.S.	10	...	...	...	92	12	96	34	...	37	74	...	...	...	
Brazil	292[z]	...	...	...	...	...	...	17[z]	...	...	795[z]	...	...	...	
British Virgin Islands	0.1	...	...	...	...	...	...	10	...	...	0.3	94[z]	90[z]	94[z]	
Cayman Islands	...	...	...	...	...	...	...	...	...	...	0.3[y]	88[y]	94[y]	87[y]	
Chile	...	...	...	...	...	...	...	...	...	...	75[y]	...	...	...	
Colombia	50	95	92	95	97[z]	92[z]	97[z]	38	40	...	188	89	84	91	
Costa Rica	9	97	97	97	87	88	87	13	13	15	37	98	98	98	
Cuba	...	...	...	...	...	...	...	...	...	...	84	83	...	...	
Curaçao	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Dominica	0.2	...	...	...	20	.	20	11	...	57	0.5	65[z]	56[z]	66[z]	
Dominican Republic	16	82	82	82	...	...	...	18	22	...	71	87	87	87	
Ecuador	**32**	**19**	**28**	**18**	**81**	**72**	**82**	**22**	**117**	**27**	**80**	**19**	**22**	**18**	
El Salvador	7	100	100	100	94	74	95	32	32	34	25	100	100	100	
Grenada	0.3	100	.	100	35	.	35	12	12	33	1	100	100	100	
Guatemala	...	...	...	...	...	...	...	...	...	...	117	...	...	...	
Guyana	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Honduras	11	51[y]	41[y]	52[y]	51[y]	41[y]	52[y]	21	28[y]	28[y]	40	...	...	...	
Jamaica	10	25	18	25	75	82	75	13	52	17	12	93	89	94	
Mexico	191[z]	...	...	...	...	...	...	25[z]	...	...	534[z]	...	...	...	
Montserrat	...	...	...	...	...	...	...	...	...	...	0.0[z]	...	...	...	
Nicaragua	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Panama	5[z]	22[z]	13[z]	22[z]	...	...	...	20[z]	93[z]	...	19[z]	98[y]	100[y]	97[y]	
Paraguay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Peru	87	...	...	...	...	...	...	18	...	...	195	86	88	85	
Saint Kitts and Nevis	0.2	100	.	100	8[z]	.[z]	8[z]	11	11	151[z]	0.4	100	100	100	
Saint Lucia	0.4[z]	...	...	...	70[z]	.[z]	70[z]	10[z]	...	15[z]	1	...	...	...	
Saint-Martin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Saint Vincent/Grenadines	0.3	...	...	...	14[y]	-[y]	14[y]	10	...	50**[y]	0.9	18	10	19	
Sint-Maarten	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Suriname	0.8	94	80	95	6	20	5	24	25	422	5	94	88	95	
Trinidad and Tobago	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...	...	0.3[z]	...	...	...	
Uruguay	...	...	...	...	...	...	...	...	...	...	28[z]	100[z]	...	...	
Venezuela, B. R.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Northern Africa and Western Asia															
Algeria	...	...	...	...	...	...	...	...	...	...	165	100	100	100	
Bahrain	2	56	100	55	52	100	52	15	27	29	9	96	98	95	
Egypt	42[z]	90[z]	24[z]	91[z]	73[z]	13[z]	74[z]	28[z]	31[z]	38[z]	481[z]	85[z]	81[z]	88[z]	
Iraq	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Israel	...	...	...	...	...	...	...	...	...	...	71[z]	...	...	...	
Jordan	7	100	.	100	100	.	100	17	17	17	58[z]	100[z]	100[z]	100[z]	
Kuwait	9	74	-	74	75	-	76	9	12	12	30	77	52	80	
Lebanon	13[z]	...	...	...	93[y]	93[y]	93[y]	16[z]	...	15[y]	39[z]	...	...	...	
Libya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Morocco	...	...	...	...	...	...	...	...	...	...	156	100	100	100	
Oman	3	100	100	100	100	100	100	25	25	25	...	...	...	...	
Palestine	7	...	...	...	100	100	100	19	...	19	19	47[z]	40[z]	50[z]	
Qatar	3	100	100	100	...	...	...	14	14	...	11	100	100	100	
Saudi Arabia	31	100	.	100	100	.	100	11	11	11	353	100	100	100	
Sudan	29[y]	...	...	...	...	...	...	32[y]	...	...	...	...	...	...	

	PRIMARY EDUCATION						SECONDARY EDUCATION									
	Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]
	Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]					
	School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in
	2015			2015	2015	2015tt	2015	2015			2015			2015	2015	2015
	Total	Male	Female				Total (000)	Total	Male	Female	Total	Male	Female			
	...	...	...	17[g]	...	...	15[g]	...	...	...	...	...	...	10[g]	...	...
	...	...	...	13	...	...	276	...	...	...	...	...	...	12	...	...
	...	...	...	12	...	...	66	...	...	...	...	...	...	13	...	...
	...	...	...	10[z]	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	15[z]	...	...	18[z]	...	...	...	...	...	...	10[z]	...	...
	...	...	...	17[z]	20[z]	...	340	...	...	...	...	...	...	7	...	...
	...	...	...	17[z]	...	...	412	...	...	...	...	...	...	...	...	...
	...	...	...	15[z]	...	...	1,639[z]	...	...	...	...	...	...	15[z]	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	65	56	66	14	14	22	0.7	94	97	93	73	72	73	11	12	16
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100[z]	100[z]	100[z]	18[z]	18[z]	18[z]	...	...	...	...	...	...	...	...	...	...
	68	61	70	20	71	30	2	46	52	42	47	37	53	16	36	35
	100[z]	100[z]	100[z]	10	7[z]	7[z]	0.6	100[z]	100[z]	100[z]	100[z]	100[z]	100[z]	6	5[z]	5
	58	40	67	18	...	31	55	...	...	...	57	56	58	21	...	36
	...	...	...	21[z]	...	...	1,451[z]	...	...	...	...	...	...	17[z]	...	...
	92	86	92	12	13[z]	13	0.3	94[z]	92[z]	94[z]	89	100	83	8	8[z]	9
	88[g]	94[g]	87[g]	13[g]	15[g]	15[g]	...	...	...	...	...	...	...	...	...	...
	...	...	...	20[g]	...	...	75[g]	...	...	...	...	...	...	21[g]	...	...
	98[z]	97[z]	99[z]	24	27	25[z]	187	98	98	99	99[z]	99[z]	99[z]	26	26	25
	94	94	94	13	13	13	33	99	99	99	96	96	96	14	14	14
	100	100	100	9	11	9	91	82	...	...	100	100	100	9	11	9
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	64	53	66	14	22[z]	22	0.5	46[z]	42[z]	48[z]	45	40	47	11	...	24
	...	...	...	18	21	...	42	83	82	83	...	...	...	22	27	...
	81	**78**	**82**	**25**	**134**	**31**	**86**	**26**	**31**	**22**	**74**	**69**	**78**	**22**	**86**	**30**
	96	93	96	30	30	31	19	100	100	100	92	90	93	31	31	34
	64	59	65	17	17	27	0.8	100	100	100	42	37	45	12	12	28
	...	...	...	20	...	...	111	...	...	...	...	...	...	11	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	29	...	...	40	...	...	...	...	...	...	16	...	...
	93	89	94	22	23	23	13	15	21	12	85	79	88	16	111	19
	...	...	...	27[z]	...	...	806[z]	...	...	...	...	...	...	16[z]	...	...
	...	...	...	11[z]	...	...	0.03[z]	...	...	...	...	...	...	13[z]	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	83[z]	99[z]	79[z]	22[z]	23[g]	26[z]	23[z]	88[z]	88[z]	89[z]	96[z]	95[z]	96[z]	14[z]	15[z]	14
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	97	...	...	18	21	19	190	78	77	79	85	84	86	14	18	17
	72	62	73	15	15	21	0.5	100	100	100	60	54	62	8	8	14
	79[z]	73[z]	80[z]	15	...	18[z]	1	...	...	...	71[z]	61[z]	76[z]	12	...	18
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	84	77	86	15	84	18	0.7	50	45	53	58	55	60	15	30	26
	...	...	...	...	...	...	0.4[z]	93[z]	97[z]	90[z]	...	...	...	8[z]	8[z]	...
	6	12	5	14	15	249	4	79	74	80	21	26	20	13	17	62
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	89[z]	...	...	9[z]	...	10[z]	0.2	98	...	...	98	...	...	10	10	10
	100[z]	...	...	11[z]	11[z]	11[z]	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	24	24	24	...	...	...	...	...	...	...	...	...	...
	82	80	83	12	12	14	9	97	98	96	83	81	85	10	10	12
	73[z]	69[z]	75[z]	23[z]	27[z]	32[z]	572[z]	85[z]	83[z]	88[z]	63[z]	59[z]	68[z]	14[z]	17[z]	23
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	12[z]	...	...	62[z]	...	...	...	...	...	...	12[z]	...	...
	100[z]	100[z]	100[z]	17[z]	17[z]	17[z]	51[z]	100[z]	100[z]	100[z]	100[z]	100[z]	100[z]	15[z]	15[z]	15
	79	53	82	9	11	11	40	...	...	...	...	...	...	7	...	...
	97[z]	96[z]	97[z]	12[z]	...	13[z]	48[z]	...	...	...	99[z]	98[z]	99[z]	8[z]	...	8
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	26	26	26	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	24	51[z]	24	36	28[z]	24[z]	31[z]	100	100	100	20	71[z]	20
	...	...	...	12	12	...	9	100	100	100	...	...	...	11	11	...
	100	100	100	11	11	11	312[z]	100[z]	100[z]	100[z]	100[z]	100[z]	100[z]	11**,[z]	11**,[z]	11
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE 13 *(CONTINUED)*

	PRE-PRIMARY EDUCATION										PRIMARY EDUCATION				
	Teaching staff	Teacher qualifications			Teacher training			Pupil/ teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			
	Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			
	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			
	2015	2015			2015			2015	2015	2015	2015	2015			
Country or territory	**Total (000)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**				**Total (000)**	**Total**	**Male**	**Female**	
Syrian Arab Republic	5[y]	47[y]	92[y]	46[y]	35[y]	-[y]	35[y]	16[y]	...	46[y]	...	...	...	...	
Tunisia	15	100	100	99	100	100	100	16	16	16	71	97	98	96	
Turkey	63[z]	...	...	...	...	...	...	17[z]	...	...	288[z]	...	...	...	
United Arab Emirates	7	100	100	100	100	100	100	23	23	23	20	100	100	100	
Yemen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
The Pacific															
Australia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cook Islands	0.03	84	.	84	84	.	84	17	20	20	0.1	100	110	99	
Fiji	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kiribati	...	...	...	...	...	...	...	...	...	...	0.6[z]	97[z]	95[z]	97[z]	
Marshall Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Micronesia, F. S.	...	...	...	...	...	...	...	...	126	174	0.7**	...	...	...	
Nauru	0.03[z]	93[z]	.[z]	93[z]	...	...	...	33[z]	35[z]	...	0.0[z]	50[z]	100[z]	46[z]	
New Zealand	13[z]	...	...	...	...	...	...	9[z]	...	...	25[z]	...	...	...	
Niue	0.01	100	.	100	100	.	100	5	5	5	0.01	100	.	100	
Palau	0.03[z]	100[z]	.[z]	100[z]	...	...	...	18[z]	18[z]	...	**0.1**	**100**	**100**	**100**	
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Samoa	0.3	100	100	100	100	100	100	12	12	12	...	...	...	...	
Solomon Islands	2	68[y]	68[y]	68[y]	59[z]	59[z]	60[z]	24	50[y]	56[z]	4	64	65	61	
Tokelau	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Tonga	0.2[z]	...	...	...	...	...	...	12[z]	...	...	0.8[z]	94[z]	96[z]	93[z]	
Tuvalu	0.1	48	-	50	75[z]	.[z]	75[z]	11	22	17[z]	0.1	62	475	48	
Vanuatu	0.9	52	54	52	46	46	46	16	30	34	2	72	74	70	
Southern Asia															
Afghanistan	...	...	...	...	...	...	...	...	...	...	143	...	...	...	
Bangladesh	...	...	...	...	...	...	...	...	...	...	528	48	47	48	
Bhutan	**0.6**	**100**	**100**	**100**	**100**	**100**	**100**	**12**	12	**12**	**3**	**100**	**100**	**100**	
India	461	...	...	...	...	...	...	20	...	...	4399	...	...	...	
Iran, Islamic Republic of	...	...	...	...	...	...	...	...	...	...	286	100	100	100	
Maldives	**1**	73[z]	-[z]	73[z]	73[z]	-[z]	73[z]	**16**	23[z]	23[z]	**4**	86[z]	88[z]	85[z]	
Nepal	**47**	**91**	**85**	**92**	**88**	**52**	**92**	**21**	23	**23**	**190**	**97**	**96**	**97**	
Pakistan	...	...	...	...	...	...	...	...	...	...	428	...	...	...	
Sri Lanka	...	...	...	...	...	...	...	...	...	...	77	85	88	85	
Sub-Saharan Africa															
Angola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Benin	6	100	100	100	...	...	...	26	26	...	50	100	100	100	
Botswana	2**,[y]	55**,[y]	56**,[y]	55**,[y]	55**,[y]	56**,[y]	55**,[y]	12**,[y]	21**,[y]	21**,[y]	15[y]	99[y]	98[y]	99[y]	
Burkina Faso	3	72	17	83	72	17	83	22	31	31	64	85	82	89	
Burundi	3	69[z]	37[z]	75[z]	100	100	100	34	51[z]	34	48	100	100	100	
Cabo Verde	1	49[z]	.[z]	49[z]	49[z]	.[z]	49[z]	19	36[z]	36[z]	3	91[z]	91[z]	91[z]	
Cameroon	25	63	52	63	54	47	54	21	33	38	105	76	80	73	
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Chad	0.4[y]	...	...	...	52[y]	49[y]	53[y]	29[y]	...	56[y]	37[y]	...	...	...	
Comoros	...	...	...	...	...	...	...	...	...	...	4[y]	75[y]	73[y]	77[y]	
Congo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Côte d'Ivoire	7	100	100	100	100	100	100	22	22	22	80	100	100	100	
D. R. Congo	13[z]	100[z]	100[z]	100[z]	20[z]	8[z]	21[z]	25[z]	25[z]	121[z]	383[z]	100[z]	100[z]	100[z]	
Djibouti	**0.1**	**100**	**100**	**100**	...	...	...	**29**	**29**	...	**2**	**100**	100	100	
Equatorial Guinea	2	8	11	7	89	86	89	17	214	19	4	61	44	83	
Eritrea	1	50[y]	35[y]	51[y]	42	29	42	29	67[y]	69	8	14	15	13	
Ethiopia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gabon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gambia	3	70	72	67	70	72	67	33	48	48	**7**	86	85	87	
Ghana	**54**	46	43	46	**48**	**45**	**48**	**33**	75	**69**	**143**	55	48	65	
Guinea	...	...	...	...	...	...	...	...	...	...	38[z]	71[z]	75[z]	61[z]	
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kenya	107	82**	90**	80**	82**	90**	80**	30	36**	36**	267**	...	...	...	
Lesotho	3	100	100	100	100	100	100	17	17	17	11	79	71	82	
Liberia	12	38	31	45	35	30	40	53	142	154	22	48	47	58	
Madagascar	15	87	84	87	13	16	13	25	28	186	116	99	99	99	
Malawi	32	100	100	100	...	...	...	42	42	...	60**	88**	88**	88**	
Mali	5	...	...	...	...	...	...	21	...	...	52	...	...	...	
Mauritania	2	...	...	...	100[z]	100[z]	100[z]	19	...	7[z]	18	...	...	...	
Mauritius	2**	100**	100**	100**	100**	100**	100**	14**	14**	14**	5	100	100	100	
Mozambique	...	...	...	...	...	...	...	...	...	...	108	100	100	100	
Namibia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Niger	6	100[z]	100[z]	100[z]	...	...	...	27	28[z]	...	67	99	99	99	

	PRIMARY EDUCATION						SECONDARY EDUCATION									
	Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]
	Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]					
	School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in
	2015			2015	2015	2015tt	2015	2015			2015			2015	2015	2015
	Total	Male	Female				Total (000)	Total	Male	Female	Total	Male	Female			
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	16	16	16	...	...	...	...	...	...	...	...	...	...
	...	...	...	19[z]	...	...	559[z]	...	...	...	...	...	...	19[z]	...	...
	100	100	100	24	24	24	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	...	...	17	17	17	0.1	98	100	97	98	100	97	14	14	14
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	26[z]	27	49	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	20**	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	39[z]	79[z]	...	0.05[z]	89[z]	100[z]	81[z]	...	...	...	23[z]	26[z]	...
	...	...	...	14[z]	...	...	35[z]	...	...	...	...	...	...	14[z]	...	...
	100	.	100	17	17	17	0.02	100	100	100	100	100	100	8	8	8
	34	**20**	**35**	**14**	**14**	**42**	**0.1**	**100**	**100**	**100**	**94**	**94**	**95**	**19**	**19**	**20**
	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	59	61	57	26	40	43	2	84	84	84	76	75	79	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	97[z]	98[z]	97[z]	22[z]	23[z]	23[z]	1[z]	95[z]	95[z]	95[z]	57[z]	55[z]	59[z]	13[z]	14[z]	23
	...	...	...	13	20	...	0.2	60	153	40	...	...	...	6	10	...
	28	26	29	27	37	95	1	79	78	79	21	22	21	21	26	97
	...	...	...	44	...	...	72	...	...	...	...	...	...	38	...	...
	48	47	48	36	76	76	378[y]	98[y]	99[y]	97[y]	58[y]	56[y]	67[y]	35[y]	36[y]	61
	100	**100**	**100**	**38**	**38**	**38**	5[z]	...	...	...	...	...	...	14[z]	...	...
	77[z]	77[z]	78[z]	31	...	41[z]	4,093	...	...	...	...	...	...	32	...	...
	100	100	100	27	27	27	336	96	96	96	100	100	100	17	18	17
	86[z]	88[z]	85[z]	**10**	14[z]	14[z]	...	...	...	...	...	...	...	...	...	...
	97	**97**	**97**	**22**	**23**	**23**	**113****	**86****	...	...	**90****	...	...	**29****	**33****	**32**
	82	92	73	46	...	56	572**	...	...	...	...	...	...	21**	...	...
	71	74	71	23	27	32	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	69	70	66	45	45	65	93	59[z]	58[z]	65[z]	20	20	22	10	17[z]	52
	99[y]	98[y]	99[y]	23[y]	23[y]	23[y]	...	...	...	...	...	...	...	...	...	...
	85	82	89	42	49	49	38	96	96	97	60	60	60	25	26	42
	96[z]	95[z]	96[z]	43	43	43	19	71	73	64	100	100	100	36	50	36
	100	100	100	22	25[z]	24[z]	4	71[z]	67[z]	76[z]	87[z]	84[z]	91[z]	16	23[z]	18
	58	31	81	41	54	71	106	54[z]	49[z]	63[z]	53	48	63	20	38[z]	37
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	65[y]	...	...	62[y]	...	96[y]	15[y]	...	...	...	53[y]	...	...	...	...	...
	75[y]	73[y]	77[y]	28[y]	37[y]	37[y]	8[z]	94[z]	94[z]	88[z]	...	...	...	9[z]	9[z]	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	100	100	100	42	42	42	60	100	100	100	100	100	100	27	27	27
	95[z]	94[z]	95[z]	35[z]	35[z]	37[z]	301[z]	100[z]	100[z]	100[z]	24[z]	24[z]	22[z]	15[z]	15[z]	62
	100	100	100	**31**	**31**	33	**3**	**100**	**100**	**100**	100	100	100	**24**	**24**	23
	37	35	41	23	38	62	...	...	...	...	...	...	...	...	...	...
	61	58	67	43	303	71	6	83	82	87	83[y]	82[y]	87[y]	39	47	46
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	93	**93**	**92**	**42**	43	**45**	...	...	...	...	...	...	...	...	...	...
	56	**50**	**65**	**31**	57	**55**	**148**	73	70	82	74	71	83	**17**	23	**22**
	75[z]	73[z]	80[z]	46[z]	64[z]	61[z]	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	31**	...	...	199**	...	...	...	...	...	...	...	...	...
	79	71	82	33	42	42	6	100	100	100	100	100	100	24	24	24
	47	46	53	30	63	65	12	64	64	70	62	62	61	18	29	30
	15	11	18	41	41	273	65[z]	91[z]	90[z]	92[z]	21[z]	19[z]	22[z]	23[z]	25[z]	112
	91**[,y]	90**[,y]	91**[,y]	70**	79**	76**[,y]	25**	73**	67**	87**	66**[,y]	61**[,y]	78**[,y]	41**	56**	64
	...	...	...	43	...	...	49	...	...	...	...	...	...	19	...	...
	91[z]	91[z]	92[z]	36	...	38[z]	6	...	...	...	99	99	100	34	...	34
	100	100	100	19	19	19	10	88	79	93	31	28	33	13	15	41
	93	92	95	55**	55**	59**	27**	91**	91**	90**	85**	85**	86**	40**	44**	47
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	56	51	60	37	37	66	21	100	100	100	15	15	15	28	28	186

TABLE 13 *(CONTINUED)*

	PRE-PRIMARY EDUCATION									PRIMARY EDUCATION			
	Teaching staff	Teacher qualifications			Teacher training					Teaching staff	Teacher qualifications		
	Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]			Pupil/ teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Number of classroom teachers	Qualified classroom teachers (%)[1]		
	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in		
	2015	2015			2015			2015	2015	2015	2015	2015		
Country or territory	Total (000)	Total	Male	Female	Total	Male	Female				Total (000)	Total	Male	Female
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rwanda	5	100	100	100	49	51	48	34	34	70	42	100	100	100
Sao Tome and Principe	0.7	-	-	-	28	24	29	13	...	46	**1**	**7**	**9**	**6**
Senegal	12	100	100	100	26	33	24	17	17	65	62	100	100	100
Seychelles	0.2	81	.	81	81	.	81	18	22	22	1	84	78	84
Sierra Leone	3	38[y]	26[y]	41[y]	54	44	56	19	49[y]	36	74	52[y]	47[y]	64[y]
Somalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Africa	26**[,y]	...	...	...	...	...	...	32**[, y]	...	...	214**[,z]	...	...	...
South Sudan	3	87	84	90	...	...	...	35	40	...	27**	84**	84**	84**
Swaziland	...	...	...	...	...	...	...	...	...	...	9[z]	69[z]	66[z]	71[z]
Togo	4	28	41	28	63	65	63	31	108	49	34	33	32	35
Uganda	17	87	76	89	...	...	...	29	33	...	193	84	84	83
United Republic of Tanzania	...	...	...	...	...	...	...	...	...	...	191[z]	97[z]	97[z]	98[z]
Zambia	...	...	...	...	...	...	...	...	...	...	64**[,y]	66**[,y]	...	...
Zimbabwe	10[y]	25[y]	41[y]	24[y]	27[y]	46[y]	26[y]	37[y]	150[y]	138[y]	73[y]	74[y]	71[y]	77[y]
	Sum	Median			Weighted average			Weighted average	Median	Median	Sum	Median		
World	9,328**	...	...	...	...	...	...	18**	...	...	30,878	...	...	...
Caucasus and Central Asia	195**	82	...	...	93**	...	...	11**	15	12	333	97	...	...
Eastern and South-eastern Asia	3,139	...	...	...	...	...	...	19	...	...	10,083	100	100	100
Eastern Asia	2,285	...	...	...	...	...	...	20	...	...	6,560	100	100	100
South-eastern Asia	854**	...	...	...	89	88	89	16**	...	25	3,523**	100	100	100
Europe and Northern America	2,778**	...	...	...	...	...	...	12**	...	...	4,528**	...	...	...
Latin America and the Caribbean	1,031**	...	...	...	...	...	...	20**	...	...	2,990**	...	...	...
Caribbean	77**[,y]	...	...	...	...	...	...	18**[,y]	...	...	271	94	...	...
Latin America	946**	...	...	...	...	...	...	21**	...	...	2,719**	...	...	...
Northern Africa and Western Asia	347**	100	50	100	81**	85**	80**	20**	...	19	2,635**	100	100	100
Northern Africa	153**	...	...	...	75**	86**	73**	25**	...	...	1,147**	98	99	98
Western Asia	193**	100	96	100	85**	85**	77**	16**	17	19	1,488**	100	100	100
Pacific	...	...	...	...	...	...	...	...	22	...	190**[,y]	94	96	93
Southern Asia	1,052**	...	...	...	...	...	...	20**	...	...	6,055	91	92	91
Sub-Saharan Africa	732**	81	76	81	36**	29**	39**	30**	33	38	4,062	85	84	87
Countries with low income	389**	87	80	88	40**	21**	44**	28**	37	...	2,588**	87	87	89
Countries with middle income	2,515**	...	...	...	...	...	...	20**	...	...	22,620	94	96	93
Lower middle	6,577**	...	...	...	...	...	...	19**	...	32	11,690	89	88	90
Upper middle	4,062	...	...	...	...	...	...	18	...	...	10,930	96	97	95
Countries with high income	2,362**	...	...	...	...	...	...	14**	...	...	5,670**	...	...	...

Sources: UIS database; Global Education Monitoring Report team calculations for pupil/qualified and pupil/trained teacher ratios.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. Qualified teachers are defined according to national standards.

2. Trained teachers are defined as those who have received at least the minimum organized and recognized pre-service and in-service pedagogical training required to teach at a given level of education. Data on trained classroom teachers are not collected for countries whose education statistics are gathered through the OECD, Eurostat or the World Education Indicators questionnaires.

3. Based on headcounts of pupils and teachers.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of the population of the region or other country grouping).

(-) Magnitude nil or negligible.

(.) The category is not applicable or does not exist.

(...) No data are available.

	PRIMARY EDUCATION						SECONDARY EDUCATION									
	Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]	Teaching staff	Teacher qualifications			Teacher training			Pupil/teacher ratio[3]	Pupil/qualified teacher ratio[3]	Pupil/trained teacher ratio[3]
	Trained classroom teachers (%)[2]						Number of classroom teachers	Qualified classroom teachers (%)[1]			Trained classroom teachers (%)[2]					
	School year ending in			School year ending in	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in	School year ending in	School year ending in
	2015			2015	2015	2015tt	2015	2015			2015			2015	2015	2015
	Total	Male	Female				Total (000)	Total	Male	Female	Total	Male	Female			
	...	...	...	...	58**,ɣ	..	...	...	...	...	...	...	...	...	...	...
	94	93	94	58	58	62	30	77	80	71	52	54	47	19	25	37
	31	**25**	**36**	**32**	**449**	**103**	**0.9**	**47**	**44**	**53**	36	26	57	**25**	**53**	57
	68	70	65	32	32	47	56	76	84	54	48	51	41	20	27	42
	84	78	84	14	16	16	0.6	99	99	99	99	99	99	12	12	12
	29	27	37	18	67ɣ	63	40	57ɣ	56ɣ	67ɣ	38	38	44	11	36ɣ	29
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	34**,ƶ	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	47**	55**	...	6**	64**	62**	73**	...	...	...	27**	43**	...
	82ƶ	79ƶ	83ƶ	28ƶ	40ƶ	34ƶ	6ƶ	75ƶ	76ƶ	73ƶ	76ɣ	78ɣ	75ɣ	16ƶ	21ƶ	21
	73	74	70	42	128	57	...	...	...	...	...	...	...	...	...	...
	...	...	...	46ɣ	...	...	64ƶ	85ƶ	84ƶ	86ƶ	...	...	...	...	...	...
	99ɣ	99ɣ	99ɣ	43ƶ	44ƶ	44ɣ	...	...	...	...	...	...	...	...	...	...
	...	...	...	48**,ɣ	73ɣ	...	...	...	...	...	...	...	...	...	...	...
	86ɣ	84ɣ	88ɣ	36ɣ	49ɣ	42ɣ	43ɣ	49ɣ	45ɣ	54ɣ	73ɣ	71ɣ	75ɣ	22ɣ	46ɣ	31
	Weighted average			Weighted average	Median	Median	Sum	Median			Weighted average			Weighted average	Median	Median
	86**	82**	89**	23	...	...	33,051**	...	...		...	...	...	18**	...	...
	97**	...	...	17	22	...	895	22	...		...	...	...	10	...	...
	...	...	...	17	17	19	9,946	17	19		...	...	...	15	...	...
	...	...	...	16	16	...	7,251	16	...		...	...	...	14	...	...
	97**	...	...	20**	19	22	2,695**	19	22		97**			19**	...	23
	...	...	...	14	...	...	7,103	...	...		...	...	...	12	...	...
	...	...	...	22**	...	21	3,826**	...	21		...	...	...	16**	...	...
	70**	55**	77**	19	16	18	176	16	18		88**	89**	87**	14	...	...
	...	...	...	22**	...	28	3,649**	...	28		...	...	...	17**	...	...
	85**	85**	86**	19**	17	17	2,715**	17	17		75**	74**	76**	16	...	...
	85**	83**	86**	22**	25	25	1,166**	25	25		72**	70**	74**	16**	...	...
	86**	86**	85**	17**	12	14	1,549**	12	14		...	...	...	15**	...	...
	...	...	...	22**,ɣ	23	...	...	23	...		...	...	...	...	...	...
	77**	77**	76**	33	27	35	5,757	27	35		...	...	...	30	...	...
	62**	59**	65**	39**	44	49	2,607**	44	49		45**	44**	47**	21**	26	37
	68**	67**	70**	41**	49	59	1,533**	49	59		49**	47**	55**	23**	29	44
	85**	82**	87**	24	25	27	24,175	25	27		...	...	...	19	...	...
	79**	77**	81**	28	31	33	10,821	31	33		...	...	...	23	...	...
	...	...	...	19	20	19	13,354**	20	19		...	...	...	15**	...	...
	...	...	...	14**	...	...	7,343**	...	...		...	...	...	13**	...	...

TABLE 14: SDG 4, Means of implementation 4.c – Teacher motivation and instructional time in pre-primary, primary and secondary education

By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

	TEACHER MOTIVATION												
	Percentage of non-permanent teachers (%)			Teacher attrition rate (%)									
	Pre-primary education	Primary education	Secondary education	Pre-primary education			Primary education			Secondary education			
	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in			
	2015	2015	2015	2015			2015			2015			
Country or territory	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Caucasus and Central Asia													
Armenia	...	-	...	...	...	...	...	...	...	...	...	...	
Azerbaijan	-	-	-	...	...	...	...	...	...	...	...	...	
Georgia	...	...	...	...	...	...	...	...	...	...	...	...	
Kazakhstan	-	-	-	...	...	...	**7.9**	...	...	...	...	...	
Kyrgyzstan	...	...	...	...	...	...	...	...	...	...	...	...	
Tajikistan	...	...	...	...	...	...	...	...	...	...	...	...	
Turkmenistan	...	...	...	...	...	...	...	...	...	...	...	...	
Uzbekistan	...	...	...	**0.9**	...	...	**2.0**	**8.3**	**1.4**	**3.2**	...	...	
Eastern and South-eastern Asia													
Brunei Darussalam	...	...	...	...	...	...	...	...	...	...	...	...	
Cambodia	...	...	...	...	...	...	...	...	...	...	...	...	
China	...	...	...	...	...	...	2.7[2]	...	...	...	...	...	
DPR Korea	...	...	...	...	...	...	...	...	...	...	...	...	
Hong Kong, China	-	9	11	...	...	...	0.8	0.4	0.9	3.0**	3.4**	2.7**	
Indonesia	44[2]	34[2]	30[2]	...	...	...	6.9[2]	...	...	...	...	...	
Japan	...	...	...	...	...	...	...	...	...	...	...	...	
Lao PDR	16	28	...	...	...	...	1.9	2.0	1.7	...	...	...	
Macao, China	...	...	...	...	...	...	0.8	...	...	3.2	4.4	2.3	
Malaysia	18	0.2	6	...	...	...	6.7	5.5	7.2	...	...	...	
Mongolia	-	-	-	...	...	...	0.6	...	...	...	...	...	
Myanmar	...	...	...	...	...	...	...	...	...	...	...	...	
Philippines	...	...	...	...	...	...	...	...	...	...	...	...	
Republic of Korea	...	...	...	...	...	...	...	...	...	...	...	...	
Singapore	...	...	...	...	...	...	...	...	...	...	...	...	
Thailand	...	...	...	...	...	...	...	...	...	...	...	...	
Timor-Leste	...	...	...	...	...	...	...	...	...	...	...	...	
Viet Nam	38[2]	8[2]	...	...	...	...	...	...	...	...	...	...	
Europe and Northern America													
Albania	...	...	...	...	...	...	...	...	...	...	...	...	
Andorra	...	...	...	3.4	10.5	2.5	17.3	24.1	15.6	16.2	14.3	17.4	
Austria	...	...	...	...	...	...	...	...	...	...	...	...	
Belarus	...	...	...	...	...	...	...	...	...	...	...	...	
Belgium	...	...	...	...	...	...	...	...	...	...	...	...	
Bosnia and Herzegovina	...	...	...	...	...	...	...	...	...	...	...	...	
Bulgaria	...	...	...	...	...	...	...	...	...	...	...	...	
Canada	...	...	...	...	...	...	...	...	...	...	...	...	
Croatia	...	...	...	...	...	...	...	...	...	...	...	...	
Cyprus	...	...	...	...	...	...	...	...	...	...	...	...	
Czechia	...	...	...	...	...	...	...	...	...	...	...	...	
Denmark	...	...	...	...	...	...	...	...	...	...	...	...	
Estonia	...	...	...	...	...	...	...	...	...	...	...	...	
Finland	...	...	...	...	...	...	...	...	...	...	...	...	
France	...	...	...	...	...	...	...	...	...	...	...	...	
Germany	...	...	...	...	...	...	...	...	...	...	...	...	
Greece	...	...	...	...	...	...	...	...	...	...	...	...	
Hungary	...	...	...	...	...	...	...	...	...	...	...	...	
Iceland	...	...	...	...	...	...	...	...	...	...	...	...	
Ireland	...	...	...	...	...	...	...	...	...	...	...	...	
Italy	...	...	...	...	...	...	...	...	...	...	...	...	
Latvia	...	...	...	...	...	...	...	...	...	...	...	...	
Liechtenstein	...	...	...	...	...	...	...	...	...	...	...	...	
Lithuania	...	...	...	...	...	...	...	...	...	...	...	...	
Luxembourg	...	...	...	...	...	...	...	...	...	...	...	...	
Malta	...	...	...	...	...	...	...	...	...	...	...	...	
Monaco	...	...	...	...	...	...	...	...	...	...	...	...	
Montenegro	...	...	...	...	...	...	...	...	...	...	...	...	
Netherlands	...	...	...	...	...	...	...	...	...	...	...	...	
Norway	...	...	...	...	...	...	...	...	...	...	...	...	
Poland	...	...	...	...	...	...	...	...	...	...	...	...	
Portugal	...	...	...	...	...	...	...	...	...	...	...	...	
Republic of Moldova	-[2]	-[2]	-[2]	...	...	...	...	...	...	...	...	...	
Romania	...	...	...	...	...	...	...	...	...	...	...	...	
Russian Federation	...	...	...	...	...	...	...	...	...	...	...	...	
San Marino	...	...	...	...	...	...	...	...	...	...	...	...	
Serbia	...	...	...	...	...	...	...	...	...	...	...	...	
Slovakia	...	...	...	...	...	...	...	...	...	...	...	...	

	Teacher salary				INSTRUCTIONAL TIME		
	Teacher salary relative to other professionals with equivalent academic qualification[1, 2]				Number of intended instructional hours per year		
						Secondary education	
	Pre-primary	Primary	Upper secondary education	Lower secondary education	Primary education	Lower secondary	Upper secondary
	School year ending in		School year ending in		School year ending in	School year ending in	School year ending in
	2015	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total	Total	Total	Total
	...	...	...	...	2347[g]	3173[g]	2607
	...	...	...	...	2234[z]	3932[z]	1767
	...	...	...	...	3359[g]	2265[g]	2188
	...	...	...	...	2530[z]	4100[z]	1838
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	4163[z]	1440[z]	2941
	...	...	...	...	4104[z]	3015[z]	2925
	...	...	...	...	3313[g]	2485[g]	2835
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3511[g]	2176[g]	2958
	...	...	...	...	...	...	...
	...	...	...	...	3168[g]	3355[g]	2720
	...	...	...	...	...	...	...
	...	...	...	...	5152[z]	2870[z]	...
	...	...	...	...	2453[g]	2394[g]	2394
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5273[g]	1866[g]	1858
	...	...	...	...	5580[z]	3348[z]	3348
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5775[g]	4480[g]	2142
	...	0.75	0.86	0.94	...	...	...
	...	...	...	...	1568[z]	2898[z]	1176
	...	...	...	...	...	...	...
	...	...	...	...	2683[g]	2999[g]	3006
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	0.48	0.56	0.56	0.58	...	...	...
	0.73	0.87	0.88	1.00	...	...	...
	0.59	0.88	0.88	0.88	...	...	...
	0.65	0.89	0.98	1.10	...	...	...
	0.77	0.76	0.90	0.99	...	...	...
	...	0.89	0.98	1.05	...	...	...
	0.96	0.96	1.07	1.07	...	...	...
	0.66	0.71	0.71	0.73	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	0.65	0.65	0.69	0.72	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	1.08	1.08	1.23	1.23	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	0.68	0.68	0.85	0.85	...	...	...
	0.62	0.70	0.70	0.74	...	...	...
	0.71	0.82	0.83	0.81	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	2219[z]	3621[z]	1581
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	4980[z]	2667[z]	4556
	...	...	...	...	...	...	...
	0.45	0.61	0.61	0.61	...	...	...

	TEACHER MOTIVATION												
	Percentage of non-permanent teachers (%)			Teacher attrition rate (%)									
	Pre-primary education	Primary education	Secondary education	Pre-primary education			Primary education			Secondary education			
	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in			
	2015	2015	2015	2015			2015			2015			
Country or territory	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Slovenia	...	...	...	...	...	...	...	...	...	...	...	...	
Spain	...	...	...	...	...	...	...	...	...	...	...	...	
Sweden	...	...	...	...	...	...	...	...	...	...	...	...	
Switzerland	...	...	...	...	...	...	...	...	...	...	...	...	
TFYR Macedonia	...	...	...	...	...	...	...	...	...	...	...	...	
Ukraine	...	...	...	...	...	...	...	...	...	...	...	...	
United Kingdom	...	...	...	...	...	...	...	...	...	...	...	...	
United States	...	...	...	...	...	...	...	...	...	...	...	...	
Latin America and the Caribbean													
Anguilla	...	...	...	...	...	...	...	...	...	...	...	...	
Antigua and Barbuda	...	...	...	...	...	...	...	...	...	...	...	...	
Argentina	...	...	...	...	...	...	...	...	...	...	...	...	
Aruba	...	...	...	...	...	...	...	...	...	...	...	...	
Bahamas	...	...	...	...	...	...	...	...	...	...	...	...	
Barbados	...	...	...	...	...	...	...	...	...	...	...	...	
Belize	...	...	...	...	...	...	...	...	...	...	...	...	
Bermuda	...	...	...	...	...	...	...	...	...	...	...	...	
Bolivia, P.S.	-	-	-	4.4	6.7	4.3	5.4	5.8	5.2	4.7	5.4	3.9	
Brazil	...	...	...	...	...	...	...	...	...	...	...	...	
British Virgin Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Cayman Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Chile	...	...	...	...	...	...	...	...	...	...	...	...	
Colombia	0.1	0.5	0.7	4.9	...	...	7.0	5.4	7.5	12.8	11.1	14.3	
Costa Rica	32	30	46	3.6[2]	2.0[2]	3.7[2]	4.3[2]	5.3[2]	4.0[2]	7.6[2]	7.5[2]	7.7[2]	
Cuba	...	...	...	...	...	...	...	...	...	...	...	...	
Curaçao	...	...	...	...	...	...	...	...	...	...	...	...	
Dominica	...	...	...	...	...	...	...	...	...	...	...	...	
Dominican Republic	-[2]	-[2]	-[2]	...	...	...	...	...	...	...	...	...	
Ecuador	**43**	**34**	**34**	**9.6**	**13.3**	**9.4**	**14.6**	**15.2**	**14.4**	**7.7**	**7.7**	**7.8**	
El Salvador	...	...	...	...	...	...	...	...	...	...	...	...	
Grenada	...	...	...	...	...	...	...	...	...	...	...	...	
Guatemala	...	...	...	...	...	...	...	...	...	...	...	...	
Guyana	...	...	...	...	...	...	...	...	...	...	...	...	
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	
Honduras	3	6	14	...	...	...	56.5	62.7	53.8	49.7	47.6	51.0	
Jamaica	2	11	24	...	...	...	6.3	7.8	6.1	11.1	12.5	10.4	
Mexico	...	...	...	...	...	...	...	...	...	...	...	...	
Montserrat	...	...	...	...	...	...	...	...	...	...	...	...	
Nicaragua	...	...	...	...	...	...	...	...	...	...	...	...	
Panama	...	...	...	...	...	...	...	...	...	...	...	...	
Paraguay	...	...	...	...	...	...	...	...	...	...	...	...	
Peru	72	47	60	...	...	...	17.7	14.6	19.2	19.8	20.7	18.5	
Saint Kitts and Nevis	...	...	...	...	...	...	14.5	22.5	13.6	5.4	10.5	3.1	
Saint Lucia	...	...	...	...	...	...	...	...	...	...	...	...	
Saint Martin	...	...	...	...	...	...	...	...	...	...	...	...	
Saint Vincent/Grenadines	...	-	-	...	...	...	...	...	...	...	...	...	
Sint Maarten	...	...	...	...	...	...	...	...	...	...	...	...	
Suriname	...	...	...	...	...	...	...	...	...	...	...	...	
Trinidad and Tobago	...	...	...	...	...	...	...	...	...	...	...	...	
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Uruguay	...	...	...	...	...	...	...	...	...	...	...	...	
Venezuela, B. R.	...	...	...	...	...	...	...	...	...	...	...	...	
Northern Africa and Western Asia													
Algeria	...	...	...	...	...	...	...	...	...	...	...	...	
Bahrain	...	...	...	...	...	...	...	...	...	...	...	...	
Egypt	...	...	...	...	...	...	...	...	...	...	...	...	
Iraq	...	...	...	...	...	...	...	...	...	...	...	...	
Israel	...	...	...	...	...	...	...	...	...	...	...	...	
Jordan	...	...	...	...	...	...	...	...	...	...	...	...	
Kuwait	-	-	-	72.5[2]	5.9[2]	72.6[2]	...	...	...	...	...	...	
Lebanon	40[2]	38[2]	46[2]	...	...	...	...	...	...	...	...	...	
Libya	...	...	...	...	...	...	...	...	...	...	...	...	
Morocco	...	-	...	...	...	...	2.1	2.7	1.6	...	...	...	
Oman	...	...	...	...	...	...	...	...	...	...	...	...	
Palestine	-	-	-	-[2]	-[2]	-[2]	4.3	6.4	3.4	2.3	3.4	1.4	
Qatar	7	7	4	1.7	...	...	4.9	...	...	6.1	3.7	8.0	
Saudi Arabia	...	...	...	...	...	...	...	...	...	...	...	...	
Sudan	...	...	...	...	...	...	...	...	...	...	...	...	
Syrian Arab Republic	...	...	...	...	...	...	...	...	...	...	...	...	

	Teacher salary				INSTRUCTIONAL TIME		
	Teacher salary relative to other professionals with equivalent academic qualification[1, 2]				Number of intended instructional hours per year		
						Secondary education	
	Pre-primary	Primary	Upper secondary education	Lower secondary education	Primary education	Lower secondary	Upper secondary
	School year ending in		School year ending in		School year ending in	School year ending in	School year ending in
	2015	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total	Total	Total	Total
	0.63	0.86	0.88	0.95	...	...	...
	...	...	...	...	...	...	...
	0.76	0.82	0.84	0.88	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	2188[g]	4259[g]	1938
	...	...	...	...	...	...	...
	0.65	0.68	0.69	0.71	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5100[g]	2279[g]	1519
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5155[z]	2618[z]	1745
	...	...	...	...	4307[z]	3471[z]	2453
	...	...	...	...	...	...	...
	...	...	...	...	5400[g]	2040[g]	5280
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5550[g]	2775[g]	2775
	0.70	0.73	0.73	0.77	5000[g]	...	...
	...	...	...	...	5000[g]	4800[g]	2400
	...	...	...	...	7201[g]	3360[g]	2453
	...	...	...	...	6143[x]	3420[x]	3721
	...	...	...	...	6401[g]	...	...
	...	...	...	...	...	...	...
	...	...	...	...	4613[x]	1538[x]	4100
	...	...	...	...	6300	3150	3600
	...	...	...	...	3420[x]	1710[x]	2736
	...	...	...	...	...	...	...
	...	...	...	...	3830[g]	2590[g]	1727
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	6954[g]	3870[g]	2580
	...	...	...	...	5370[g]	3580[g]	2387
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5783[x]	3402[x]	3402
	...	...	...	...	4368[x]	2766[x]	2888
	...	...	...	...	4779[g]	2630[g]	1754
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5891[g]	3366[g]	2244
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5130[z]	3420[z]	2280
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3953[g]	4526[g]	3658
	...	...	...	...	4442[x]	2559[x]	2799
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	0.90	0.92	0.99	0.88	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3965[g]	3152[g]	2364
	...	...	...	...	4500[g]	2805[g]	2888
	...	...	...	...	...	...	...
	...	...	...	...	5615[z]	2824[z]	3013
	...	...	...	...	...	...	...
	...	...	...	...	2616[g]	3998[g]	1199
	...	...	...	...	5775	2937	2838
	...	...	...	...	4579[z]	2599[z]	2624
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...

TABLE 14 *(CONTINUED)*

Country or territory	TEACHER MOTIVATION												
	Percentage of non-permanent teachers (%)			Teacher attrition rate (%)									
	Pre-primary education	Primary education	Secondary education	Pre-primary education			Primary education			Secondary education			
	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in			
	2015	2015	2015	2015			2015			2015			
	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Tunisia	...	...	...	...	...	...	...	...	...	...	...	...	
Turkey	...	...	...	...	...	...	...	...	...	...	...	...	
United Arab Emirates	...	...	...	...	...	...	...	...	...	...	...	...	
Yemen	...	...	...	...	...	...	...	...	...	...	...	...	
The Pacific													
Australia	...	...	...	...	...	...	...	...	...	...	...	...	
Cook Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Fiji	...	...	...	...	...	...	...	...	...	...	...	...	
Kiribati	...	...	...	...	...	...	...	...	...	...	...	...	
Marshall Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Micronesia, F. S.	...	...	...	...	...	...	...	...	...	...	...	...	
Nauru	...	...	...	...	...	...	...	...	...	...	...	...	
New Zealand	...	...	...	...	...	...	...	...	...	...	...	...	
Niue	...	...	...	...	...	...	...	...	...	...	...	...	
Palau	...	...	...	...	...	...	...	...	...	...	...	...	
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	
Samoa	...	...	...	...	...	...	...	...	...	...	...	...	
Solomon Islands	...	...	...	...	...	...	...	...	...	...	...	...	
Tokelau	...	...	...	...	...	...	...	...	...	...	...	...	
Tonga	...	...	...	...	...	...	...	...	...	...	...	...	
Tuvalu	...	...	...	...	...	...	...	...	...	...	...	...	
Vanuatu	...	...	...	...	...	...	...	...	...	...	...	...	
Southern Asia													
Afghanistan	...	...	...	...	...	...	...	...	...	...	...	...	
Bangladesh	...	...	-	...	...	...	...	...	...	...	...	...	
Bhutan	...	...	...	...	...	...	...	...	...	...	...	...	
India	...	...	...	...	...	...	...	...	...	...	...	...	
Iran, Islamic Republic of	...	...	...	...	...	...	...	...	...	...	...	...	
Maldives	...	...	...	...	...	...	...	...	...	...	...	...	
Nepal	...	...	...	...	...	...	...	...	...	...	...	...	
Pakistan	...	...	...	...	...	...	...	...	...	...	...	...	
Sri Lanka	...	...	...	...	...	...	...	...	...	...	...	...	
Sub-Saharan Africa													
Angola	...	...	...	...	...	...	...	...	...	...	...	...	
Benin	...	45	...	...	...	...	8.1	7.2	11.4	...	...	...	
Botswana	...	...	...	...	...	...	...	...	...	...	...	...	
Burkina Faso	-	-	69	...	...	...	...	...	...	...	...	...	
Burundi	...	...	...	...	...	...	...	...	...	...	...	...	
Cabo Verde	...	...	...	...	...	...	...	...	...	...	...	...	
Cameroon	...	...	...	...	...	...	...	...	...	...	...	...	
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	
Chad	...	...	...	...	...	...	...	...	...	...	...	...	
Comoros	...	...	...	...	...	...	...	...	...	...	...	...	
Congo	...	...	...	...	...	...	...	...	...	...	...	...	
Côte d'Ivoire	...	...	39[2]	...	...	...	...	...	...	...	...	...	
D. R. Congo	...	...	...	...	...	...	...	...	...	...	...	...	
Djibouti	...	...	...	...	...	...	...	...	...	...	...	...	
Equatorial Guinea	56	41	...	...	...	...	...	...	...	...	...	...	
Eritrea	...	...	...	...	...	...	...	...	...	...	...	...	
Ethiopia	...	...	...	...	...	...	...	...	...	...	...	...	
Gabon	...	...	...	...	...	...	...	...	...	...	...	...	
Gambia	2	3	...	...	...	...	...	...	...	...	...	...	
Ghana	...	...	...	...	...	...	...	...	...	...	...	...	
Guinea	...	32[2]	...	...	...	...	21.2[2]	23.8[2]	15.1[2]	...	...	...	
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...	...	
Kenya	...	...	...	...	...	...	...	...	...	...	...	...	
Lesotho	...	...	...	...	...	...	...	...	...	...	...	...	
Liberia	...	...	...	...	...	...	...	...	...	...	...	...	
Madagascar	45	67	...	...	...	...	...	...	...	...	...	...	
Malawi	...	...	...	...	...	...	...	...	...	...	...	...	
Mali	...	...	...	...	...	...	...	...	...	...	...	...	
Mauritania	...	18	35	...	...	...	1.5[2]	1.8[2]	0.9[2]	...	...	...	
Mauritius	-	-	...	8.0**	...	...	4.8	8.4	3.5	...	...	...	
Mozambique	...	...	...	...	...	...	...	...	...	...	...	...	
Namibia	...	...	...	...	...	...	...	...	...	...	...	...	
Niger	...	...	...	...	...	...	...	...	...	...	...	...	
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	
Rwanda	...	...	...	...	...	...	...	...	...	...	...	...	

	Teacher salary				INSTRUCTIONAL TIME		
	Teacher salary relative to other professionals with equivalent academic qualification[1, 2]				Number of intended instructional hours per year		
						Secondary education	
	Pre-primary	Primary	Upper secondary education	Lower secondary education	Primary education	Lower secondary	Upper secondary
	School year ending in		School year ending in		School year ending in	School year ending in	School year ending in
	2015	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total	Total	Total	Total
	...	...	...	...	3392[g]	2196[g]	3077
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3509[g]	1986[g]	2036
	0.82	0.84	0.85	0.85	...	...	...
	...	...	...	...	4878[g]	3495[g]	2889
	...	...	...	...	5297[g]	3531[g]	1766
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	0.85	0.87	0.93	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	4968[z]	1656[z]	4416
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3868[g]	2579[g]	2579
	...	...	...	...	...	...	...
	...	...	...	...	6156[g]	3829[g]	1984
	...	...	...	...	...	...	...
	...	...	...	...	3610[g]	1533[g]	3443
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	4465[g]	4267[g]	4267
	...	...	...	...	...	...	...
	...	...	...	...	4186[z]	3671[z]	2931
	...	...	...	...	5180[x]	2960[x]	1973
	...	...	...	...	4660[g]	3570[g]	2850
	...	...	...	...	5365[x]	3974[x]	2981
	...	...	...	...	5358[g]	2879[g]	2532
	...	...	...	...	4436[g]	4486[g]	3501
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3460[g]	4408[g]	3315
	...	...	...	...	4556[x]	4608[x]	4845
	...	...	...	...	3624[g]	2640[g]	2310
	...	...	...	...	...	...	...
	...	...	...	...	5687[x]	3152[x]	2494
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5229[x]	3276[x]	1638
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5097[x]	3576[x]	2801
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	3520[g]	2957[g]	2218
	...	...	...	...	...	...	...
	...	...	...	...	4195[x]	2280[x]	2628
	...	...	...	...	4401[g]	5878[g]	4503
	...	...	...	...	5520[g]	2505[g]	3340
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	2875[x]	2848[x]	2592
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...

TABLE 14 *(CONTINUED)*

	TEACHER MOTIVATION												
	Percentage of non-permanent teachers (%)			Teacher attrition rate (%)									
	Pre-primary education	Primary education	Secondary education	Pre-primary education			Primary education			Secondary education			
	School year ending in	School year ending in	School year ending in	School year ending in			School year ending in			School year ending in			
	2015	2015	2015	2015			2015			2015			
Country or territory	Total	Total	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Sao Tome and Principe	...	...	...	...	...	...	...	...	...	...	...	...	
Senegal	...	-	...	...	...	...	-	-	-	...	...	...	
Seychelles	-	-	-	...	...	...	4.7	10.8	3.8	...	...	...	
Sierra Leone	...	...	...	...	...	...	...	...	...	...	...	...	
Somalia	...	...	...	...	...	...	...	...	...	...	...	...	
South Africa	...	...	...	...	...	...	...	...	...	...	...	...	
South Sudan	...	...	...	...	...	...	...	...	...	...	...	...	
Swaziland	...	...	...	...	...	...	...	...	...	...	...	...	
Togo	49[z]	42[z]	...	...	...	...	14.4[z]	16.1[z]	5.0[z]	...	...	...	
Uganda	...	...	...	...	...	...	...	...	...	...	...	...	
United Republic of Tanzania	...	...	...	...	...	...	...	...	...	...	...	...	
Zambia	...	...	...	...	...	...	...	...	...	...	...	...	
Zimbabwe	...	...	...	...	...	...	...	...	...	...	...	...	
World[3]	...	...	...	...	...	...	...	...	...	...	...	...	
Caucasus and Central Asia	...	...	...	...	...	...	...	...	...	...	...	...	
Eastern and South-eastern Asia	...	...	...	...	...	...	...	...	...	...	...	...	
Eastern Asia	...	...	...	...	...	...	...	...	...	...	...	...	
South-eastern Asia	...	...	...	...	...	...	...	...	...	...	...	...	
Europe and Northern America	...	...	...	...	...	...	...	...	...	...	...	...	
Latin America and the Caribbean	...	...	...	...	...	...	...	...	...	...	...	...	
Caribbean	...	...	...	...	...	...	...	...	...	...	...	...	
Latin America	...	...	...	...	...	...	...	...	...	...	...	...	
Northern Africa and Western Asia	...	...	...	...	...	...	...	...	...	...	...	...	
Northern Africa	...	...	...	...	...	...	...	...	...	...	...	...	
Western Asia	...	...	...	...	...	...	...	...	...	...	...	...	
Pacific	...	...	...	...	...	...	...	...	...	...	...	...	
Southern Asia	...	...	...	...	...	...	...	...	...	...	...	...	
Sub-Saharan Africa	...	...	...	...	...	...	...	...	...	...	...	...	
Countries with low income	...	...	...	...	...	...	...	...	...	...	...	...	
Countries with middle income	...	...	...	...	...	...	...	...	...	...	...	...	
Lower middle	...	...	...	...	...	...	...	...	...	...	...	...	
Upper middle	...	...	...	...	...	...	...	...	...	...	...	...	
Countries with high income	...	...	...	...	...	...	...	...	...	...	...	...	

Source: UIS database.

Note: The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

1. Education at a Glance 2016: OECD Indicators - Table D3.2a. Disclaimer: http://oe.cd/disclaimer.

2. Data refer to actual salaries of all teachers relative to earnings for full-time, full-year workers with tertiary education (ISCED 5 to 8). The indicator is defined as a ratio of salary, using annual average salaries (including bonuses and allowances) of teachers in public institutions relative to the wages of workers with similar educational attainment (weighted average) and to the wages of full-time, full-year workers aged 25 to 64 with tertiary education.

3. All regional values shown are medians.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(*) National estimate.

(**) For country level data: UIS partial estimate; for regional and other country grouping sums and weighted averages: partial imputation due to incomplete country coverage (between 33% and 60% of the population of the region or other country grouping).

(-) Magnitude nil or negligible.

(...) No data are available.

	Teacher salary				INSTRUCTIONAL TIME		
	Teacher salary relative to other professionals with equivalent academic qualification[1, 2]				Number of intended instructional hours per year		
						Secondary education	
	Pre-primary	Primary	Upper secondary education	Lower secondary education	Primary education	Lower secondary	Upper secondary
	School year ending in		School year ending in		School year ending in	School year ending in	School year ending in
	2015	2015	2015	2015	2015	2015	2015
	Total	Total	Total	Total	Total	Total	Total
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5152g	2944g	3614
	...	...	...	...	4774x	2548x	2548
	...	...	...	...	...	...	...
	...	...	...	...	7421g	2255g	3383
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	4756g	3525g	2783
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	2438	3553	2013
	...	...	...	...	4104	2485	...
	...	...	...	...	...	...	...
	...	...	...	...	4163	2870	2933
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	5000	3150	2580
	...	...	...	...	4203	2814	2819
	...	...	...	...	3953	2824	3077
	...	...	...	...	4442	2805	2624
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...
	...	...	...	...	...	...	...

TABLE 15: Domestic financial commitment to education: public spending

Country or territory	Government expenditure on education as % of GDP 2015	Expenditure on education as % of total government expenditure 2015	Government expenditure on pre-primary education per pupil in constant 2014 PPP US$ 2015	Government expenditure on pre-primary education per pupil as % of GDP per capita 2015	Government expenditure on primary education per pupil in constant 2014 PPP US$ 2015	Government expenditure on primary education per pupil as % of GDP per capita 2015
Caucasus and Central Asia						
Armenia	2.8	10.7	1,280	15.4	947	11.4
Azerbaijan	2.6[z]	7.4[z]	...	...	...	...
Georgia	2.0[x]	6.7[x]	...	...	753[x]	9.1[x]
Kazakhstan	2.8	11.9	1,555	6.3	...	...
Kyrgyzstan	5.5[z]	16.1[z]	916[z]	27.3[z]	...	...
Tajikistan	5.2	16.3	774	27.6	...	...
Turkmenistan	3.1[x]	20.8[x]	...	...	...	...
Uzbekistan	...	...	...	...	...	...
Eastern and South-eastern Asia						
Brunei Darussalam	**4.4**	10.0[z]	**792**	**1.0**	**6,894**	**9.1**
Cambodia	1.9[z]	9.1[z]	138[z]	4.2[z]	217[z]	6.6[z]
China	...	...	...	...	...	...
DPR Korea	...	...	...	...	...	...
Hong Kong, China	3.3	18.6	3,393	6.2	8,137	14.9
Indonesia	3.6	20.5	290[z]	2.7[z]	1,447	13.2
Japan	3.6[z]	9.3[z]	1,729[z]	4.4[z]	8,791[z]	22.5[z]
Lao PDR	3.3[z]	12.2[z]	487[z]	9.1[z]	553[z]	10.4[z]
Macao, China	2.0[z]	13.4[z]	...	...	...	...
Malaysia	5.0	19.7	1,340	5.0	4,309	16.1
Mongolia	...	...	...	...	...	...
Myanmar	...	...	...	...	...	...
Philippines	...	...	...	...	...	...
Republic of Korea	5.1	...	5,691	16.8	9,991	29.4
Singapore	2.9[y]	20.0[y]	...	...	...	...
Thailand	4.1[y]	18.9[y]	...	...	3,627[y]	23.1[y]
Timor-Leste	7.8[z]	8.0[z]	152[z]	6.9[z]	553[z]	24.9[z]
Viet Nam	5.7[y]	18.5[y]	1,214[y]	22.5[y]	1,130[y]	20.9[y]
Europe and Northern America						
Albania	3.5[y]	12.1[y]	...	...	...	...
Andorra	3.3	...	...	14.3	...	14.0
Austria	5.5[z]	10.5[z]	8,345[z]	17.1[z]	11,369[z]	23.4[z]
Belarus	4.9	11.2	...	...	...	...
Belgium	6.6[z]	12.0[z]	7,627[z]	17.0[z]	9,950[z]	22.2[z]
Bosnia and Herzegovina	...	...	...	...	...	...
Bulgaria	4.1[y]	11.4[y]	5,435[y]	31.8[y]	3,914[y]	22.9[y]
Canada	...	...	...	...	...	...
Croatia	4.6[y]	9.6[y]	...	...	...	...
Cyprus	6.1[z]	15.5[z]	4,056[z]	13.3[z]	9,854[z]	32.3[z]
Czechia	4.1[y]	9.6[y]	5,017[y]	15.9[y]	4,908[y]	15.5[y]
Denmark	8.6[y]	15.2[y]	16,225[y]	34.9[y]	11,909[y]	25.6[y]
Estonia	5.5[z]	14.3[z]	...	10.9[x]	6,560[z]	23.0[z]
Finland	7.2[z]	12.3[z]	8,890[z]	21.4[z]	8,818[z]	21.2[z]
France	5.5[y]	9.7[y]	7,191[y]	18.0[y]	7,212[y]	18.0[y]
Germany	5.0[z]	11.1[z]	7,564[z]	16.1[z]	8,430[z]	17.9[z]
Greece	...	...	...	...	...	...
Hungary	4.7[z]	9.4[z]	4,609[y]	19.0[y]	3,741[z]	14.7[z]
Iceland	7.8[y]	17.7[y]	9,411[y]	21.6[y]	10,675[y]	24.5[y]
Ireland	5.3[y]	13.5[y]	3,010[y]	6.3[y]	7,970[y]	16.8[y]
Italy	4.1[z]	8.0[z]	6,047[z]	16.7[z]	7,698[z]	21.2[z]
Latvia	5.3[z]	14.0[z]	5,179[z]	21.7[z]	6,598[z]	27.6[z]
Liechtenstein	...	...	...	...	...	...
Lithuania	4.6[y]	13.3[y]	5,396[x]	20.9[x]	5,152[y]	19.1[y]
Luxembourg	4.1[z]	9.6[z]	19,387[z]	19.4[z]	19,720[z]	19.8[z]
Malta	7.8[y]	18.8[y]	6,610[y]	20.9[y]	9,013[y]	28.4[y]
Monaco	1.0[z]	5.0[z]	...	...	...	...
Montenegro	...	...	...	...	...	...
Netherlands	5.5[z]	12.0[z]	5,972[z]	12.2[z]	8,403[z]	17.1[z]
Norway	7.4[y]	17.0[y]	13,166[y]	20.2[y]	13,006[y]	20.0[y]
Poland	4.9[z]	11.6[z]	4,599[z]	17.9[z]	7,010[z]	27.2[z]
Portugal	5.1[z]	9.9[z]	4,792[z]	16.6[z]	6,813[z]	23.6[z]
Republic of Moldova	7.5[z]	18.8[z]	2,394	47.9	2,075	41.5
Romania	3.1[z]	9.2[z]	2,450[z]	11.8[z]	2,250[x]	11.7[x]
Russian Federation	3.9[x]	11.1[x]	...	...	...	...
San Marino	...	...	...	...	...	...
Serbia	4.2[z]	9.1[z]	...	...	...	...
Slovakia	4.2[z]	10.2[z]	4,827[z]	16.6[z]	5,945[z]	20.5[z]
Slovenia	5.5[y]	10.0[y]	6,481[y]	21.5[y]	8,705[y]	28.9[y]
Spain	4.3[z]	9.6[z]	5,240[z]	15.5[z]	5,964[z]	17.6[z]
Sweden	7.7[z]	14.9[z]	13,237[z]	28.5[z]	10,407[z]	22.4[z]
Switzerland	5.1[z]	15.5[z]	7,234[z]	11.8[z]	15,636[z]	25.5[z]
TFYR Macedonia	...	...	...	...	...	...

	Government expenditure on secondary education per student in constant 2014 PPP US$	Government expenditure on secondary education per student as % of GDP per capita	Government expenditure on tertiary education per student in constant 2014 PPP US$	Government expenditure on tertiary education per student as % of GDP per capita	Primary education expenditure on textbooks and teaching materials as % of current expenditure on primary education in public institutions	Primary education teaching staff compensation as % of current expenditure on primary education in public institutions
	2015	2015	2015	2015	2015	2015
	1,221[z]	15.0[z]	833	10.0	...	...
	...	...	...	...	...	...
	...	...	1,215[x]	14.6[x]	...	...
	4,743	19.2	2,806	11.3	...	...
	...	...	187[z]	5.6[z]	...	...
	...	...	551	19.6	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	18,370	**24.1**	**24,805**	**32.6**	...	66.6
	...	...	...	...	10.1[x]	47.5
	...	...	...	...	...	...
	...	...	...	...	...	...
	11,123	20.4	12,776	23.4	...	...
	1,146	10.5	3,120	28.5	...	81.8
	9,333[z]	23.9[z]	9,591[z]	24.6[z]	...	...
	761[z]	14.3[z]	1,236[z]	23.2[z]	1.6[z]	81.3
	27,312[y]	18.9[y]	23,858[z]	16.9[z]	...	...
	4,911	18.4	13,453	50.4	2.3	56.8
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	9,528	28.1	5,421	16.0	...	56.2
	...	...	17,584[y]	22.4[y]	...	...
	2,800[y]	17.8[y]	2,827[y]	18.0[y]	18.9[z]	18.9
	526[z]	23.6[z]	...	...	8.5[z]	47.3
	...	...	1,829[y]	33.8[y]	...	73.9
	651[y]	5.9[y]	1,441[y]	13.0[y]	...	...
	...	14.9	...	28.8	0.2	50.3
	13,213[z]	27.2[z]	17,623[z]	36.2[z]	...	62.0
	...	...	2,894	16.5	...	...
	11,504[z]	25.7[z]	14,719[z]	32.9[z]	...	64.7
	...	...	...	...	...	...
	3,775[y]	22.1[y]	2,825[y]	16.5[y]	...	61.5
	...	...	...	...	...	66.0
	...	...	5,700[y]	25.9[y]	...	...
	11,925[z]	39.1[z]	8,318[z]	27.3[z]	...	83.7
	7,441[y]	23.5[y]	6,829[y]	21.6[y]	...	44.6
	13,126[y]	28.2[y]	20,768[y]	44.7[y]	...	60.1
	6,897[z]	24.1[z]	9,000[z]	31.5[z]	...	43.5
	...	...	14,799[z]	35.6[z]	...	54.0
	10,739[y]	26.8[y]	14,038[y]	35.1[y]	...	58.9
	10,993[z]	23.3[z]	17,222[z]	36.6[z]	...	...
	...	...	...	...	...	...
	5,848[z]	22.9[z]	5,857[z]	23.0[z]	...	...
	8,009[y]	18.3[y]	11,194[y]	25.6[y]	...	51.2
	12,158[x]	25.8[x]	12,516[y]	26.4[y]	...	76.1
	8,303[z]	22.9[z]	9,505[z]	26.2[z]	...	62.2
	6,459[z]	27.0[z]	5,982	25.0[z]	...	...
	...	...	...	...	...	70.3
	4,816[y]	17.8[y]	6,636[y]	24.6[y]	...	64.9
	20,393[z]	20.4[z]	386[x]	0.4[x]	...	82.1
	12,184[y]	38.4[y]	16,126[y]	50.9[y]	...	84.9
	...	...	.[z]	.[z]	...	...
	...	...	...	...	...	...
	11,706[z]	23.9[z]	16,225[x]	33.3[x]	...	...
	...	...	24,745[y]	38.0[y]	...	...
	5,715[z]	22.2[z]	6,575[z]	25.6[z]	...	...
	8,452[z]	29.3[z]	7,562[z]	26.2[z]	...	82.1
	1,958	39.2	1,969[z]	39.2[z]	0.2	49.6
	3,289[z]	15.8[z]	4,846[z]	23.3[z]	...	80.8
	...	...	3,684[x]	14.6[x]	...	...
	...	...	...	...	...	...
	...	...	5,441[x]	40.1	...	...
	6,003[z]	20.7[z]	7,754[z]	26.7[z]	...	53.0
	7,805[y]	25.9[y]	7,154[y]	23.8[y]	...	...
	7,456[y]	22.5[y]	7,610[z]	22.5[z]	...	69.1
	11,499[z]	24.8[z]	20,356[z]	43.8[z]	...	52.9
	15,620[z]	25.5[z]	23,303[z]	38.0[z]	...	65.3
	...	...	...	...	...	...

TABLE 15 *(CONTINUED)*

Country or territory	Government expenditure on education as % of GDP	Expenditure on education as % of total government expenditure	Government expenditure on pre-primary education per pupil in constant 2014 PPP US$	Government expenditure on pre-primary education per pupil as % of GDP per capita	Government expenditure on primary education per pupil in constant 2014 PPP US$	Government expenditure on primary education per pupil as % of GDP per capita	
	2015	2015	2015	2015	2015	2015	
Ukraine	5.9[z]	13.1[z]	3,598[y]	40.6[y]	2,348[z]	27.0[z]	
United Kingdom	5.7	13.9	5,044[z]	12.9[z]	8,768[z]	22.5[z]	
United States	5.4[z]	14.5[z]	6,230[z]	11.8[z]	10,509[z]	19.9[z]	
Latin America and the Caribbean							
Anguilla	...	...	...	...	...	...	
Antigua and Barbuda	...	...	...	...	...	...	
Argentina	5.3[z]	14.7[z]	2,295[z]	11.5[z]	2,862[z]	14.4[z]	
Aruba	6.2[z]	19.6[z]	...	13.2[z]	...	17.0[z]	
Bahamas	...	...	...	...	...	...	
Barbados	6.6[z]	14.2[z]	...	...	...	...	
Belize	6.4[z]	20.9[z]	336[y]	4.1[y]	1,318[z]	16.1[z]	
Bermuda	1.7	9.0	11,534[z]	17.8	4,437[z]	8.3	
Bolivia, P.S.	7.3[z]	16.8[z]	806[z]	12.1[z]	1,585[z]	23.8[z]	
Brazil	6.0[y]	16.0[y]	4,254[y]	26.4[y]	3,227[y]	20.0[y]	
British Virgin Islands	6.6	...	...	0.09	...	9.6	
Cayman Islands	...	...	...	...	...	...	
Chile	4.9	18.9	4,400	19.0	3,566	15.4	
Colombia	4.5	15.0	908	6.6	2,430	17.8	
Costa Rica	7.2	23.4	2,825	18.3	4,135	26.8	
Cuba	...	...	...	...	...	...	
Curaçao	4.9[y]	...	...	...	...	10.0[y]	
Dominica	...	...	266[x]	2.5[x]	1,433[x]	13.6[x]	
Dominican Republic	...	...	1,432	10.2	2,175	15.4	
Ecuador	5.0	12.8	2,817	24.8	1,007	8.9	
El Salvador	3.5	16.6	584	6.8	1,015	11.9	
Grenada	...	...	...	...	...	...	
Guatemala	3.0	24.1	1,188	15.5	773	10.1	
Guyana	3.2[x]	10.3[x]	672[x]	10.1[x]	524[x]	7.8[x]	
Haiti	...	...	...	...	...	...	
Honduras	5.9[y]	19.2[y]	685[y]	14.1[y]	928[y]	19.1[y]	
Jamaica	5.5	20.1	364	4.1	1,848	21.1	
Mexico	5.3[z]	19.1[z]	...	...	2,574[z]	15.0[z]	
Montserrat	...	...	...	...	...	...	
Nicaragua	...	...	...	...	...	...	
Panama	...	...	...	...	...	...	
Paraguay	5.0[x]	19.6[x]	987[x]	12.8[x]	1,113[x]	14.4[x]	
Peru	4.0	17.6	1,634	13.2	1,610	13.0	
Saint Kitts and Nevis	2.8	8.8	3,621	14.6	1,502	6.1	
Saint Lucia	4.9	16.5	418	4.0	1,913	18.3	
Saint Martin	...	...	...	3.3	1,893	17.2	
Saint Vincent/Grenadines	...	...	361	...	...	...	
Sint Maarten	...	...	...	...	...	...	
Suriname	...	...	...	...	...	...	
Trinidad and Tobago	...	...	...	...	...	...	
Turks and Caicos Islands	3.3	...	...	...	...	...	
Uruguay	...	...	...	...	...	...	
Venezuela, B. R.	...	...	...	0.02	...	0.02	
Northern Africa and Western Asia							
Algeria	...	...	...	...	...	...	
Bahrain	2.7	7.7	...	...	5,166	11.2	
Egypt	...	...	...	...	...	...	
Iraq	...	...	...	...	...	...	
Israel	5.8[z]	14.3[z]	4,038[z]	11.6[z]	7,279[z]	20.8[z]	
Jordan	...	...	...	...	...	...	
Kuwait	...	...	13,128[z]	17.1[z]	11,248[z]	14.7[z]	
Lebanon	2.6[y]	8.6[y]	...	...	...	...	
Libya	...	...	...	...	...	...	
Morocco	...	...	-[y]	-[y]	1,450[y]	19.4[y]	
Oman	5.0[y]	11.1[y]	...	...	...	...	
Palestine	1.3	...	...	...	...	...	
Qatar	3.6[z]	12.7[z]	...	...	...	...	
Saudi Arabia	...	...	...	...	...	...	
Sudan	...	...	...	...	...	...	
Syrian Arab Republic	...	...	-[x]	-[x]	...	18.3[x]	
Tunisia	6.3[x]	20.6[x]	...	...	...	...	
Turkey	4.8[y]	12.4[y]	2,237[y]	11.5[y]	2,588[y]	13.3[y]	
United Arab Emirates	...	...	...	...	...	...	
Yemen	...	...	...	...	...	...	
The Pacific							
Australia	5.2[z]	13.9[z]	4,561[z]	9.9[z]	8,514[z]	18.4[z]	
Cook Islands	3.9	11.6[z]	...	9.9[y]	...	10.1[y]	
Fiji	3.9[y]	14.0[y]	...	...	1,055[y]	12.6[y]	

	Government expenditure on secondary education per student in constant 2014 PPP US$	Government expenditure on secondary education per student as % of GDP per capita	Government expenditure on tertiary education per student in constant 2014 PPP US$	Government expenditure on tertiary education per student as % of GDP per capita	Primary education expenditure on textbooks and teaching materials as % of current expenditure on primary education in public institutions	Primary education teaching staff compensation as % of current expenditure on primary education in public institutions
	2015	2015	2015	2015	2015	2015
	2,250[z]	25.9[z]	3,222[z]	37.1[z]	...	...
	9,011[z]	23.1[z]	14,851[z]	38.0[z]	...	66.5
	11,877[z]	22.5[z]	14,843[z]	28.1[z]	...	54.3
	...	...	...	...	...	...
	...	...	...	...	...	...
	4,242[z]	21.3[z]	3,237[z]	16.3[z]	...	72.2
	...	25.1	...	103.4[z]	...	95.5
	...	...	...	...	...	...
	3,215[z]	20.3[z]	...	...	...	...
	1,919[z]	23.4[z]	2,769[y]	33.5[y]	...	...
	6,582[z]	12.2	10,000[z]	19.1[z]	...	...
	1,228[z]	18.4[z]	...	...	...	82.1
	3,484[y]	21.6[y]	4,752[y]	29.5[y]	...	...
	...	18.2	...	51.8	...	...
	...	...	...	...	...	...
	3,906	16.8	4,324	18.6	...	...
	2,189	16.0	2,763	20.2	3.6	84.0
	3,889	25.2	5,429	35.2	...	72.3
	...	...	...	...	...	...
	...	23.0[y]	...	18.2[y]	6.0[y]	81.0
	...	...	...	...	...	100.0
	2,079	14.8	...	...	2.4	64.8
	566	5.0	4,832[y]	43.1[y]	8.9	78.4
	981	11.5	813	9.5	-	-
	...	...	...	...	...	...
	389	5.1	1,387	18.2	0.7	97.2
	627[x]	9.4[x]	926[x]	13.8[x]	...	84.6
	...	...	...	...	...	...
	881[y]	18.1[y]	1,866	37.0	-[y]	81.2
	2,385	27.2	3,036	34.6	2.0	77.5
	2,829[z]	16.4[z]	7,167[z]	41.7[z]	...	85.0
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	3,634[x]	18.8[x]	...	...
	1,275[x]	16.6[x]	...	...	2.8[x]	64.5
	1,780	14.3	...	...	1.5	53.2
	3,579	14.4	1,681	6.8	7.0	88.0
	3,121	29.8	...	...	...	70.0
	2,388	21.7	...	...	...	90.8
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	14.5	85.5
	...	0.02	...	...	0.7	30.6
	...	...	...	...	...	94.5
	8,101	17.6	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	6,240[z]	17.9[z]	6,663[z]	19.1[z]	...	...
	...	...	...	...	...	...
	13,530[z]	17.6[z]	...	...	4.0[z]	72.0
	894[y]	6.0[y]	2,722[y]	18.4[y]	0.0[y]	...
	...	...	...	...	...	...
	2,618[x]	36.1[x]	...	...	...	...
	8,925[y]	21.3[y]	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	15.4[x]	...	...	3.4	96.6
	...	...	6,271	54.6	...	...
	2,866[y]	14.8[y]	4,714[y]	24.3[y]	...	...
	...	...	...	...	0.6[y]	62.2
	...	...	...	...	3.4[y]	93.0
	7,724[z]	16.7[z]	10,333[z]	22.3[z]	...	63.2
	...	10.4[y]	...	7.8[x]	...	...
	...	...	...	...	...	...

TABLE 15 *(CONTINUED)*

Country or territory	Government expenditure on education as % of GDP 2015	Expenditure on education as % of total government expenditure 2015	Government expenditure on pre-primary education per pupil in constant 2014 PPP US$ 2015	Government expenditure on pre-primary education per pupil as % of GDP per capita 2015	Government expenditure on primary education per pupil in constant 2014 PPP US$ 2015	Government expenditure on primary education per pupil as % of GDP per capita 2015
Kiribati	...	...	...	...	...	...
Marshall Islands	...	...	...	...	...	...
Micronesia, F. S.	12.5	20.7	...	...	...	...
Nauru	...	...	...	...	...	...
New Zealand	6.4	18.0	6,866	18.5	6,717	18.1
Niue	...	...	...	...	...	...
Palau	...	...	...	...	...	...
Papua New Guinea	...	...	...	...	...	...
Samoa	...	...	...	...	...	...
Solomon Islands	...	...	...	...	...	...
Tokelau	...	...	...	...	...	...
Tonga	...	...	...	...	...	...
Tuvalu	...	...	...	...	...	...
Vanuatu	5.5	22.3	3	0.1	390	13.2
Southern Asia						
Afghanistan	3.3	12.5	-[y]	-[y]	183	9.6
Bangladesh	**1.9**	13.8**[,y]	-	-	**230**	**7.1**
Bhutan	7.4	25.5	-	-	2,451	31.7
India	3.8[y]	14.1[y]	524[y]	10.5[y]	488[y]	9.8[y]
Iran, Islamic Republic of	2.9	18.6	141	0.8	1,360	8.0
Maldives	5.2	12.9	1,082[z]	8.6[z]	2,096[z]	16.7[z]
Nepal	3.7	17.1	51	2.2	305	12.9
Pakistan	2.6	13.2	...	...	364	7.7
Sri Lanka	2.2	11.0	-	-	848	7.3
Sub-Saharan Africa						
Angola	...	...	...	...	...	...
Benin	4.4	17.5	274	13.5	215	10.5
Botswana	...	...	...	...	...	...
Burkina Faso	4.1	18.0	12	0.7	264	15.7
Burundi	5.4[y]	17.2[y]	2[y]	0.3[y]	98[y]	12.8[y]
Cabo Verde	5.0[y]	15.0[y]	51[y]	0.8[y]	926[y]	14.4[y]
Cameroon	3.0[y]	13.8[y]	162[x]	5.8[x]	170[x]	6.0[x]
Central African Republic	...	...	...	...	...	...
Chad	2.8[y]	12.5[y]	...	...	129[x]	6.3[x]
Comoros	4.3	15.3	303[z]	20.4[z]	261[z]	17.5[z]
Congo	...	...	...	...	...	...
Côte d'Ivoire	5.0**	21.2**	814	23.4	489	14.1
D. R. Congo	2.2[y]	16.9[y]	42[y]	5.9[y]	56[y]	8.0[y]
Djibouti	...	...	...	...	...	...
Equatorial Guinea	...	...	...	...	...	...
Eritrea	...	...	...	...	...	...
Ethiopia	4.5[y]	27.0[y]	15[x]	1.2[x]	102[x]	8.4[x]
Gabon	2.7[z]	11.4[z]	...	...	...	...
Gambia	2.8[y]	10.3[y]	-[y]	-[y]	175[y]	10.5[y]
Ghana	6.2[z]	21.0[z]	300[z]	7.3[z]	357[z]	8.7[z]
Guinea	3.2[z]	12.0[z]	...	...	109[z]	8.9[z]
Guinea-Bissau	2.2[y]	16.2[y]	...	...	...	...
Kenya	5.3	16.5	39	1.3	307	10.5
Lesotho	...	...	...	...	...	...
Liberia	2.8[x]	8.1[x]	...	...	...	...
Madagascar	2.1[y]	14.0[y]	...	...	95[x]	6.6[x]
Malawi	5.6	21.6	-	-	113	9.8
Mali	3.7[z]	18.2[z]	32[z]	1.6[z]	247[z]	12.6[z]
Mauritania	2.9[y]	11.4[y]	-[y]	-[y]	331[y]	8.6[y]
Mauritius	4.9	19.0	485	2.4	2,490	12.5
Mozambique	6.5[y]	19.0[y]	...	...	165[y]	15.2[y]
Namibia	...	...	...	...	...	...
Niger	6.7[z]	21.7[z]	387[z]	40.7[z]	279[z]	29.4[z]
Nigeria	...	...	...	...	...	...
Rwanda	**3.6****	12.5**	49	3.0	94	5.7
Sao Tome and Principe	3.8[z]	12.3[z]	374[z]	12.0[z]	354[z]	11.3[z]
Senegal	7.4[z]	24.8[z]	366[z]	15.8[z]	465[z]	20.0[z]
Seychelles	...	...	...	...	...	...
Sierra Leone	2.7[z]	15.1[z]	-[z]	-[z]	108[y]	5.5[y]
Somalia	...	...	...	...	...	...
South Africa	6.0[z]	19.1[z]	771[z]	6.0[z]	2,271[z]	17.6[z]
South Sudan	**1.8**	2.6	**10**	**0.5**	**115**	**6.4**
Swaziland	7.0[z]	24.9[z]	...	...	1,548[z]	18.7[z]
Togo	5.2	18.0	76	5.3	251	17.4
Uganda	2.2[z]	11.7[z]	-[z]	-[z]	98[z]	5.7[z]
United Republic of Tanzania	3.5[z]	17.3[z]	236[z]	9.8[z]	245[z]	10.1[z]
Zambia	...	...	...	...	...	...
Zimbabwe	8.4[z]	30.0[z]	119[y]	6.7[y]	392[y]	22.1[y]

	Government expenditure on secondary education per student in constant 2014 PPP US$	Government expenditure on secondary education per student as % of GDP per capita	Government expenditure on tertiary education per student in constant 2014 PPP US$	Government expenditure on tertiary education per student as % of GDP per capita	Primary education expenditure on textbooks and teaching materials as % of current expenditure on primary education in public institutions	Primary education teaching staff compensation as % of current expenditure on primary education in public institutions
	2015	2015	2015	2015	2015	2015
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	8,078	21.8	10,079	27.2	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	607	20.5	...	...	...	...
	185	9.7	1,096[z]	56.4[z]	-	79.7
	245	**7.6**	642[x]	24.1[x]	...	**22.2**
	2,445	31.6	3,995[z]	53.9[z]	...	...
	841[y]	16.8[y]	2,458[y]	49.2[y]	...	...
	2,586	15.1	2,389	14.0	0.8	81.5
	...	...	4,400[z]	35.1[z]	5.7[y]	55.3
	258	10.9	596	25.3	2.1	78.2
	721	15.2	2,834	59.7	...	...
	678[y]	6.3[y]	3,351	28.8	1.5	**35.3**
	...	...	...	...	...	...
	238	11.7	1,341[y]	67.9[y]	2.3	67.5
	...	...	...	...	...	...
	282	16.8	3,775[y]	229.7[y]	1.9	47.1
	237[y]	31.0[y]	2,338[y]	306.0[y]	...	...
	1,057[y]	16.4[y]	1,978[y]	30.7[y]	0.4[y]	95.5
	553[x]	19.7[x]	616[y]	21.3[y]	...	81.9
	...	...	...	...	...	...
	262[x]	12.7[x]	...	...	...	60.2
	227[z]	15.2[z]	664[z]	44.6[z]	...	...
	...	...	5,069[y]	83.7[y]	...	...
	857	24.7	4,427	127.4	4.4**	64.8
	42[y]	5.9[y]	573[y]	80.7[y]	...	...
	33	1.0	...	...	1.1[z]	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	310[x]	25.7[x]	4,075[x]	337.9[x]	1.3[y]	...
	...	...	...	...	...	...
	...	...	1,799[x]	108.8[x]	...	89.2
	1,105[z]	26.9[z]	3,074[z]	74.9[z]	...	57.1
	148[z]	12.0[z]	1,606[z]	130.8[z]	0.0[z]	77.0
	...	...	...	...	1.4[x]	89.1
	...	...	...	...	8.7	77.4
	...	...	...	...	...	...
	...	...	613[x]	80.9[x]	...	...
	121[x]	8.4[x]	1,485[x]	102.6[x]	...	71.0
	289	25.1	...	...	0.5	...
	442[z]	22.7[z]	2,214[x]	117.2[x]	4.0[z]	75.6
	593[y]	15.5[y]	2,620[y]	68.5[y]	...	...
	6,101	30.7	2,211	11.1	1.7	...
	566[y]	52.0[y]	1,866[y]	171.5[y]	19.1[x]	65.6
	...	...	...	...	...	...
	689[z]	72.6[z]	5,643[x]	617.7[x]	7.5[z]	81.6
	...	...	...	...	...	...
	531	32.4	**148**	**8.6**	-**	**51.0**
	255[z]	8.2[z]	1,251[z]	40.0[z]	...	...
	...	...	5,144[z]	221.8[z]	0.9[z]	85.9
	...	...	...	...	...	...
	152[y]	7.8[y]	...	...	...	...
	...	...	...	...	...	...
	2,668[x]	20.9[x]	4,865[z]	37.7[z]	1.8[z]	76.9
	300	**16.6**	...	...	-[y]	**96.7**
	2,655[z]	32.1[z]	12,057[z]	145.9[z]	5.0[z]	51.3
	...	...	1,342	92.9	0.2	85.8
	...	...	1,729[y]	99.8[y]	2.2[z]	67.2
	...	...	...	...	...	...
	...	...	...	...	...	...
	623[y]	35.1[y]	4,523[y]	254.9[y]	0.2[z]	98.7

TABLE 15 *(CONTINUED)*

Country or territory	Government expenditure on education as % of GDP	Expenditure on education as % of total government expenditure	Government expenditure on pre-primary education per pupil in constant 2014 PPP US$	Government expenditure on pre-primary education per pupil as % of GDP per capita	Government expenditure on primary education per pupil in constant 2014 PPP US$	Government expenditure on primary education per pupil as % of GDP per capita	
	2015	2015	2015	2015	2015	2015	
World[1]	4.7	14.1	987	11.5	1,848	15.4	
Caucasus and Central Asia	2.8	11.9	1,098	21.4	...	...	
Eastern and South-eastern Asia	3.6	16.0	1,003	5.6	3,627	16.1	
Eastern Asia	3.4	...	...	...	...	...	
South-eastern Asia	4.1	18.5	487	5.0	1,288	14.7	
Europe and Northern America	5.1	11.8	5,972	17.1	8,186	22.2	
Latin America and the Caribbean	5.0	...	...	11.8	1,729	14.7	
Caribbean	...	...	...	...	...	...	
Latin America	5.0	17.6	1,088	12.8	1,585	14.7	
Northern Africa and Western Asia	...	...	...	...	...	...	
Northern Africa	...	...	...	...	...	...	
Western Asia	3.6	...	...	...	...	...	
Pacific	...	...	...	...	...	...	
Southern Asia	3.3	13.8	26	0.4	488	9.6	
Sub-Saharan Africa	4.1	16.9	51	3.0	246	10.5	
Countries with low income	3.7	17.0	37	1.9	170	10.3	
Countries with middle income	4.6	16.0	...	...	...	13.6	
Lower middle	5.0	16.4	337	7.1	773	12.6	
Upper middle	4.2	14.0	...	...	...	...	
Countries with high income	5.1	12.5	5,691	16.6	8,053	19.1	

Source: UIS database.

Note: The country groupings by level of income are as defined by the World Bank but include countries listed in the table only. They are based on the list of countries by income group as revised in July 2016.

1. All regional values shown are medians.

Data in bold are for the school year ending in 2016.

(z) Data are for the school year ending in 2014.

(y) Data are for the school year ending in 2013.

(x) Data are for the school year ending in 2012.

(*) National estimate.

(**) UIS partial estimate.

(-) Magnitude nil or negligible.

(.) The category is not applicable or does not exist.

(...) No data available.

	Government expenditure on secondary education per student in constant 2014 PPP US$	Government expenditure on secondary education per student as % of GDP per capita	Government expenditure on tertiary education per student in constant 2014 PPP US$	Government expenditure on tertiary education per student as % of GDP per capita	Primary education expenditure on textbooks and teaching materials as % of current expenditure on primary education in public institutions	Primary education teaching staff compensation as % of current expenditure on primary education in public institutions
	2015	2015	2015	2015	2015	2015
	2,636	20.4	4,075	29.1	...	...
	...	...	833	11.3	...	...
	7,122	19.6	9,591	23.4	...	56.8
	10,326	22.1	11,184	20.2	...	...
	1,973	18.1	3,120	28.5	...	61.7
	8,303	23.7	7,682	26.7	...	62.2
	2,287	17.5	...	...	...	81.1
	...	...	...	...	...	...
	1,780	16.5	3,237	20.2	...	79.8
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	17.6	...	...	...	...
	...	...	...	...	...	...
	699	13.0	2,458	35.1	1.5	66.7
	310	19.7	2,094	96.3	...	76.9
	262	16.6	1,667	105.7	1.3	77.6
	...	...	...	...	...	...
	...	16.6	...	...	...	...
	...	...	...	...	...	...
	8,452	22.7	10,000	26.0	...	...

Syrian refugee in Beka'a Valley, Lebanon.

CREDIT: GEM Report/Redman

Aid tables

INTRODUCTION

The data on aid used in this Report are derived from the Organisation for Economic Co-operation and Development (OECD) International Development Statistics (IDS) databases, which record information provided annually by all member countries of the OECD Development Assistance Committee (DAC), as well as a growing number of donors that are not members of the committee. In this Report, total figures for net official development assistance (ODA) comes from the DAC database while those for gross ODA, sector-allocable aid and aid to education come from the Creditor Reporter System (CRS). Both are available at www.oecd.org/dac/stats/idsonline.htm.

ODA is public funds provided to developing countries to promote their economic and social development. It is concessional; that is, it takes the form of either a grant or a loan carrying a lower rate of interest than is available on the market and, usually, a longer repayment period.

The aid tables including ODA per recipient are available on the Report's website, http://en.unesco.org/gem-report/node/58/.

AID RECIPIENTS AND DONORS

Developing countries are those in Part 1 of the DAC List of Aid Recipients: all low and middle income countries except twelve Central and Eastern European countries and a few more advanced developing countries.

Bilateral donors are countries that provide development assistance directly to recipient countries. Most are members of the DAC, a forum of major bilateral donors established to promote aid and its effectiveness. Bilateral donors also contribute substantially to the financing of multilateral donors through contributions recorded as multilateral ODA.

Multilateral donors are international institutions with government membership that conduct all or a significant part of their activities in favour of developing countries. They include multilateral development banks (e.g. the World Bank and Inter-American Development Bank), United Nations agencies and regional groupings (e.g. the European Commission). The development banks also make non-concessional loans to several middle and higher income countries; these are not counted as part of ODA.

TYPES OF AID

Total ODA: bilateral and multilateral aid for all sectors, as well as aid that is not allocable by sector, such as general budget support and debt relief. In **Table 1**, total ODA from bilateral donors is bilateral aid only, while aid as a percentage of gross national income (GNI) is bilateral and multilateral ODA.

Sector-allocable ODA: aid allocated to a specific sector, such as education or health. It does not include aid for general development purposes (e.g. general budget support), balance-of-payments support, debt relief or emergency assistance.

Debt relief: includes debt forgiveness, i.e. the extinction of a loan by agreement between the creditor (donor) and debtor (aid recipient), and other action on debt, including debt swaps, buy-backs and refinancing. In the DAC database, debt forgiveness is reported as a grant and therefore counts as ODA.

EDUCATION AID

Direct aid to education: aid to education reported in the CRS database as direct allocations to the education sector. It is the total of direct aid, as defined by the DAC, to:

- basic education, defined by the DAC as covering primary education, basic life skills for youth and adults, and early childhood education;
- secondary education, both general secondary education and vocational training;
- post-secondary education, including advanced technical and managerial training;
- education, 'level unspecified', which refers to any activity that cannot be attributed solely to the development of a particular level of education, such as education research and teacher training. General education programme support is often reported within this subcategory.

Total aid to education: direct aid to education plus 20% of general budget support (aid provided to governments without being earmarked for specific projects or sectors) to represent the estimated 15% to 25% of budget support that typically benefits the education sector.

Total aid to basic education: direct aid to basic education, plus 10% of general budget support, plus 50% of education, 'level unspecified'.

Total aid to secondary education: direct aid to secondary education, plus 5% of general budget support, plus 25% of education, 'level unspecified'.

Commitments and disbursements: A commitment is a firm obligation by a donor, expressed in writing and backed by necessary funds to provide specified assistance to a country or a multilateral organization. Disbursements record the actual international transfer of financial resources or of goods and services. Starting with the 2011 Report, disbursement figures are used in the text and tables, while in previous years commitments were reported. As the aid committed in a given year can be disbursed later, sometimes over several years, the annual aid figures based on commitments cannot be directly compared to disbursements. Reliable figures on aid disbursements have only been available since 2002, which consequently is used as the base year.

Current and constant prices: Aid figures in the DAC databases are expressed in US dollars. When comparing aid figures between years, adjustment is required to compensate for inflation and changes in exchange rates. Such adjustments result in aid being expressed in constant dollars, i.e. in dollars fixed at the value they held in a given reference year, including their external value in terms of other currencies. This Report presents most aid data in constant 2015 US dollars.

Source: OECD-DAC, 2017.

TABLE 1

Bilateral and multilateral ODA

	TOTAL ODA				ODA AS % OF GNI				SECTOR-ALLOCABLE ODA			DEBT RELIEF AND OTHER ACTIONS RELATING TO DEBT		
	CONSTANT 2015 US$ MILLIONS								CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2016*	2002–2003 annual average	2014	2015	2016*	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Australia	1,563	2,897	2,752	2,232	0.50	0.31	0.29	0.25	1,072	2,415	2,291	10	6	8
Austria	411	542	783	959	0.46	0.28	0.35	0.41	191	278	260	50	93	1
Belgium	1,398	1,112	1,112	1,415	1.03	0.46	0.42	0.49	622	768	678	623	8	1
Canada	2,142	2,817	2,972	2,801	0.52	0.24	0.28	0.26	914	1,797	1,860	11	…	…
Czechia**	80	53	70	74	0.18	0.11	0.12	0.14	…	32	41	…	…	…
Denmark	1,408	1,796	1,880	1,700	1.80	0.86	0.85	0.75	461	1,065	1,054	0	0	0
Finland	372	797	698	629	0.70	0.59	0.55	0.44	255	527	476	0	…	…
France	5,534	5,480	5,157	5,425	0.78	0.37	0.37	0.38	2,554	5,277	4,971	2,928	91	198
Germany	4,634	9,879	14,113	19,367	0.55	0.42	0.52	0.70	3,501	9,690	11,253	1,599	946	80
Greece	205	38	72	71	0.42	0.11	0.12	0.14	177	13	12	…	…	…
Iceland**	11	29	31	35	0.32	0.22	0.24	0.25	…	22	20	…	…	…
Ireland	372	455	427	426	0.80	0.38	0.32	0.33	264	287	249	…	0	0
Italy	1,368	1,154	1,829	2,313	0.37	0.19	0.22	0.26	178	364	621	806	24	81
Japan	5,917	5,466	6,147	6,317	0.43	0.20	0.20	0.20	2,988	9,328	9,690	555	…	39
Kuwait**	81	206	304	…	…	…	…	…	…	473	626	…	…	…
Luxembourg	202	252	263	276	1.64	1.06	0.95	1.00	…	174	169	…	…	…
Netherlands	3,315	3,370	4,163	3,171	1.61	0.64	0.75	0.65	1,459	2,166	2,019	393	53	46
New Zealand	195	345	358	352	0.45	0.27	0.27	0.25	126	251	266	…	…	…
Norway	1,946	2,969	3,307	3,628	1.81	1.00	1.05	1.11	975	2,111	2,114	22	14	17
Poland**	19	69	100	154	0.01	0.09	0.10	0.13	…	81	107	…	…	…
Portugal	247	210	146	126	0.49	0.19	0.16	0.17	215	176	136	…	10	14
Republic of Korea	308	1,328	1,469	1,549	0.11	0.13	0.14	0.14	…	1,223	1,360	…	…	…
Slovakia**	11	14	17	20	0.07	0.09	0.10	0.12	…	8	11	…	…	…
Slovenia**	…	17	25	29	…	0.12	0.15	0.18	…	11	12	…	…	…
Spain	1,412	390	355	2,481	0.50	0.13	0.12	0.33	826	363	346	145	…	122
Sweden	1,943	3,607	4,828	3,473	1.63	1.09	1.40	0.94	919	1,933	1,793	99	…	…
Switzerland	1,373	2,628	2,726	2,874	0.68	0.50	0.51	0.54	728	1,539	1,545	28	…	…
United Arab Emirates**	921	4,459	4,353	4,078	…	1.26	1.18	1.12	…	2,120	1,616	…	…	…
United Kingdom	4,599	10,468	11,710	12,844	0.65	0.70	0.70	0.70	1,890	8,218	8,635	459	5	…
United States	16,131	27,805	26,654	27,581	0.28	0.19	0.17	0.18	9,006	18,332	16,727	1,909	48	11
Estonia**	1	13	15	19	…	0.14	0.15	0.19	…	8	9	…	…	…
Hungary**	17	26	47	18	0.03	0.11	0.13	0.13	…	15	27	…	…	…
Kazakhstan**	…	24	34	…	…	0.02	0.02	…	…	17	16	…	…	…
Lithuania**	1	5	10	15	0.01	0.10	0.12	0.14	…	2	4	…	…	…
Romania**	…	63	33	38	…	0.11	0.09	0.11	…	62	32	…	…	…
TOTAL bilaterals* **	**61,327**	**106,714**	**110,933**	**113,857**	**0.24**	**0.30**	**0.30**	**0.32**	**28,859**	**71,148**	**71,059**	**9,554**	**1,297**	**1,033**
African Development Bank	116	124	124						…	12	14	116	112	110
African Development Fund	697	1,716	2,059						634	1,613	2,079	139	0	0
Arab Fund for Economic and Social Development	…	323	55						…	791	610	…	…	…
Asian Development Bank Special Funds	1,094	1,331	1,446						…	2,498	2,686	…	6	6
EU Institutions	7,427	13,855	13,546						1,295	11,712	12,008	4	1	0
BADEA	…	50	71						…	113	124	…	…	…
Climate Investment Funds (CIF)	…	315	411						…	315	381	…	…	…
World Bank (IDA)	7,379	9,245	10,055						8,931	12,015	12,415	469	9	535
Inter-American Development Bank Special Fund	284	1,549	1,793						…	1,101	1,063	…	…	…
International Monetary Fund (Concessional Trust Funds)	829	162	503						…	…	…	434	…	107
OPEC Fund for International Development	91	235	170						…	403	393	…	10	…
UNDP	359	414	420						…	353	324	…	…	…
UNICEF	751	1,167	1,395						453	752	866	…	…	…
UN Peacebuilding Fund	…	58	71						…	58	69	…	…	…
UN Relief and Works Agency for Palestine Refugees	517	613	771						…	449	555	…	…	…
World Food Programme	423	278	286						…	48	40	…	…	…
Global Fund	256	2,565	3,172						256	2,601	3,239	…	…	…
GAVI	…	1,275	1,725						…	1,187	1,614	…	…	…
Global Environment Facility	506	758	813						506	754	809	…	…	…
World Health Organization	…	424	664						…	393	577	…	…	…
TOTAL multilaterals* **	**22,659**	**38,388**	**41,669**						**12,323**	**38,083**	**41,097**	**1,163**	**138**	**779**
TOTAL	**84,123**	**145,103**	**152,603**						**41,182**	**109,231**	**112,156**	**10,717**	**1,436**	**1,813**

Source: OECD-DAC, DAC and CRS databases (2017).

*Preliminary data.

**Estonia, Hungary, Kazakhstan, Kuwait, Lithuania, Romania and the United Arab Emirates are not part of the DAC but are included in its CRS database. Iceland became a DAC member in 2012 and now reports to the CRS. Czechia, Poland, Slovakia and Slovenia became DAC members in 2013.

***The total includes ODA from other bilaterals and multilaterals not listed above.

(…) indicates that data are not available, (-) represents a nil value.

Total ODA data represent net disbursements. Sector-allocable ODA and debt relief and other actions relating to debt represent gross disbursements.

Total ODA from DAC donors is bilateral ODA (both DAC and non-DAC countries) only, while ODA as % of GNI includes multilateral ODA but not DAC countries.

2002–2003 annual average excludes countries with missing values.

TABLE 2

Bilateral and multilateral aid to education

	TOTAL AID TO EDUCATION			TOTAL AID TO BASIC EDUCATION			TOTAL AID TO SECONDARY EDUCATION			DIRECT AID TO EDUCATION			DIRECT AID TO BASIC EDUCATION		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Australia	164	438	333	53	254	216	34	82	53	162	438	333	36	105	141
Austria	61	125	135	5	3	9	4	19	8	61	125	134	3	0	0
Belgium	129	85	79	25	25	29	21	29	29	125	85	79	13	15	18
Canada	221	211	254	92	120	150	24	48	59	218	208	247	64	82	93
Czechia*	…	9	10	…	1	1	…	1	1	…	9	10	…	0	0
Denmark	46	103	84	26	61	50	10	18	13	43	96	79	8	31	23
Finland	37	68	63	20	36	43	8	15	10	35	63	62	8	12	29
France	1,214	1,242	1,156	155	105	95	98	211	203	1,176	1,206	1,110	21	39	35
Germany	725	1,548	1,858	115	253	339	76	183	264	724	1,541	1,856	89	142	207
Greece	48	9	9	24	1	1	19	0	0	48	9	9	39	…	…
Iceland*	…	2	2	…	2	1	…	0	0	…	2	2	…	2	1
Ireland	64	42	43	36	22	23	12	10	11	58	40	40	14	11	12
Italy	40	61	99	15	26	35	9	18	22	38	60	98	1	12	20
Japan	439	525	468	124	161	143	59	119	81	393	459	429	71	48	41
Kuwait*	…	38	31	…	4	16	…	13	8	…	38	31	…	…	…
Luxembourg	…	45	44	…	21	20	…	21	22	…	45	44	…	18	16
Netherlands	280	143	98	184	46	5	16	10	5	253	143	98	154	43	4
New Zealand	83	65	77	23	21	27	16	4	4	81	62	74	10	18	22
Norway	156	233	322	91	165	248	18	19	24	145	223	311	71	138	214
Poland*	…	39	49	…	8	9	…	4	4	…	39	49	…	1	1
Portugal	64	48	42	10	10	9	9	10	9	64	48	42	6	0	0
Republic of Korea	…	216	234	…	43	48	…	84	96	…	216	234	…	24	30
Slovakia*	…	4	4	…	1	1	…	1	1	…	4	4	…	0	0
Slovenia*	…	6	6	…	1	0	…	0	0	…	6	6	…	0	0
Spain	166	44	38	55	18	15	47	13	13	166	44	38	36	7	5
Sweden	95	148	103	62	93	44	14	18	19	79	140	89	38	70	20
Switzerland	68	113	119	32	50	54	31	46	48	62	107	114	24	39	45
United Arab Emirates*	…	165	572	…	85	276	…	36	137	…	126	110	…	20	6
United Kingdom	277	1,280	1,017	191	592	534	46	426	190	170	1,264	1,002	113	304	323
United States	433	1,096	1,025	274	887	782	53	45	42	243	1,060	968	167	828	705
Estonia*	…	1	3	…	0	1	…	0	1	…	1	3	…	0	0
Hungary*	…	6	19	…	0	0	…	0	0	…	6	19	…	0	0
Kazakhstan*	…	16	3	…	7	1	…	4	1	…	16	3	…	…	…
Lithuania*	…	1	2	…	0	0	…	0	0	…	1	2	…	…	…
Romania*	…	51	30	…	15	0	…	8	1	…	51	30	…	0	0
TOTAL bilaterals**	**4,764**	**8,227**	**8,433**	**1,588**	**3,135**	**3,224**	**620**	**1,517**	**1,380**	**4,302**	**7,981**	**7,759**	**959**	**2,011**	**2,014**
African Development Bank	…	0	0	…	0	0	…	0	0	…	0	0	…	…	…
African Development Fund	87	101	96	47	23	11	21	45	54	66	62	83	10	…	…
Arab Fund for Economic and Social Development	…	3	5	…	2	3	…	1	1	…	3	5	…	…	…
Asian Development Bank Special Funds	…	201	246	…	55	52	…	108	160	…	201	246	…	19	24
EU Institutions	186	859	931	89	362	423	45	173	208	66	654	768	22	136	213
BADEA	…	5	6	…	1	0	…	1	3	…	5	6	…	0	…
Climate Investment Funds	…	0	0	…	…	…	…	0	0	…	0	0	…	…	…
World Bank (IDA)	1,023	1,468	1,379	687	664	779	150	554	334	1,023	1,461	1,379	573	492	647
Inter-American Development Bank Special Fund	…	49	32	…	36	29	…	6	2	…	49	32	…	27	28
International Monetary Fund (Concessional Trust Funds)	373	150	273	187	75	136	93	37	68	…	…	…	…	…	…
OPEC Fund for International Development	…	19	22	…	4	12	…	12	5	…	19	22	…	3	2
UNDP	…	2	1	…	1	1	…	0	0	…	2	1	…	0	0
UNICEF	66	74	89	66	48	54	0	13	18	66	74	89	66	23	21
UN Peacebuilding Fund	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
UN Relief and Works Agency for Palestine Refugees	…	356	404	…	356	404	…	…	…	…	356	404	…	356	404
World Food Programme	…	28	26	…	27	26	…	0	…	…	28	26	…	27	26
TOTAL multilaterals**	**1,735**	**3,316**	**3,538**	**1,075**	**1,655**	**1,949**	**310**	**953**	**857**	**1,222**	**2,916**	**3,087**	**670**	**1,082**	**1,383**
TOTAL	**6,499**	**11,543**	**11,971**	**2,663**	**4,790**	**5,173**	**929**	**2,470**	**2,237**	**5,524**	**10,897**	**10,845**	**1,630**	**3,093**	**3,396**

Source: OECD-DAC, DAC and CRS databases (2017).

* Estonia, Hungary, Kazakhstan, Kuwait, Lithuania, Romania and the United Arab Emirates are not part of the DAC but are included in its CRS database. Iceland became a DAC member in 2012 and now reports to the CRS. Czechia, Poland, Slovakia and Slovenia became DAC members in 2013.

** The total includes ODA from other bilaterals and multilaterals not listed above.

(…) indicates that data are not available, (-) represents a nil value.

All data represent gross disbursements. The share of ODA disbursed to the education sector is a percentage of gross ODA disbursements as reported in the CRS statistical tables. Total ODA figures in Table 1 represent net disbursements as reported in the DAC statistical tables.

Aid from France, the United Kingdom and New Zealand includes funds disbursed to overseas territories (see Table 3).

2002–2003 annual average excludes donors with missing values.

	DIRECT AID TO SECONDARY EDUCATION			DIRECT AID TO POST-SECONDARY EDUCATION			SHARE OF EDUCATION IN TOTAL ODA (%)			SHARE OF BASIC EDUCATION IN TOTAL AID TO EDUCATION (%)			SHARE OF SECONDARY EDUCATION IN TOTAL AID TO EDUCATION (%)		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS											
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
	25	8	16	69	28	28	11	15	12	32	58	65	20	19	16
	3	17	3	51	102	114	15	23	17	8	2	6	6	15	6
	15	25	24	77	26	16	9	8	7	19	29	37	16	34	37
	10	29	30	91	23	17	10	7	9	42	57	59	11	23	23
	…	1	1	…	7	7	…	16	14	…	7	8	…	11	12
	1	4	0	2	9	7	3	6	4	56	59	60	21	18	16
	2	3	3	2	6	4	10	9	9	56	52	68	22	22	15
	31	178	173	893	894	828	22	23	22	13	8	8	8	17	18
	63	127	198	520	1,056	1,189	16	16	13	16	16	18	10	12	14
	33	…	…	3	8	8	23	24	13	49	7	7	39	3	3
	…	0	0	…	…	…	…	7	5	…	92	96	…	7	4
	1	5	5	4	5	4	17	9	10	57	51	53	19	24	25
	2	11	14	9	10	34	3	5	5	38	43	35	22	30	22
	32	62	30	230	189	194	7	10	8	28	31	30	13	23	17
	…	11	…	…	19	…	…	18	10	…	10	50	…	35	25
	…	20	20	…	0	1	…	18	17	…	47	44	…	48	49
	1	9	5	64	84	87	8	4	2	66	32	5	6	7	5
	10	2	2	36	39	44	42	19	21	28	32	35	20	6	6
	8	6	7	37	35	33	8	8	10	58	71	77	11	8	7
	…	0	0	…	23	31	…	56	49	…	21	19	…	10	9
	7	5	4	44	24	19	26	23	29	15	20	22	14	20	22
	…	74	87	…	80	81	…	16	16	…	20	20	…	39	41
	…	0	1	…	2	2	…	27	22	…	16	18	…	18	23
	…	0	0	…	4	6	…	32	24	…	10	5	…	7	4
	38	7	9	54	9	5	12	11	11	33	40	40	29	29	35
	3	7	7	7	26	29	5	4	2	65	63	42	15	12	18
	28	41	44	2	12	13	5	4	4	47	44	45	46	41	40
	…	4	2	…	12	23	…	4	13	…	51	48	…	22	24
	7	282	84	1	117	188	6	12	9	69	46	53	17	33	19
	0	15	4	53	134	162	3	4	4	63	81	76	12	4	4
	…	0	0	…	1	1	…	11	17	…	25	22	…	22	20
	…	0	…	…	6	18	…	25	39	…	3	2	…	1	1
	…	…	…	…	1	…	…	65	8	…	47	50	…	24	25
	…	0	0	…	0	1	…	22	16	…	29	23	…	15	13
	…	0	1	…	20	29	…	81	90	…	30	1	…	16	2
	301	**955**	**775**	**2,247**	**3,012**	**3,224**	**8**	**8**	**8**	**33**	**38**	**38**	**13**	**18**	**16**
	…	…	…	…	0	…	…	0	0	…	10	50	…	5	25
	2	33	49	1	22	26	12	6	5	54	23	11	24	44	56
	…	…	…	…	…	…	…	1	10	…	50	50	…	25	25
	…	90	146	…	19	20	…	15	17	…	27	21	…	54	65
	12	60	103	18	210	195	3	6	7	48	42	45	24	20	22
	…	0	3	…	3	2	…	10	8	…	19	7	…	19	48
	…	0	0	…	…	…	…	0	0	…	…	…	…	100	100
	93	468	267	129	164	202	14	16	14	67	45	57	15	38	24
	…	1	2	…	2	0	…	3	2	…	75	90	…	12	7
	…	…	…	…	…	…	45	93	54	50	50	50	25	25	25
	…	11	0	…	1	1	…	8	13	…	23	53	…	65	22
	…	0	0	…	0	0	…	0	0	…	42	54	…	25	28
	0	0	1	0	…	…	9	6	6	99	65	61	1	18	20
	…	…	…	…	…	…	…	-	…	…	…	…	…	…	…
	…	…	…	…	…	…	…	58	52	…	100	100	…	…	…
	…	…	…	…	…	…	…	10	9	…	100	100	…	0	…
	107	**667**	**574**	**147**	**423**	**449**	**8**	**9**	**8**	**62**	**50**	**55**	**18**	**29**	**24**
	408	**1,622**	**1,349**	**2,395**	**3,435**	**3,673**	**8**	**8**	**8**	**41**	**41**	**43**	**14**	**21**	**19**

TABLE 3

Recipients of aid to education

	TOTAL AID TO EDUCATION			TOTAL AID TO BASIC EDUCATION			TOTAL AID TO BASIC EDUCATION PER PRIMARY SCHOOL-AGE CHILD			TOTAL AID TO SECONDARY EDUCATION			DIRECT AID TO EDUCATION		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Caucasus and Central Asia	**81**	**187**	**187**	**26**	**43**	**43**	**4**	**8**	**8**	**16**	**33**	**34**	**51**	**183**	**176**
Unallocated within the region	…	*15*	*12*	-	*2*	*2*	…	…	…	…	*3*	*4*	…	*15*	*12*
Armenia	15	25	22	6	5	4	38	-	29	3	2	2	7	24	22
Azerbaijan	11	17	15	4	3	2	6	7	4	2	1	2	5	17	15
Georgia	22	37	41	5	10	9	20	40	37	4	3	4	17	37	38
Kazakhstan	5	18	23	1	1	2	1	1	1	0	2	1	5	18	23
Kyrgyzstan	10	35	38	4	13	14	8	32	33	3	11	12	4	33	31
Tajikistan	7	11	13	4	4	6	5	6	9	2	3	3	2	11	13
Turkmenistan	1	3	2	0	0	0	1	0	1	0	1	0	1	3	2
Uzbekistan	10	24	20	2	4	4	1	2	2	3	6	7	10	24	20
Europe and Northern America	**166**	**432**	**365**	**59**	**96**	**49**	**17**	**33**	**38**	**37**	**64**	**34**	**156**	**354**	**360**
Unallocated within the region	*18*	*60*	*58*	*4*	*12*	*8*	…	…	…	*4*	*13*	*6*	*17*	*59*	*59*
Albania	64	31	30	30	6	5	118	35	31	22	7	5	62	27	30
Belarus	…	27	29	-	3	3	-	8	7	…	1	2	…	27	29
Bosnia and Herzegovina	27	33	34	9	3	3	-	-	-	3	4	4	27	33	34
Croatia	8	…	…	0	-	-	1	-	-	0	…	…	8	…	…
Montenegro	…	5	6	-	1	1	-	18	30	…	1	1	…	5	6
Republic of Moldova	8	65	39	2	19	5	8	126	31	1	12	4	6	65	39
Serbia	31	49	55	9	8	11	26	27	38	5	5	6	29	48	55
TFYR Macedonia	11	13	14	4	3	3	33	23	25	2	1	1	8	13	14
Ukraine	…	149	100	-	42	11	-	26	-	…	21	5	…	76	95
Eastern and South-eastern Asia	**743**	**1,382**	**1,371**	**140**	**369**	**352**	**1**	**2**	**2**	**93**	**237**	**294**	**704**	**1,347**	**1,368**
Unallocated within the region	*3*	*2*	*3*	*1*	0	0	…	…	…	0	*1*	*1*	3	2	3
Cambodia	41	82	78	15	26	25	7	14	14	7	22	24	33	82	77
China	316	419	458	15	19	25	0	0	0	21	38	65	316	419	458
DPR Korea	2	11	3	0	0	0	0	0	0	1	0	0	2	11	3
Indonesia	127	208	251	42	80	88	2	3	3	25	32	60	121	208	251
Lao PDR	24	61	44	7	13	16	9	17	21	3	31	17	20	60	44
Malaysia	13	28	23	1	2	2	0	1	1	3	1	1	13	28	23
Mongolia	24	41	45	8	10	14	33	42	55	1	10	10	21	41	45
Myanmar	10	90	84	5	52	37	1	10	7	0	19	22	10	90	84
Philippines	31	87	97	7	55	73	1	4	6	6	11	5	30	87	97
Thailand	26	40	32	2	6	8	0	1	2	3	3	4	26	40	32
Timor-Leste	17	29	29	4	12	10	22	65	54	6	8	11	14	29	29
Viet Nam	111	282	224	34	95	55	4	14	8	17	61	74	97	249	222
Latin America and the Caribbean	**495**	**773**	**724**	**195**	**275**	**252**	**3**	**5**	**4**	**88**	**152**	**143**	**477**	**759**	**708**
Unallocated within the region	*43*	*58*	*57*	*11*	*13*	*22*	…	…	…	*3*	*5*	*7*	*43*	*58*	*57*
Antigua and Barbuda	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0
Argentina	16	24	25	2	4	4	0	1	1	1	6	7	16	24	25
Aruba	…	…	…	…	…	…	-	-	-	…	…	…	…	…	…
Barbados	0	…	…	…	…	…	-	-	-	…	…	…	0	…	…
Belize	0	1	1	0	0	1	5	10	20	0	0	0	0	1	1
Bolivia, P. S.	75	41	30	48	13	8	37	10	6	17	15	15	72	41	30
Brazil	33	97	99	4	15	11	0	1	1	4	9	9	33	97	99
Chile	12	25	25	1	4	4	1	3	3	2	5	5	12	25	25
Colombia	28	68	65	4	17	13	1	4	3	4	12	12	28	68	65
Costa Rica	3	10	13	0	3	3	1	8	7	0	2	4	3	10	13
Cuba	10	6	7	3	1	1	3	1	1	1	1	2	10	6	7
Dominica	1	1	2	0	0	1	30	36	143	0	0	1	0	0	0
Dominican Republic	16	47	25	11	22	11	9	17	9	3	8	6	16	46	24
Ecuador	15	32	23	3	12	8	1	7	4	4	7	4	15	32	23
El Salvador	7	22	22	3	11	10	3	17	15	2	7	5	7	22	22
Grenada	0	3	1	-	1	1	-	100	44	0	1	0	0	0	0
Guatemala	25	24	26	13	12	14	7	5	6	5	8	7	25	24	26
Guyana	15	4	7	5	1	2	45	14	18	8	0	1	13	4	7
Haiti	21	95	70	11	58	44	8	41	31	2	17	13	21	87	60
Honduras	32	39	32	25	30	25	23	28	24	3	6	4	32	37	31
Jamaica	11	8	13	8	6	6	25	-	-	1	1	5	8	8	12
Mexico	26	54	56	2	7	5	0	0	0	6	8	6	26	54	56
Nicaragua	51	32	25	28	12	10	36	16	14	7	17	11	43	32	25
Panama	4	3	3	0	2	2	1	4	4	3	0	0	4	3	3
Paraguay	6	13	28	3	8	20	4	10	26	1	4	5	6	13	28
Peru	29	41	42	8	17	19	2	5	5	7	7	7	29	41	42
Saint Kitts and Nevis	…	…	…	0	-	-	1	-	-	0	…	…	0	…	…
Saint Lucia	1	2	1	0	1	0	9	-	-	0	0	0	1	2	1
Saint Vincent/Grenadines	0	1	2	0	1	1	4	44	75	0	0	0	0	1	2
Suriname	2	2	2	1	1	1	16	13	10	0	0	0	2	2	2
Trinidad and Tobago	1	…	…	0	-	-	0	-	-	0	…	…	1	…	…
Uruguay	3	4	5	0	1	1	1	3	4	0	2	2	3	4	5
Venezuela, B. R.	7	14	15	1	2	3	0	1	1	1	3	3	7	14	15
Northern Africa and Western Asia	**932**	**1,841**	**2,382**	**199**	**801**	**1,142**	**4**	**17**	**23**	**105**	**253**	**308**	**772**	**1,699**	**1,811**
Unallocated within the region	*4*	*29*	*131*	*2*	*14*	*106*	…	…	…	0	*2*	*1*	*4*	*29*	*131*
Algeria	114	107	102	1	2	2	0	1	1	1	3	3	114	107	102
Bahrain	0	…	…	0	-	-	0	-	-	0	…	…	0	…	…
Egypt	98	136	509	54	45	227	7	4	21	16	17	113	79	136	108
Iraq	7	60	59	1	18	29	0	3	5	1	17	10	7	60	47
Jordan	129	335	361	58	235	210	80	233	205	31	36	46	18	243	263
Lebanon	34	160	193	1	82	119	3	161	224	2	23	25	34	160	193
Libya	…	9	10	-	1	3	-	2	4	…	1	0	…	9	10

	DIRECT AID TO BASIC EDUCATION			DIRECT AID TO SECONDARY EDUCATION			DIRECT AID TO POST-SECONDARY EDUCATION			SHARE OF EDUCATION IN TOTAL ODA (%)			SHARE OF BASIC EDUCATION IN TOTAL AID TO EDUCATION (%)			SHARE OF SECONDARY EDUCATION IN TOTAL AID TO EDUCATION (%)		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS											
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
	7	**18**	**18**	**6**	**21**	**21**	**30**	**99**	**97**	**5**	**8**	**6**	**32**	**23**	**23**	**20**	**18**	**18**
	…	2	2	…	3	4	…	9	6	-	8	8	-	15	20	-	22	32
	1	2	2	1	0	1	4	16	15	5	9	5	39	21	19	20	8	9
	1	2	1	0	0	1	3	12	11	3	7	10	36	19	14	17	7	10
	3	4	4	2	1	1	12	22	26	7	6	7	25	26	22	17	9	9
	1	0	0	0	2	1	4	14	19	2	21	17	21	6	7	6	13	6
	0	4	4	1	6	7	2	7	7	5	10	5	39	36	36	25	31	32
	1	3	4	0	2	2	0	4	3	4	3	3	52	37	48	24	24	20
	0	0	0	0	1	0	0	2	2	3	12	9	36	3	9	11	34	9
	1	1	1	2	5	5	5	12	8	5	7	4	17	17	18	28	26	32
	33	**17**	**16**	**23**	**25**	**17**	**58**	**232**	**266**	**4**	**9**	**7**	**35**	**22**	**13**	**23**	**15**	**9**
	1	0	3	3	8	4	9	30	41	3	5	4	0	0	0	20	21	11
	20	2	2	17	5	3	7	17	19	18	10	7	47	20	17	34	21	16
	…	1	0	…	0	0	…	23	24	…	26	27	-	10	10	-	3	5
	5	1	1	1	3	3	13	24	27	6	5	7	34	10	7	12	12	11
	…	…	…	0	…	…	7	…	…	6	…	…	2	-	-	2	-	-
	…	0	0	…	1	0	…	2	4	-	4	5	-	16	19	-	25	9
	0	2	2	0	4	3	4	26	29	6	13	10	23	29	12	15	18	11
	3	2	2	2	3	2	15	34	33	2	8	8	28	16	19	16	11	12
	2	2	2	1	0	0	4	10	10	4	5	5	36	21	21	21	5	5
	…	3	4	…	2	1	…	66	80	…	12	7	-	28	11	-	14	5
	83	**195**	**187**	**64**	**150**	**212**	**481**	**689**	**642**	**8**	**10**	**11**	**19**	**27**	**26**	**13**	**17**	**21**
	1	…	0	0	1	1	1	1	3	4	1	1	46	1	1	2	42	21
	6	8	12	2	13	17	14	26	22	9	11	10	38	32	32	17	26	31
	9	3	3	18	31	54	278	354	357	14	35	31	5	4	5	7	9	14
	0	0	0	1	0	0	1	11	2	1	15	2	15	4	14	28	1	7
	29	28	12	19	6	22	54	70	66	7	11	12	33	38	35	20	15	24
	4	9	13	2	29	16	12	15	9	10	14	8	29	21	37	13	51	39
	0	0	0	3	0	0	9	24	20	8	21	18	6	7	7	25	4	3
	6	7	11	1	9	9	14	19	19	12	13	15	33	24	31	5	25	23
	5	40	15	0	13	11	4	13	14	10	5	7	55	58	44	3	21	26
	5	40	69	4	3	3	17	14	17	3	6	8	23	63	75	18	13	5
	0	3	4	2	2	2	21	29	18	4	7	10	6	15	26	10	8	12
	1	4	3	5	4	8	6	6	5	7	13	14	22	40	33	36	26	37
	17	53	44	9	40	69	52	106	90	8	6	6	30	34	24	16	22	33
	148	**157**	**173**	**64**	**93**	**103**	**188**	**286**	**289**	**7**	**8**	**6**	**39**	**36**	**35**	**23**	**55**	**57**
	7	10	19	2	4	5	28	38	26	8	3	2	25	23	39	8	9	12
	…	…	0	…	…	0	0	0	0	3	2	4	40	8	9	20	4	78
	1	0	0	1	4	5	12	13	12	16	35	17	12	15	16	11	25	28
	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
	…	…	…	…	…	…	0	…	…	3	…	…	-	…	…	…	…	…
	0	0	1	0	0	0	0	0	0	3	3	4	61	42	62	11	25	12
	39	3	3	13	10	12	6	7	5	7	6	4	63	32	27	18	38	49
	2	3	2	3	4	5	25	67	75	9	10	8	11	15	11	11	10	10
	0	0	0	1	3	3	9	14	15	18	11	30	9	17	15	9	20	19
	2	6	6	3	7	9	18	33	36	3	6	5	15	25	21	16	18	19
	0	2	2	0	1	4	2	4	5	5	13	9	12	36	25	2	19	34
	2	0	0	1	1	2	6	4	4	14	6	1	26	12	8	14	12	32
	…	0	0	0	…	0	0	0	0	8	4	10	30	34	42	20	10	24
	10	9	6	3	1	4	2	11	4	10	23	7	67	46	46	20	17	25
	2	4	6	4	3	3	8	8	9	5	16	6	18	39	35	35	23	18
	2	9	8	2	5	4	2	3	5	3	15	15	38	52	47	30	30	23
	…	…	0	0	-0	..	0	0	0	2	7	4	-	49	43	36	22	21
	11	11	11	4	8	5	6	3	3	8	8	6	53	50	54	22	35	27
	2	1	1	7	0	1	1	2	4	19	3	11	33	37	24	52	9	17
	9	37	35	1	7	8	6	10	8	11	10	7	54	61	64	11	18	18
	21	27	23	1	4	3	2	2	1	8	6	5	77	77	79	10	14	13
	6	5	5	0	1	4	0	1	2	11	7	13	76	72	47	11	13	37
	1	1	1	5	5	4	19	36	42	12	6	11	6	13	9	21	15	11
	19	8	8	2	15	10	11	2	3	8	8	5	55	36	41	14	51	43
	0	1	1	3	0	0	1	1	1	10	9	11	9	45	47	64	11	7
	2	6	18	1	3	4	1	2	1	7	11	22	49	57	73	28	27	19
	6	12	14	6	4	5	13	15	13	4	9	8	27	42	45	24	16	17
	…	…	…	…	…	…	0	…	…	-	-	-	-	-	-	-	-	-
	0	0	0	0	0	…	0	0	0	4	15	4	31	42	25	20	21	12
	0	…	0	0	…	…	0	0	0	4	13	12	24	47	44	39	24	22
	1	0	0	0	…	…	1	1	1	7	20	12	42	33	27	4	10	8
	…	…	…	0	…	…	1	…	…	14	…	…	1	-	-	4	-	-
	0	0	0	0	1	1	2	1	2	19	5	11	16	25	20	15	39	32
	0	0	0	1	2	2	5	8	8	10	36	36	10	15	20	18	22	19
	89	**575**	**725**	**50**	**140**	**100**	**571**	**674**	**724**	**13**	**8**	**8**	**21**	**44**	**48**	**11**	**14**	**13**
	2	14	105	1	2	1	1	12	23	4	4	2	66	49	81	10	9	1
	0	0	0	1	3	2	111	101	96	51	48	52	1	2	2	1	3	3
	…	…	…	0	…	…	0	…	…	53	…	…	1	-	-	3	-	-
	43	25	13	11	7	6	23	64	61	6	3	14	55	33	45	16	13	22
	1	13	19	1	15	5	5	23	16	1	5	4	18	29	49	10	29	17
	0	169	133	2	3	8	10	31	65	13	12	15	45	70	58	24	11	13
	0	62	108	2	13	19	31	44	44	28	19	17	4	51	62	6	14	13
	…	…	2	…	0	…	…	6	7	…	5	6	-	13	26	-	10	3

TABLE 3

Recipients of aid to education (Continued)

	TOTAL AID TO EDUCATION			TOTAL AID TO BASIC EDUCATION			TOTAL AID TO BASIC EDUCATION PER PRIMARY SCHOOL-AGE CHILD			TOTAL AID TO SECONDARY EDUCATION			DIRECT AID TO EDUCATION		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Morocco	242	266	233	15	40	44	4	12	13	8	70	41	241	266	233
Oman	0	…	…	0	-	-	0	-	-	0	…	…	0	…	…
Palestine	44	316	346	18	263	287	41	565	601	10	22	20	44	308	339
Saudi Arabia	2	…	…	0	-	-	0	-	-	1	…	…	2	…	…
Sudan*	18	26	26	9	14	13	2	2	2	2	3	4	15	26	20
Syrian Arab Republic	27	62	91	1	17	36	1	6	13	1	0	2	27	62	91
Tunisia	84	144	126	2	29	18	1	30	18	14	22	15	84	116	109
Turkey	90	106	104	17	7	11	3	1	2	10	12	6	64	106	104
Yemen	39	85	91	20	34	37	6	8	9	8	23	21	38	72	61
Pacific	**191**	**200**	**193**	**73**	**95**	**80**	**64**	**60**	**49**	**39**	**32**	**41**	**151**	**198**	**187**
Unallocated within the region	*10*	*18*	*15*	*1*	*2*	*3*	…	…	…	*1*	*1*	*1*	*10*	*18*	15
Cook Islands	3	3	2	1	2	2	480	1,376	921	1	0	0	3	3	2
Fiji	9	15	17	3	3	5	24	31	51	1	3	3	9	15	17
Kiribati	8	10	16	3	6	8	201	449	555	2	2	5	8	10	16
Marshall Islands	12	9	6	6	9	3	803	984	347	3	0	1	1	9	6
Micronesia, F. S.	24	38	15	12	29	8	701	2,010	561	6	4	3	1	38	15
Nauru	0	3	5	0	0	0	14	126	242	0	2	4	0	3	5
Niue	5	1	1	2	1	1	8,984	3,827	3,815	1	0	0	4	0	0
Palau	4	1	1	2	0	0	1,061	326	258	1	0	0	1	1	1
Papua New Guinea	74	46	39	33	19	15	39	15	11	13	11	9	74	46	39
Samoa	11	13	14	4	3	4	132	112	138	2	2	3	11	13	14
Solomon Islands	7	16	25	2	9	12	28	100	127	2	2	6	6	16	24
Tonga	6	6	11	2	2	5	111	127	336	1	1	1	6	6	11
Tuvalu	2	4	4	1	1	1	517	991	816	0	1	1	2	4	4
Vanuatu	14	16	22	3	7	12	92	185	312	6	3	4	14	16	19
Southern Asia	**826**	**2,390**	**2,310**	**512**	**1,112**	**1,214**	**3**	**6**	**7**	**105**	**716**	**476**	**660**	**2,365**	**2,238**
Unallocated within the region	*4*	2	*4*	1	1	0	…	…	…	…	0	0	*4*	2	*4*
Afghanistan	33	363	219	21	264	113	6	47	20	5	43	45	28	363	219
Bangladesh	129	400	518	85	182	254	5	11	16	25	152	160	121	375	466
Bhutan	8	2	1	4	0	1	39	5	5	2	0	0	8	2	1
India	330	721	589	244	241	359	2	2	3	20	333	65	311	721	589
Iran, Islamic Republic of	33	65	75	1	1	1	0	0	0	1	1	1	33	65	75
Maldives	8	2	2	2	1	1	46	-	18	2	0	0	8	2	2
Nepal	44	145	147	28	68	76	8	21	24	6	45	38	41	145	137
Pakistan	193	586	659	112	315	371	6	15	17	36	98	126	68	586	648
Sri Lanka	44	103	95	15	38	38	9	22	22	8	42	40	38	103	95
Sub-Saharan Africa	**2,416**	**2,824**	**2,919**	**1,278**	**1,334**	**1,348**	**11**	**9**	**8**	**360**	**689**	**739**	**1,909**	**2,494**	**2,491**
Unallocated within the region	53	47	*74*	41	25	39	…	…	…	4	*8*	*13*	52	47	67
Angola	35	26	26	20	13	11	10	3	2	3	6	7	35	26	26
Benin	39	37	40	15	16	19	12	9	11	6	5	6	34	31	40
Botswana	3	32	9	0	16	4	1	50	13	1	8	2	3	32	9
Burkina Faso	78	76	95	47	45	47	23	15	15	14	16	25	55	57	61
Burundi	12	28	18	5	12	7	4	8	4	2	7	5	8	21	17
Cameroon	85	87	96	16	5	5	6	1	1	5	11	17	73	87	96
Cape Verde	33	25	17	4	3	2	51	43	31	4	9	6	31	22	14
Central African Republic	8	18	15	1	8	6	1	11	8	1	4	3	8	3	4
Chad	24	16	33	12	7	15	7	3	6	4	4	8	16	12	13
Comoros	11	14	14	4	1	2	39	9	19	1	2	1	11	14	14
Congo	22	18	17	2	2	1	4	2	1	1	3	4	22	18	17
Côte d'Ivoire	79	71	72	28	24	17	10	7	5	12	16	27	46	35	44
D. R. Congo	108	92	58	49	53	23	6	4	2	25	21	20	26	92	58
Djibouti	26	15	19	7	4	6	56	47	64	6	4	5	23	11	12
Equatorial Guinea	8	1	2	4	0	1	52	3	6	2	0	0	8	1	2
Eritrea	16	8	7	7	1	1	13	1	1	4	3	2	16	8	7
Ethiopia	92	399	186	52	238	101	4	15	6	16	90	44	71	384	186
Gabon	26	21	19	5	1	1	23	4	4	2	3	2	25	21	19
Gambia	8	9	6	5	5	3	26	15	9	1	1	1	7	8	4
Ghana	113	82	227	73	41	93	23	11	24	17	29	96	71	80	158
Guinea	40	47	50	24	18	20	17	9	11	5	6	7	36	30	35
Guinea-Bissau	9	16	11	4	9	4	17	33	15	1	3	2	9	13	8
Kenya	76	89	99	50	52	53	9	7	7	7	14	18	71	89	99
Lesotho	21	3	3	11	2	3	30	7	7	7	0	0	18	3	3
Liberia	3	46	65	2	28	40	4	39	55	0	8	13	3	33	47
Madagascar	72	72	75	32	31	31	13	10	10	8	17	18	57	49	55
Malawi	66	78	85	39	46	54	18	16	19	20	18	13	63	74	82
Mali	87	89	92	46	42	44	24	15	15	15	23	24	67	59	72
Mauritania	30	22	34	12	2	9	26	3	14	4	5	15	26	22	24
Mauritius	14	12	16	0	1	3	3	11	34	0	3	5	14	11	11
Mozambique	131	192	174	73	106	105	19	20	19	20	47	36	95	147	132
Namibia	24	46	22	13	17	10	35	43	25	7	20	6	24	46	22
Niger	49	78	77	25	40	43	13	12	13	12	22	20	30	55	47
Nigeria	30	134	148	15	52	52	1	2	2	4	48	54	29	134	148
Rwanda	55	80	90	25	34	44	18	19	24	15	25	26	38	80	90
Sao Tome and Principe	5	6	5	1	0	1	40	16	39	1	1	1	5	6	4
Senegal	100	149	140	32	56	44	19	24	18	10	34	28	95	141	138
Seychelles	1	1	1	0	0	0	41	34	42	0	0	0	1	1	1
Sierra Leone	21	40	44	13	24	22	18	24	20	4	8	12	10	19	9
Somalia	4	29	44	3	20	29	2	11	16	0	5	8	4	29	43
South Africa	106	39	98	49	13	56	7	2	8	13	7	15	106	39	87

	DIRECT AID TO BASIC EDUCATION			DIRECT AID TO SECONDARY EDUCATION			DIRECT AID TO POST-SECONDARY EDUCATION			SHARE OF EDUCATION IN TOTAL ODA (%)			SHARE OF BASIC EDUCATION IN TOTAL AID TO EDUCATION (%)			SHARE OF SECONDARY EDUCATION IN TOTAL AID TO EDUCATION (%)		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS											
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
	6	12	29	4	56	33	213	142	140	34	11	12	6	15	19	3	26	17
	0	…	…	0	…	…	0	…	…	9	…	…	26	-	-	11	-	-
	12	236	264	7	9	9	14	17	28	8	15	18	40	83	83	22	7	6
	…	…	…	0	…	…	1	…	…	49	…	…	4	-	-	24	-	-
	6	10	8	1	1	1	5	6	7	5	3	2	50	55	50	11	13	14
	1	16	32	0	0	…	25	45	51	28	4	2	5	27	40	2	1	2
	1	2	2	13	9	7	68	80	85	23	15	14	2	20	14	16	15	12
	2	0	3	3	8	2	56	84	84	19	3	3	19	6	10	11	11	6
	14	16	7	5	14	6	7	19	18	12	7	6	52	41	41	22	27	23
	26	**59**	**39**	**16**	**14**	**21**	**55**	**55**	**51**	**18**	**13**	**10**	**38**	**48**	**41**	**21**	**16**	**21**
	1	1	2	1	0	0	8	15	10	14	9	7	13	12	23	11	3	7
	0	2	1	0	0	0	1	1	0	42	13	9	32	76	67	25	3	9
	1	0	1	0	2	0	5	8	7	21	19	16	28	21	31	10	21	15
	0	6	8	0	2	5	3	2	2	36	15	25	32	62	53	20	20	33
	0	8	0	0	…	0	0	0	0	18	15	10	48	97	50	26	1	23
	0	21	2	1	…	…	1	0	0	18	32	17	49	77	55	25	11	22
	…	…	0	…	2	4	0	0	0	0	16	15	47	6	8	23	80	78
	1	0	…	…	0	0	1	0	0	41	12	7	34	43	42	19	22	25
	0	0	0	0	…	0	1	0	0	14	4	5	46	50	49	22	17	13
	20	2	2	6	2	2	22	7	9	19	9	6	45	42	37	17	23	22
	1	2	1	1	2	1	3	7	6	24	15	14	35	26	29	21	18	18
	0	8	9	1	1	5	2	5	6	8	9	13	29	56	47	26	11	24
	1	1	3	1	0	0	3	3	3	24	8	15	26	34	49	17	10	11
	0	0	0	0	…	0	1	2	1	19	15	8	36	32	30	11	16	23
	0	6	10	4	3	3	4	6	5	34	18	12	20	43	54	40	19	17
	398	**852**	**946**	**49**	**586**	**342**	**150**	**433**	**486**	**8**	**13**	**12**	**62**	**47**	**53**	**13**	**30**	**21**
	0	0	0	0	…	0	3	1	3	1	1	1	14	24	11	-	11	10
	14	245	91	1	34	34	4	46	50	2	8	5	64	73	52	14	12	20
	77	133	198	21	127	132	16	41	75	10	14	16	66	46	49	19	38	31
	3	0	0	1	0	0	1	1	1	14	1	1	53	32	36	25	21	6
	226	221	340	12	323	55	57	136	156	11	16	11	74	33	61	6	46	11
	0	0	0	1	1	1	32	63	72	27	58	61	2	1	1	2	2	1
	2	0	0	2	0	0	3	1	1	40	7	5	33	36	39	31	20	18
	21	53	56	3	38	28	7	25	24	10	15	11	63	47	52	14	31	26
	42	184	239	1	32	59	10	107	96	5	15	15	58	54	56	19	17	19
	11	15	21	6	30	32	19	11	8	7	12	12	34	37	40	19	41	42
	801	**752**	**789**	**121**	**398**	**459**	**539**	**510**	**553**	**9**	**7**	**6**	**53**	**47**	**46**	**15**	**24**	**25**
	35	21	30	1	6	9	4	12	17	4	1	3	78	53	53	8	16	18
	14	6	2	0	3	3	10	4	4	7	10	6	56	49	41	9	23	27
	11	11	17	3	3	5	16	13	14	12	7	9	39	43	46	14	14	16
	0	0	0	1	0	…	1	0	1	6	29	11	14	49	45	50	25	22
	31	31	23	6	10	12	9	9	11	13	7	9	60	58	49	18	22	26
	2	5	3	0	4	3	3	4	4	5	6	5	44	45	40	17	27	28
	9	3	3	1	10	16	60	71	74	9	11	13	19	6	5	6	12	17
	2	0	0	3	8	5	24	12	8	26	11	9	12	10	11	11	38	34
	1	0	1	0	0	1	6	3	3	13	3	3	11	42	40	8	21	22
	4	4	4	1	2	2	5	3	3	8	4	3	48	45	47	18	23	24
	3	0	1	1	1	0	7	11	10	35	21	20	32	7	16	6	11	7
	1	1	1	0	3	4	18	12	12	23	16	13	9	9	6	4	19	22
	8	6	2	2	7	19	28	21	20	8	7	7	36	34	24	15	23	37
	4	45	14	3	17	16	11	13	11	3	4	2	45	58	39	24	23	34
	5	1	0	5	2	2	12	5	5	31	9	10	26	29	32	24	26	27
	2	0	1	1	0	…	1	1	1	28	16	14	49	29	44	26	7	4
	4	0	0	3	3	2	3	3	4	6	11	7	45	13	9	27	40	25
	28	125	55	4	34	21	13	15	19	5	12	6	56	60	54	17	23	24
	4	0	0	2	2	2	19	17	15	20	19	16	18	4	4	9	12	13
	4	2	1	0	0	0	1	1	1	13	9	4	63	54	53	13	17	18
	43	38	47	2	28	73	8	10	14	11	8	12	65	50	41	15	35	42
	21	8	11	3	2	3	9	18	18	12	9	8	61	38	41	12	14	15
	3	4	1	1	0	1	4	2	3	7	16	11	42	56	40	10	16	19
	45	46	47	4	11	15	16	19	26	12	3	4	67	58	53	9	16	18
	7	2	2	5	…	0	2	0	0	20	2	3	51	90	83	32	4	6
	2	15	22	0	1	4	0	3	4	3	7	6	71	61	61	19	17	19
	18	11	8	2	6	6	25	14	13	12	13	10	44	43	42	12	23	24
	27	27	41	14	9	7	2	4	11	12	8	8	59	59	63	30	23	16
	26	21	28	5	13	16	15	14	15	13	8	7	54	47	48	18	26	26
	7	1	1	2	4	12	12	15	7	9	8	9	39	9	25	14	21	45
	0	0	1	…	3	3	14	7	7	35	12	14	2	10	21	0	27	28
	39	51	64	3	20	16	22	11	13	6	10	9	55	55	60	15	25	21
	11	2	2	6	13	3	3	3	2	18	18	12	53	36	44	30	43	28
	7	16	23	3	10	10	3	5	4	11	9	9	51	51	56	24	28	26
	11	12	23	2	28	40	8	14	26	8	6	6	51	39	35	13	36	37
	4	17	33	4	17	21	6	12	16	13	9	8	44	43	48	26	32	29
	1	0	1	1	1	1	3	4	2	14	15	9	18	8	26	22	26	29
	17	38	28	2	25	20	50	51	60	17	14	14	32	37	31	10	23	20
	…	0	0	0	…	…	0	0	1	17	6	10	37	34	32	19	6	7
	6	13	2	1	3	2	1	1	1	5	5	4	62	62	49	19	21	27
	2	15	17	…	2	2	0	1	1	2	3	4	77	70	66	9	18	18
	40	7	41	8	4	8	39	17	20	21	3	6	47	33	57	12	17	16

TABLE 3

Recipients of aid to education (Continued)

	TOTAL AID TO EDUCATION			TOTAL AID TO BASIC EDUCATION			TOTAL AID TO BASIC EDUCATION PER PRIMARY SCHOOL-AGE CHILD			TOTAL AID TO SECONDARY EDUCATION			DIRECT AID TO EDUCATION		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
South Sudan*	…	50	77	-	34	60	…	18	30	…	9	8	…	50	77
Swaziland	3	5	7	1	4	5	6	20	24	1	0	1	3	5	7
Togo	12	20	29	1	2	4	1	2	4	0	9	13	12	20	26
U. R. Tanzania	257	122	207	196	62	113	29	6	11	27	20	54	192	98	184
Uganda	195	113	101	138	36	45	25	5	5	26	62	34	168	108	96
Zambia	114	71	39	71	44	25	33	14	8	20	13	6	78	67	39
Zimbabwe	11	55	38	5	39	24	2	14	9	1	9	6	11	55	38
Overseas territories**	**208**	**61**	**58**	**103**	**20**	**22**	**-**	**-**	**-**	**52**	**35**	**30**	**203**	**58**	**57**
Anguilla (UK)	1	…	…	0	…	…	-	…	…	0	…	…	1	…	…
Mayotte (France)	145	…	…	72	…	…	-	…	…	36	…	…	145	…	…
Montserrat (UK)	5	2	0	1	1	0	2,902	-	-	1	1	0	0	1	0
Saint Helena (UK)	0	1	2	0	0	1	-	-	-	0	0	0	0	1	2
Tokelau (New Zealand)	5	2	3	2	1	2	11,731	6,118	10,925	1	0	0	4	0	2
Turks and Caicos Islands (UK)	0	…	…	0	…	…	-	…	…	…	…	…	0	…	…
Wallis and Futuna (France)	52	56	53	26	18	19	-	-	-	13	34	29	52	56	53
Unallocated by region or country	*462*	*1,454*	*1,463*	*88*	*645*	*671*	…	…	…	*32*	*258*	*138*	*461*	*1,441*	*1,449*
Total	**6,522**	**11,543**	**11,971**	**2,674**	**4,790**	**5,173**	**5**	**8**	**8**	**929**	**2,470**	**2,237**	**5,544**	**10,897**	**10,845**
Low income countries	1,613	2,588	2,312	916	1,403	1,186	13	14	11	254	586	534	1,239	2,297	2,003
Lower middle income countries	2,665	4,969	5,427	1,184	2,039	2,450	4	6	8	382	1,265	1,187	2,247	4,731	4,768
Upper middle income countries	1,398	2,183	2,295	317	602	652	2	3	4	192	279	296	1,217	2,080	2,161
High income countries	54	62	65	8	12	12	1	1	1	7	16	18	52	61	63
Unallocated by income	792	1,741	1,873	248	733	873	…	…	…	94	325	201	790	1,728	1,851
Total	**6,522**	**11,543**	**11,971**	**2,674**	**4,790**	**5,173**	**5**	**8**	**8**	**929**	**2,470**	**2,237**	**5,544**	**10,897**	**10,845**
Least developed countries	2,152	3,486	8,710	1,191	1,787	1,641	12	14	12	357	871	838	1,703	3,148	2,916
Caucasus and Central Asia	81	187	187	26	43	43	4	8	8	16	33	34	51	183	176
Europe and Northern America	167	432	365	59	96	49	17	33	38	37	64	34	156	354	360
Eastern and South-eastern Asia	743	1,382	1,371	140	369	352	1	2	2	93	237	294	704	1,347	1,368
Latin America and the Caribbean	495	773	724	195	275	252	3	5	4	88	152	143	477	759	708
Northern Africa and Western Asia	932	1,841	2,382	199	801	1,142	4	17	23	105	253	308	772	1,699	1,811
Pacific	191	200	193	73	95	80	64	60	49	39	32	41	151	198	187
Southern Asia	826	2,390	2,310	512	1,112	1,214	3	6	7	106	716	476	660	2,365	2,238
Sub-Saharan Africa	2,416	2,824	2,919	1,278	1,334	1,348	11	9	8	360	689	739	1,909	2,494	2,491
Overseas territories	208	61	58	103	20	22	-	-	-	52	35	30	203	58	57
Unallocated by region or country	462	1,454	1,463	88	645	671	…	…	…	32	258	138	461	1,441	1,449
Total	**6,522**	**11,543**	**11,971**	**2,674**	**4,790**	**5,173**	**5**	**8**	**8**	**929**	**2,470**	**2,237**	**5,544**	**10,897**	**10,845**

Source: OECD-DAC, CRS database (2017).

* Aid disbursement figures for 2002–2003 refer to the former Sudan, before the separation of South Sudan in 2011. Aid disbursements for 2011 onwards have been separated out by the OECD and refer to Sudan and South Sudan.

** As defined on the OECD-DAC list of ODA recipients.

(…) indicates that data are not available, (-) represents a nil value.

The share of education in total ODA does not match that in Table 2 because the DAC database is used for donors and the CRS database for recipients in total ODA figures.

Malta and Slovenia are not listed because they were removed from the OECD-DAC list of ODA recipients in 2005. However, the aid they received in 2002–2003 is included in the totals.

The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

All data represent gross disbursements.

2002–2003 annual average excludes recipient countries with missing values.

	DIRECT AID TO BASIC EDUCATION			DIRECT AID TO SECONDARY EDUCATION			DIRECT AID TO POST-SECONDARY EDUCATION			SHARE OF EDUCATION IN TOTAL ODA (%)			SHARE OF BASIC EDUCATION IN TOTAL AID TO EDUCATION (%)			SHARE OF SECONDARY EDUCATION IN TOTAL AID TO EDUCATION (%)		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS											
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
	…	24	47	…	4	1	…	2	3	…	3	5	-	68	78	-	17	10
	0	4	5	0	0	1	0	0	0	11	6	6	46	86	78	22	8	13
	1	1	2	0	9	12	10	9	10	17	9	13	10	9	15	4	45	46
	152	33	63	5	5	29	12	26	14	15	5	8	76	51	55	11	16	26
	96	29	32	5	58	28	11	11	15	19	7	6	71	32	45	13	55	34
	39	20	15	4	1	1	7	2	2	10	7	4	62	61	65	17	19	16
	3	35	22	0	7	5	4	4	6	5	8	5	44	71	64	10	17	16
	1	**11**	**12**	**1**	**30**	**25**	**1**	**1**	**0**	**64**	**23**	**22**	**49**	**34**	**38**	**25**	**57**	**52**
	…	…	…	0	…	…	0	…	…	23	…	…	18	…	…	72	…	…
	…	…	…	…	…	…	0	…	…	76	…	…	50	…	…	25	…	…
	0	…	…	…	0	…	0	0	0	10	7	0	26	43	27	24	22	14
	…	…	…	0	…	…	…	0	0	7	0	2	6	47	47	91	24	23
	0	0	1	…	…	…	0	…	…	52	11	29	49	51	63	21	25	19
	0	…	…	…	…	…	…	…	…	19	…	…	100	…	…	-	…	…
	…	11	11	…	30	25	0	0	0	75	66	50	50	33	37	25	60	55
	48	*457*	*491*	*12*	*164*	*48*	*322*	*456*	*565*	*5*	*4*	*3*	*19*	*44*	*46*	*7*	*18*	*9*
	1,632	**3,093**	**3,396**	**406**	**1,622**	**1,349**	**2,395**	**3,435**	**3,673**	**9**	**8**	**7**	**41**	**41**	**43**	**14**	**21**	**19**
	562	916	747	76	342	315	266	355	373	8	8	6	57	54	51	16	23	23
	809	1,313	1,584	194	902	754	911	1,302	1,356	9	9	9	44	41	45	14	25	22
	162	344	398	114	150	170	809	1,173	1,219	9	10	10	23	28	28	12	13	13
	2	3	2	4	11	13	36	29	31	14	14	18	14	20	18	6	25	28
	97	517	664	17	217	97	374	575	694	6	4	3	-	-	-	12	19	11
	1,632	**3,093**	**3,396**	**406**	**1,622**	**1,349**	**2,395**	**3,435**	**3,673**	**9**	**8**	**7**	**41**	**41**	**43**	**14**	**21**	**19**
	750	1,152	1,031	137	554	533	383	511	551	9	8	21	55	51	19	17	25	10
	7	18	18	6	21	21	30	99	97	5	8	6	32	23	23	20	18	18
	33	17	16	23	25	17	58	232	266	4	9	7	19	27	26	13	17	21
	83	195	187	64	150	212	481	689	642	8	10	11	35	22	13	22	15	9
	148	157	173	64	93	103	188	286	289	7	8	6	39	36	35	9	20	20
	89	575	725	50	140	100	571	674	724	13	8	8	21	44	48	11	14	13
	26	59	39	16	14	21	55	55	51	18	13	12	38	48	41	21	16	21
	398	852	946	49	586	342	150	433	486	8	13	12	62	47	53	13	30	21
	801	752	789	121	398	459	539	510	553	9	7	6	53	47	46	15	24	25
	1	11	12	1	30	25	1	1	0	64	23	22	49	34	38	25	57	52
	48	457	491	12	164	48	322	456	565	5	4	3	19	44	46	7	18	9
	1,632	**3,093**	**3,396**	**406**	**1,622**	**1,349**	**2,395**	**3,435**	**3,673**	**9**	**8**	**7**	**41**	**41**	**43**	**14**	**21**	**19**

TABLE 4

ODA recipients

	TOTAL ODA			PER CAPITA ODA			SECTOR-ALLOCABLE ODA			DEBT RELIEF AND OTHER ACTIONS RELATED TO DEBT		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Caucasus and Central Asia	**1,755**	**2,471**	**3,243**	**24**	**34**	**39**	**1,084**	**2,341**	**2,512**	**5**	…	-
Unallocated within the region	*3*	*190*	*151*	…	…	…	*3*	*178*	*136*	…	…	…
Armenia	314	276	409	90	89	115	231	261	354	…	…	…
Azerbaijan	322	242	160	40	23	7	147	238	144	…	…	…
Georgia	322	611	558	63	151	122	223	561	512	…	…	…
Kazakhstan	211	89	131	16	5	5	138	86	88	…	…	…
Kyrgyzstan	195	365	832	38	107	129	133	345	354	5	…	…
Tajikistan	162	336	473	25	43	50	79	321	416	…	…	…
Turkmenistan	25	25	27	8	7	4	13	24	22	…	…	…
Uzbekistan	200	338	501	8	11	14	117	328	485	…	…	…
Europe and Northern America	**3,896**	**5,061**	**5,576**	**46**	**60**	**69**	**2,015**	**4,148**	**4,450**	**1,022**	**15**	**26**
Unallocated within the region	*565*	*1,307*	*1,519*	…	…	…	*292*	*1,038*	*1,090*	*55*	…	…
Albania	353	310	423	108	97	115	269	277	316	…	…	…
Belarus	…	105	109	…	13	11	…	101	102	…	…	…
Bosnia and Herzegovina	473	612	518	144	165	93	339	534	422	13	1	26
Croatia	132	…	…	28	…	…	90	…	…	…	…	…
Montenegro	5	125	140	13	161	161	5	102	132	…	14	…
Republic of Moldova	138	496	371	36	146	88	101	481	356	0	…	…
Serbia	1,982	622	729	227	52	44	730	561	659	1,008	…	…
TFYR Macedonia	263	255	285	133	102	103	202	253	250	1	…	…
Ukraine	…	1,229	1,481	…	31	32	…	803	1,123	…	…	…
Eastern and South-eastern Asia	**8,860**	**13,497**	**12,552**	**5**	**7**	**6**	**5,346**	**11,218**	**11,359**	**332**	**1,004**	**86**
Unallocated within the region	*77*	*269*	*322*	…	…	…	*44*	*203*	*232*	…	…	…
Cambodia	434	764	757	39	52	43	330	739	721	…	…	…
China	2,235	1,212	1,491	1	-1	-0	1,654	1,181	1,451	…	…	…
DPR Korea	181	78	134	8	6	5	75	53	44	…	…	55
Indonesia	1,812	1,852	2,036	7	-2	-0	864	1,757	1,939	308	29	24
Lao PDR	241	435	538	52	71	69	201	403	468	2	…	…
Malaysia	169	136	125	4	1	-0	45	119	118	…	…	…
Mongolia	197	324	294	94	109	80	135	311	270	…	…	…
Myanmar	97	1,855	1,223	2	26	22	60	711	971	12	968	2
Philippines	1,064	1,393	1,200	8	7	5	381	849	877	9	6	6
Thailand	686	568	327	-5	5	1	319	513	254	…	…	…
Timor-Leste	231	217	213	217	206	171	199	203	207	…	…	…
Viet Nam	1,437	4,395	3,894	19	46	34	1,039	4,175	3,806	1	0	0
Latin America and the Caribbean	**6,639**	**10,146**	**11,799**	**12**	**19**	**19**	**4,426**	**8,824**	**9,331**	**606**	**18**	**554**
Unallocated within the region	*570*	*2,109*	*2,319*	…	…	…	*396*	*1,330*	*1,321*	*2*	…	…
Antigua and Barbuda	6	2	3	119	28	16	6	2	2	…	…	…
Argentina	100	70	147	3	1	-1	65	68	65	6	…	76
Aruba	…	…	…	…	…	…	…	…	…	…	…	…
Barbados	3	…	…	42	…	…	2	…	…	…	…	…
Belize	13	32	35	70	107	76	9	30	28	3	0	0
Bolivia, P. S.	1,026	639	842	93	64	73	564	626	598	339	…	…
Brazil	388	963	1,183	1	4	5	231	949	1,164	…	1	0
Chile	68	227	85	2	14	3	61	223	79	1	…	…
Colombia	815	1,146	1,418	15	26	28	718	1,079	1,343	1	0	0
Costa Rica	55	76	137	4	11	23	39	71	132	…	1	1
Cuba	70	94	559	6	23	49	58	82	73	…	5	474
Dominica	13	16	22	290	226	160	10	14	7	…	…	…
Dominican Republic	164	206	348	12	16	26	106	193	332	…	…	…
Ecuador	290	204	384	15	10	19	216	182	348	8	…	…
El Salvador	221	144	150	36	16	14	117	124	127	4	1	0
Grenada	10	36	37	103	375	225	10	16	21	…	…	…
Guatemala	304	299	455	20	17	25	225	269	426	…	0	0
Guyana	81	140	62	113	210	40	51	137	54	15	…	…
Haiti	189	968	1,052	21	102	97	129	780	842	1	1	0
Honduras	387	614	600	62	76	67	210	581	546	53	…	…
Jamaica	102	112	105	6	34	21	63	108	78	10	0	0
Mexico	224	845	508	1	7	2	215	838	496	1	…	…
Nicaragua	621	412	516	130	72	75	329	389	476	153	…	…
Panama	43	37	32	8	-50	2	32	34	27	10	0	0
Paraguay	87	125	130	10	10	8	51	122	125	…	0	0
Peru	637	471	523	19	11	11	382	433	507	12	9	1
Saint Kitts and Nevis	4	…	…	300	…	…	4	…	…	…	…	…
Saint Lucia	15	16	24	152	105	74	15	10	12	…	…	…
Saint Vincent/Grenadines	6	9	19	50	91	124	4	5	9	5	…	…
Suriname	37	12	17	27	25	28	34	12	17	…	…	…
Trinidad and Tobago	5	…	…	-5	…	…	5	…	…	0	…	…
Uruguay	15	84	48	5	26	6	13	83	46	1	…	…
Venezuela, B. R.	70	38	42	3	1	1	54	34	32	…	…	…
Northern Africa and Western Asia	**7,363**	**23,041**	**30,997**	**21**	**66**	**72**	**4,107**	**15,166**	**13,132**	**233**	**83**	**42**
Unallocated within the region	*94*	*815*	*6,474*	…	…	…	*39*	*398*	*564*	*1*	…	…
Algeria	224	221	194	7	4	2	144	198	161	…	…	…
Bahrain	1	…	…	129	…	…	1	…	…	…	…	…
Egypt	1,602	4,017	3,567	16	39	27	980	2,212	1,483	157	82	32
Iraq	1,388	1,226	1,497	47	39	41	782	699	581	…	…	…
Jordan	1,012	2,718	2,388	188	364	283	318	1,372	1,181	58	…	…
Lebanon	124	850	1,163	101	146	167	94	520	528	…	…	…
Libya	…	179	158	…	34	25	…	118	66	…	…	…
Morocco	700	2,415	2,005	16	66	43	470	2,384	1,956	302	…	9

TABLE 4

ODA recipients (Continued)

	TOTAL ODA			PER CAPITA ODA			SECTOR-ALLOCABLE ODA			DEBT RELIEF AND OTHER ACTIONS RELATED TO DEBT		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Oman	4	...	...	30	...	...	4	...	...	...	...	...
Palestine	567	2,166	1,879	323	579	424	431	1,510	1,252	...	...	...
Saudi Arabia	4	...	...	1	...	...	4	...	...	...	...	...
Sudan*	388	855	1,049	15	22	22	92	400	521	4	0	0
Syrian Arab Republic	97	1,742	4,889	5	224	264	66	262	329	2	...	...
Tunisia	371	950	894	26	84	43	249	778	774	...	0	0
Turkey	473	3,723	3,195	3	44	27	229	3,533	2,926	...	...	...
Yemen	313	1,166	1,646	12	44	57	203	782	810	13	...	...
Pacific	**1,037**	**1,587**	**1,872**	**130**	**197**	**185**	**759**	**1,506**	**1,670**	**1**	...	...
Unallocated within the region	*76*	*208*	*230*	...	...	...	*62*	*181*	*192*	...	...	...
Cook Islands	7	25	27	225	2,693	2,426	7	25	22	...	...	...
Fiji	44	81	103	52	106	115	34	78	98	...	...	...
Kiribati	24	70	65	224	733	580	23	70	65	...	...	...
Marshall Islands	66	57	60	1,146	1,051	1,077	10	52	54	...	...	...
Micronesia, F. S.	136	119	85	1,061	1,125	783	21	117	74	...	...	...
Nauru	24	19	31	1,393	2,252	3,125	4	18	29	...	...	...
Niue	11	11	20	4,557	13,632	19,539	6	6	14	...	...	...
Palau	30	22	14	1,432	1,118	664	13	22	14	...	...	...
Papua New Guinea	401	526	628	37	78	77	382	522	618	...	...	...
Samoa	45	85	102	199	474	486	44	76	98	...	...	...
Solomon Islands	92	173	196	98	347	325	79	164	191	1	...	...
Tonga	27	72	71	252	758	645	25	62	61	...	...	...
Tuvalu	11	30	50	901	3,430	4,965	10	28	48	...	...	...
Vanuatu	43	88	190	153	388	704	39	86	94	0	...	...
Southern Asia	**10,849**	**18,383**	**19,944**	**7**	**12**	**11**	**5,989**	**16,806**	**17,860**	**1,222**	**21**	**55**
Unallocated within the region	*262*	*252*	*307*	...	...	...	*112*	*110*	*142*	...	...	...
Afghanistan	1,400	4,580	4,301	66	156	130	639	4,024	3,731	63	9	11
Bangladesh	1,346	2,865	3,188	8	15	16	1,002	2,544	2,720	125	2	2
Bhutan	55	131	108	124	171	126	46	127	99	...	...	...
India	3,014	4,634	5,339	1	2	2	2,367	4,514	5,230	1	...	...
Iran, Islamic Republic of	125	113	122	2	1	1	84	97	108	...	...	...
Maldives	19	30	39	81	56	66	14	27	30	...	...	...
Nepal	429	942	1,356	16	31	43	363	916	1,038	12	0	0
Pakistan	3,584	3,982	4,359	11	20	20	1,000	3,640	3,979	1,076	10	43
Sri Lanka	615	853	825	27	24	20	362	806	783	7	...	...
Sub-Saharan Africa	**26,027**	**41,565**	**45,359**	**38**	**60**	**48**	**12,635**	**32,289**	**34,017**	**7,085**	**237**	**993**
Unallocated within the region	*1,325*	*3,228*	*2,649*	...	...	...	*671*	*1,815*	*2,054*	*1*	*4*	*6*
Angola	481	265	453	28	10	15	196	250	438	...	...	...
Benin	322	558	468	35	57	40	216	500	428	56	5	5
Botswana	48	108	81	18	45	29	36	107	79	2	0	0
Burkina Faso	594	1,059	1,069	39	64	55	374	855	797	61	8	8
Burundi	223	465	397	27	48	33	115	381	327	4	12	4
Cameroon	982	820	727	44	38	28	297	696	601	601	...	0
Cape Verde	125	224	175	259	450	293	101	194	152	0	0	0
Central African Republic	59	545	505	14	127	99	44	210	200	11	4	1
Chad	320	396	1,176	26	29	43	224	212	288	33	4	594
Comoros	33	67	70	45	97	83	28	61	62	2	2	2
Congo	96	110	132	19	24	19	53	86	86	22	0	0
Côte d'Ivoire	982	1,084	988	38	42	29	277	579	538	498	2	1
D. R. Congo	4,218	2,251	2,715	63	32	34	617	1,639	1,681	2,996	133	111
Djibouti	84	158	194	102	188	191	66	102	134	0	0	0
Equatorial Guinea	29	8	11	36	1	9	23	6	8	4	1	1
Eritrea	285	72	95	70	...	...	152	60	86	...	...	...
Ethiopia	1,671	3,317	3,352	21	37	33	894	2,662	2,525	106	0	0
Gabon	135	111	117	24	66	57	65	108	112	63	2	2
Gambia	67	99	129	48	52	54	50	89	84	5	0	...
Ghana	1,051	1,068	1,882	42	42	65	574	1,044	1,505	190	...	...
Guinea	319	522	602	27	46	43	205	359	348	49	4	35
Guinea-Bissau	122	101	99	74	61	52	50	74	77	55	3	2
Kenya	617	2,729	2,761	14	59	54	457	2,387	2,436	14	5	15
Lesotho	103	126	104	41	51	39	79	118	97	0	0	0
Liberia	89	688	1,139	26	170	243	18	511	617	14	...	36
Madagascar	604	559	729	27	25	28	385	414	492	108	2	1
Malawi	531	925	1,104	38	56	61	377	827	966	54	3	5
Mali	653	1,144	1,282	41	72	68	438	753	883	76	11	84
Mauritania	329	279	388	107	66	78	165	214	253	107	1	0
Mauritius	41	100	119	4	35	61	40	95	90	...	...	...
Mozambique	2,077	1,986	1,953	84	77	65	940	1,677	1,635	821	10	22
Namibia	135	258	180	72	94	58	120	254	176	...	...	...
Niger	460	837	901	31	48	44	233	499	478	104	5	6
Nigeria	378	2,404	2,514	2	14	13	316	2,347	2,383	46	...	...
Rwanda	423	938	1,108	40	91	93	248	913	1,059	33	1	4
Sao Tome and Principe	37	37	53	221	222	258	27	34	44	8	0	1
Senegal	603	1,072	981	43	76	58	476	970	880	76	9	8
Seychelles	6	15	11	401	132	73	6	14	11	...	...	...
Sierra Leone	444	842	1,015	80	145	147	167	389	351	81	...	30
Somalia	166	932	1,259	21	105	116	45	462	514	2	0	0
South Africa	496	1,215	1,545	13	20	26	437	1,200	1,458	...	...	...
South Sudan*	...	1,816	1,694	...	165	136	...	541	692	...	...	...
Swaziland	28	90	105	26	68	72	20	87	102	...	...	...

TABLE 4

ODA recipients (Continued)

	TOTAL ODA			PER CAPITA ODA			SECTOR-ALLOCABLE ODA			DEBT RELIEF AND OTHER ACTIONS RELATED TO DEBT		
	CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS			CONSTANT 2015 US$ MILLIONS		
	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015	2002–2003 annual average	2014	2015
Togo	73	211	228	10	30	27	50	194	190	13	3	3
U. R. Tanzania	1,702	2,473	2,706	41	51	48	929	2,292	2,484	337	1	2
Uganda	1,052	1,587	1,693	34	43	42	669	1,476	1,529	78	…	…
Zambia	1,187	963	883	70	63	49	543	928	856	413	0	4
Zimbabwe	220	700	815	15	50	51	123	605	728	…	…	…
Overseas territories**	**327**	**258**	**262**	**1,464**	**1,134**	**861**	**298**	**243**	**230**	**-**	**-**	**-**
Anguilla (UK)	3	…	…	180	…	…	3	…	…	…	…	…
Mayotte (France)	190	…	…	…	…	…	190	…	…	…	…	…
Montserrat (UK)	48	36	53	4,451	8,012	10,478	22	30	50	2	…	…
Saint Helena (UK)	6	122	94	2,154	16,419	10,239	6	121	92	…	…	…
Tokelau (New Zealand)	10	16	9	4,405	18,694	8,727	6	8	5	…	…	…
Turks and Caicos Islands (UK)	2	…	…	141	…	…	2	…	…	…	…	…
Wallis and Futuna (France)	69	84	106	3,382	6,220	6,634	69	84	82	…	…	…
Unallocated by region or country	*9,869*	*32,952*	*42,600*	…	…	…	*4,875*	*16,691*	*17,595*	*7*	*58*	*57*
Total	**76,622**	**148,962**	**174,204**	**13**	**27**	**25**	**41,533**	**109,231**	**112,156**	**10,513**	**1,436**	**1,813**
Low income countries	19,541	32,748	36,137	43	52	56	9,279	25,405	26,064	5,174	231	1,028
Lower middle income countries	28,501	53,384	58,775	12	18	20	16,171	43,546	44,840	4,125	1,107	139
Upper middle income countries	15,092	20,841	22,149	7	9	9	9,055	17,692	17,482	2,149	35	506
High income countries	396	453	372	4	4	3	283	439	268	7	…	76
Unallocated by income	*13,092*	*41,536*	*56,771*	…	…	…	*6,746*	*22,149*	*23,503*	*13*	*62*	*63*
Total	**76,622**	**148,962**	**174,204**	**13**	**27**	**25**	**41,533**	**109,231**	**112,156**	**11,468**	**1,436**	**1,813**
Least developed countries	**24,654**	**42,437**	**42,437**	**35**	**45**	**49**	**12,459**	**32,647**	**34,031**	**5,864**	**1,204**	**983**
Caucasus and Central Asia	1,755	2,471	3,243	24	34	39	1,084	2,341	2,512	5	…	…
Europe and Northern America	3,896	5,061	5,576	46	60	69	2,015	4,148	4,450	1,022	15	26
Eastern and South-eastern Asia	8,860	13,497	12,552	5	7	6	5,346	11,218	11,359	332	1,004	86
Latin America and the Caribbean	6,639	10,146	11,799	12	19	19	4,426	8,824	9,331	606	18	554
Northern Africa and Western Asia	7,363	23,041	30,997	21	66	72	4,107	15,166	13,132	233	83	42
Pacific	1,037	1,587	1,587	130	197	185	759	1,506	1,670	1	…	…
Southern Asia	10,849	18,383	19,944	7	12	11	5,989	16,806	17,860	1,222	21	55
Sub-Saharan Africa	26,027	41,565	45,359	38	60	48	12,635	32,289	34,017	7,085	237	993
Overseas territories	327	258	262	1,464	1,134	861	298	243	230	-	…	…
Unallocated by region or country	*9,869*	*32,952*	*42,600*	…	…	…	*4,875*	*16,691*	*17,595*	*7*	*58*	*57*
Total	**76,622**	**148,962**	**173,919**	**13**	**27**	**25**	**41,533**	**109,231**	**112,156**	**10,513**	**1,436**	**1,813**

Source: OECD-DAC, CRS database (2017).

* Aid disbursement figures for 2002–2003 refer to the former Sudan, before the separation of South Sudan in 2011. Aid disbursements for 2011 onwards have been separated out by the OECD and refer to Sudan and South Sudan.

** As defined on the OECD-DAC list of ODA recipients.

(…) indicates that data are not available, (-) represents a nil value.

The share of education in total ODA does not match that in Table 2 because the DAC database is used for donors and the CRS database for recipients in total ODA figures.

Malta and Slovenia are not listed in the table because they were removed from the OECD-DAC list of ODA recipients in 2005. However, the aid they received in 2002–2003 is included in the totals.

The country groupings by level of income are as defined by the World Bank but include only countries listed in the table. They are based on the list of countries by income group as revised in July 2016.

All data represent gross disbursements.

2002–2003 annual average excludes countries with missing values.

Accountability annex

This annex provides cross-national indicators associated with accountability in education. Taken together, they depict the extent to which governments provide an account for their efforts to ensure inclusive and equitable education of good quality. The notes below describe the indicators and give sources for each.

RIGHT TO EDUCATION IN NATIONAL CONSTITUTION

According to this indicator, the right to education can be:

Justiciable: The right is included in the national constitution in a manner enabling an aggrieved individual to seek redress before an independent judicial body.

Not justiciable: Although the right is formally recognized within the legal system, an aggrieved individual is not entitled to effective judicial or quasi-judicial remedy when the right to education is violated.

Not included: The right to education is not included within the national constitution.

Source: ActionAid International (2017) on the legal status of the right to education in national constitutions.

NATIONAL EDUCATION MONITORING REPORTS

The indicator shows whether the country produced a national monitoring report (yes) or not (no) at least once between 2010 and 2016.

Source: GEM Report team analysis of national education monitoring reports.

OPEN BUDGET INDEX

This is a measure of central government budget transparency, which ranges from 0 (low transparency) to 100 (high transparency). Scores of 61 or greater represent a sufficient level of transparency. Countries scoring between 0 and 20 have scant or no publicly available information.

Source: International Budget Partnership (2015), Open Budget Survey.

PUBLIC SECTOR CAPACITY

The indicator covers measures related to property rights and rule-based governance; quality of budgetary and financial management; efficiency of revenue mobilization; quality of public administration; and transparency, accountability and corruption in the public sector. Scores range from 0 (low capacity) to 6 (high capacity).

Source: Public sector management cluster of the World Bank's Country Policy and Institutional Assessment (CPIA).

PERCEPTION OF CORRUPTION IN EDUCATION SYSTEM

The indicator shows the *percentage of individuals who believe the education system is corrupt or extremely corrupt*. It is based on responses from 107 countries. These are tallied on a scale ranging from 1 (extremely low corruption) to 5 (extremely high corruption).

Source: Transparency International's Global Corruption Barometer (2013).

FREE AND FAIR ELECTION

A free election is one with clearly established and consistent rules and an open process for participation during the period leading up to the vote. A fair election is without voter intimidation and has both open access to polls and accurate counts on election day. The database evaluates leadership elections for 169 countries for between 1975 and 2011. Elections were considered *free* if at least four of seven associated variables were present/positive, and *fair* if at least two of three associated variables were present/positive. Results reported include only those elections with both free and fair scores. The total *percentage of free and fair leadership elections* is provided, with the number of elections used to calculate percentage included in parentheses.

Source: Free and Fair Elections database at the University of Oxford and Bishop and Hoeffler (2016).

NATIONAL TESTING POLICIES

The table describes national testing policies for 101 education systems. The indicator is based on how national tests (assessments and exams) are used to hold schools or educators accountable at the primary and lower secondary education levels. The categories are:

- Policies using school-level student test scores to sanction or reward schools or educators (P)
- Policies making school-level test scores publicly available, thus promoting market competition, but not applying sanctions or rewards (E)
- Policies aggregating student test scores at the national or regional level rather than using them for school accountability (S)
- Countries that do not have a national test at the primary or lower secondary level (N).

Source: GEM Report team update of categorization by Smith (2017).

MINIMUM EDUCATION LEVEL FOR CERTIFIED TEACHERS

This indicator reports the level of education obtained upon completion of the teacher education programme. Separate columns are provided for primary and secondary school teachers. Education levels are according to the 1997 *International Standard Classification of Education (ISCED)*. Initial analysis of the source data was sent to national-level officers for corroboration.

Source: GEM Report team analysis of the World Bank's System Assessment and Benchmarking for Education Results (SABER) and the International Task Force on Teachers for Education 2030 surveys.

Defining accountability and prominent approaches

This report defines accountability as a process to help individuals or institutions meet responsibilities and reach goals. It consists of three elements: (1) clearly defined responsibilities, (2) an obligation to provide an account of how responsibilities have been met, and (3) a legal, political, social, or moral justification for the obligation to account. Multiple approaches are commonly used when implementing accountability.

	GOVERNMENT							SCHOOLS	TEACHERS	
	RIGHT TO EDUCATION IN NATIONAL CONSTITUTION	NATIONAL EDUCATION MONITORING REPORTS	OPEN BUDGET INDEX	PUBLIC SECTOR CAPACITY	PERCEPTION OF CORRUPTION IN EDUCATION SYSTEM	FREE ELECTION	FAIR ELECTION	NATIONAL TESTING POLICIES	MINIMUM EDUCATION LEVEL FOR CERTIFIED TEACHERS (PRIMARY)	MINIMUM EDUCATION LEVEL FOR CERTIFIED TEACHERS (SECONDARY)
Score options	Justiciable; not justiciable; not included	Yes: at least one report in the period; No: no report in the period	0 (=lack of transparency) - 100 (=full transparency)	0 (=low capacity) to 6 (=high capacity)	% who think education system is corrupt or extremely corrupt	% free (number of elections)	% fair (number of elections)	Sanction and reward (P); market competition (E); not for school accountability (S); no national test (N)	At or below ISCED 4A; ISCED 5A; ISCED 5B; above ISCED 5A [what order for these?]	At or below ISCED 4A; ISCED 5A; ISCED 5B; ISCED 5A; above ISCED 5A [what order for these?]
Data source(s)	ActionAid International	GEM Report team analysis of national education monitoring reports	International Budget Partnership	World Bank CPIA	Transparency International Global Corruption Barometer	Free and Fair Elections Database	Free and Fair Elections Database	Smith (2017) and GEM Report team analysis	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys
Year of data	2017	2010–2016[15]	2015	2013–2015^	2013	1975–2011[13]	1975–2011[13]	2017	2010–2016^	2010–2016^
COUNTRY OR TERRITORY Several names changed per updated list of abridged names for annex tables										
Caucasus and Central Asia										
Armenia	Justiciable	No	...	3.7	58%	50% (4)	0% (4)	...	...	...
Azerbaijan	Justiciable	Yes	51	...	37%	25% (4)	0% (4)	E	...	...
Georgia	Justiciable	No	66	4	22%	0% (4)	0% (4)	S	ISCED 5B	ISCED 5B
Kazakhstan	Justiciable	No	51	...	55%	0% (3)	0% (3)	S	ISCED 5B	ISCED 5A
Kyrgyzstan	Justiciable	No	54	3.2	82%	0% (4)	0% (4)	S	...	...
Tajikistan	Justiciable	No	25	2.9	...	0% (2)	0% (2)	...	...	...
Turkmenistan	Justiciable	No	...	...	...	...	...	...	...	...
Uzbekistan	Justiciable	Yes	...	3.2	...	0% (1)	0% (1)	...	...	...
Eastern and South-eastern Asia										
Brunei Darussalam	Not Included	No	...	...	...	...	...	...	...	...
Cambodia	Justiciable	Yes	8	2.7	26%	0% (4)	75% (4)	S	At or below ISCED 4A	ISCED 5B
China	Not Justiciable	Yes	14	...	...	...	...	P	...	...
DPR Korea	Not Justiciable	No	...	...	...	...	...	...	...	...
Hong Kong, China	...	No	...	...	...	...	...	P	...	...
Indonesia	Justiciable	No	59	...	49%	0% (1)	0% (1)	S	...	...
Japan	Justiciable	Yes	...	...	55%	100% (11)	100% (11)	S	ISCED 5A	ISCED 5A
Lao PDR	Not Justiciable	Yes	...	3.1	...	...	...	S	At or below ISCED 4A	ISCED 5B
Macao, China	...	Yes	...	...	...	...	...	P	...	...
Malaysia	Not Included	Yes	46	...	13%	0% (7)	71.4% (7)	...	...	...
Mongolia	Justiciable	No	51	3.4	63%	100% (4)	100% (4)	P	...	...
Myanmar	Justiciable	No	2	...	...	0% (2)	50% (2)	E	...	...
Philippines	Not Justiciable	No	64	...	32%	33.3% (3)	0% (3)	E	ISCED 5A	ISCED 5A
Republic of Korea	Not Justiciable	Yes	65	...	30%	100% (1)	100% (1)	P	ISCED 5A	ISCED 5A
Singapore	Not Included	No	...	...	...	14.3% (7)	100% (7)	E	...	Above ISCED 5A
Thailand	Justiciable	No	42	...	32%	0% (3)	33.3% (3)	S	ISCED 5A	ISCED 5A
Timor-Leste	Justiciable	No	41	2.5	...	100% (2)	100% (2)	...	...	...
Viet Nam	Not Justiciable	No	18	3.2	49%	...	...	S	...	...
Europe and Northern America										
Albania	Justiciable	Yes	38	...	70%	42.9% (7)	28.6% (7)	S	...	...
Andorra	Justiciable	No	...	...	...	100% (5)	100% (5)	...	...	...
Austria	Justiciable	Yes	...	...	...	100% (11)	100% (11)	S	...	...
Belarus	Justiciable	No	...	...	...	0% (3)	0% (3)	...	...	...
Belgium	Justiciable	Yes	...	...	17%	100% (11)	90.9% (11)	S2	ISCED 5A6	Above ISCED 5A6
Bosnia and Herzegovina	Not Justiciable	Yes	43	3.3	64%	25% (4)	25% (4)	...	...	...
Bulgaria	Not Justiciable	Yes	65	...	47%	83.3% (6)	66.7% (6)	S	ISCED 5A	ISCED 5A
Canada	Justiciable	No1	...	...	20%	100% (11)	100% (11)	S3	...	...
Croatia	Justiciable	Yes	53	...	50%	100% (3)	66.7% (3)	S	ISCED 5A11	Above ISCED 5A
Cyprus	Justiciable	Yes	...	...	27%	100% (6)	100% (6)	...	...	...
Czech Republic	Not Justiciable	Yes	69	...	30%	100% (6)	100% (6)	N	...	...
Denmark	Not Justiciable	Yes	...	...	6%	100% (14)	100% (14)	E	...	...
Estonia	Justiciable	Yes	...	...	13%	100% (5)	100% (5)	E	...	...
Finland	Justiciable	Yes	...	...	7%	100% (10)	100% (10)	S	ISCED 5A6	ISCED 5A6
France	Not Included	Yes	76	...	16%	100% (5)	100% (5)	S	Above ISCED 5A	Above ISCED 5A
Germany	Not Included	Yes	71	...	19%	100% (7)	100% (7)	P	Above ISCED 5A	Above ISCED 5A
Greece	Justiciable	Yes	...	...	45%	100% (12)	100% (12)	N	...	...
Hungary	Justiciable	Yes	49	...	19%	100% (6)	100% (6)	P	ISCED 5A	ISCED 5A9
Iceland	Not Justiciable	No	...	...	...	100% (10)	100% (10)	E	...	...
Ireland	Justiciable	Yes	...	...	...	100% (9)	100% (9)	S	ISCED 5B	ISCED 5A
Italy	Justiciable	Yes	73	...	29%	100% (9)	100% (9)	S	Above ISCED 5A	Above ISCED 5A
Latvia	Justiciable	Yes	...	...	19%	100% (6)	66.7% (6)	P	...	...
Liechtenstein	Not Included	No	...	...	...	...	...	N	...	...
Lithuania	Justiciable	Yes	...	...	40%	100% (2)	100% (2)	E	...	...
Luxembourg	Not Justiciable	Yes	...	...	21%	100% (7)	100% (7)	S	...	...
Malta	Not Justiciable	Yes	...	...	...	100% (6)	100% (6)	...	...	...
Monaco	Justiciable	No	...	...	...	...	...	...	...	...
Montenegro	Justiciable	Yes	...	...	...	100% (1)14	100% (1)14	S	...	...
Netherlands	Not Justiciable	Yes	...	...	...	100% (11)	100% (11)	E	...	...
Norway	Not Justiciable	Yes	84	...	13%	100% (9)	100% (9)	E	ISCED 5A	ISCED 5A
Poland	Justiciable	Yes	64	...	...	100% (2)	100% (2)	E	...	...
Portugal	Justiciable	Yes	64	...	35%	100% (7)	100% (7)	P	...	...
Republic of Moldova	Justiciable	Yes	...	3.4	58%	...	...	...	ISCED 5B	ISCED 5B
Romania	Justiciable	Yes	75	...	33%	100% (4)	50% (4)	E	...	...
Russian Federation	Justiciable	Yes	74	...	72%	40% (4)	20% (5)	S	...	...
San Marino	Justiciable	No	...	...	...	...	...	...	...	...
Serbia	Justiciable	No	47	...	70%	14	14	S	Above ISCED 5A	ISCED 5A
Slovakia	Not Justiciable	Yes	57	...	39%	100% (5)	100% (5)	S	...	...
Slovenia	Justiciable	Yes	68	...	26%	100% (6)	100% (6)	E	...	...
Spain	Justiciable	Yes	58	...	11%	100% (10)	80% (10)	S	ISCED 5A	Above ISCED 5A

	GOVERNMENT							SCHOOLS	TEACHERS	
	RIGHT TO EDUCATION IN NATIONAL CONSTITUTION	NATIONAL EDUCATION MONITORING REPORTS	OPEN BUDGET INDEX	PUBLIC SECTOR CAPACITY	PERCEPTION OF CORRUPTION IN EDUCATION SYSTEM	FREE ELECTION	FAIR ELECTION	NATIONAL TESTING POLICIES	MINIMUM EDUCATION LEVEL FOR CERTIFIED TEACHERS (PRIMARY)	MINIMUM EDUCATION LEVEL FOR CERTIFIED TEACHERS (SECONDARY)
Score options	Justiciable; not justiciable; not included	Yes: at least one report in the period; No: no report in the period	0 (=lack of transparency) - 100 (=full transparency)	0 (=low capacity) to 6 (=high capacity)	% who think education system is corrupt or extremely corrupt	% free (number of elections)	% fair (number of elections)	Sanction and reward (P); market competition (E); not for school accountability (S); no national test (N)	At or below ISCED 4A; ISCED 5A; ISCED 5B; above ISCED 5A [what order for these?]	At or below ISCED 4A; ISCED 5A; ISCED 5B; above ISCED 5A [what order for these?]
Data source(s)	ActionAid International	GEM Report team analysis of national education monitoring reports	International Budget Partnership	World Bank CPIA	Transparency International Global Corruption Barometer	Free and Fair Elections Database	Free and Fair Elections Database	Smith (2017) and GEM Report team analysis	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys
Year of data	2017	2010–2016[15]	2015	2013–2015^	2013	1975–2011[13]	1975–2011[13]	2017	2010–2016^	2010–2016^
Sweden	Justiciable	Yes	87	...	...	100% (11)	100% (11)	E	Above ISCED 5A	Above ISCED 5A
Switzerland	Justiciable	Yes	...	...	11%	100% (9)	100% (9)	N	...	...
TFYR Macedonia	Justiciable	No	35	...	46%	42.9% (7)	42.9% (7)	S	Above ISCED 5A	Above ISCED 5A
Ukraine	Justiciable	No	46	...	69%	0% (3)	33.3% (3)	...	...	...
United Kingdom	Not Justiciable	Yes	75	...	18%	100% (8)	100% (8)	E	...	...
United States	Not Included	No	81	...	34%	100% (9)	88.9% (9)	P	...	...
Latin America and the Caribbean										
Anguilla	...	Yes	...	...	...	...	...	...	...	...
Antigua and Barbuda	Not Included	No	...	...	...	66.7% (3)	100% (3)	...	...	...
Argentina	Justiciable	No	59	...	23%	100% (3)	100% (3)	S	...	...
Aruba	...	No	...	...	...	...	...	...	...	...
Bahamas	Not Included	No	...	...	...	...	...	...	...	...
Barbados	Not Included	No	...	...	...	100% (7)	100% (7)	...	...	...
Belize	Not Justiciable	No	...	...	...	100% (3)	100% (3)	...	ISCED 5B6	ISCED 5A6
Bermuda	...	No	...	...	...	...	...	...	...	...
Bolivia, P. S.	Justiciable	No	17	3.1	36%	33.3% (6)	83.3% (6)	...	...	...
Brazil	Justiciable	Yes	77	...	33%	100% (4)	100% (4)	P4	ISCED 5A	ISCED 5A
British Virgin Islands	...	No	...	...	...	...	...	...	...	...
Cayman Islands	...	Yes	...	...	...	...	...	...	...	...
Chile	Not Justiciable	Yes	58	...	60%	100% (3)	100% (3)	P	...	...
Colombia	Justiciable	Yes	57	...	37%	66.7% (3)	66.7% (3)	E	ISCED 5A7	ISCED 5A7
Costa Rica	Justiciable	Yes	54	...	...	100% (9)	100% (9)	S	...	...
Cuba	Not Justiciable	No	...	...	...	...	...	S	...	...
Curaçao	...	No	...	...	...	...	...	...	...	...
Dominica	Not Included	No	...	3.8	...	100% (4)	100% (4)	...	...	...
Dominican Republic	Justiciable	Yes	51	...	...	60% (5)	100% (5)	E	...	...
Ecuador	Justiciable	Yes	50	...	...	80% (5)	40% (5)	...	...	...
El Salvador	Justiciable	Yes	53	...	40%	33.3% (6)	66.7% (6)	...	...	...
Grenada	Not Included	No	...	3.5	...	66.7% (3)	100% (3)	...	...	...
Guatemala	Justiciable	No	46	...	...	25% (8)	87.5% (8)	...	...	...
Guyana	Not Justiciable	No	...	3.1	...	71.4% (7)	71.4% (7)	...	At or below ISCED 4A	At or below ISCED 4A
Haiti	Justiciable	No	...	2.4	...	40% (5)	20% (5)	...	ISCED 5A	ISCED 5B
Honduras	Justiciable	No	43	3.1	...	0% (5)	100% (5)	...	...	...
Jamaica	Justiciable	No	...	...	19%	75% (4)	50% (4)	...	ISCED 5A	ISCED 5A
Mexico	Justiciable	Yes	66	...	43%	100% (2)	100% (2)	P	ISCED 5A	ISCED 5A
Montserrat	...	No	...	...	...	...	...	...	...	...
Nicaragua	Justiciable	No	46	3.3	...	40% (5)	80% (5)	E	...	...
Panama	Justiciable	Yes	...	...	...	60% (5)	60% (5)	S	...	...
Paraguay	Justiciable	Yes	...	...	32%	100% (1)	100% (1)	...	ISCED 5B	ISCED 5B
Peru	Justiciable	Yes	75	...	48%	66.7% (6)	83.3% (6)	S	...	...
Saint Kitts and Nevis	Not Included	No	...	...	...	...	...	...	...	...
Saint Lucia	Not Included	No	...	3.7	...	85.7% (7)	100% (7)	...	...	...
Saint-Martin	...	No	...	...	...	...	...	...	...	...
Saint Vincent/Grenadines	Not Included	No	...	3.7	...	...	...	...	...	...
Sint Maarten	...	No	...	...	...	...	...	...	...	...
Suriname	Not Justiciable	No	...	...	...	0% (1)	100% (1)	...	...	...
Trinidad and Tobago	Not Included	No	34	...	...	100% (7)	100% (7)	E	...	...
Turks and Caicos Islands	...	No	...	...	...	...	...	...	...	...
Uruguay	Justiciable	Yes	...	...	24%	100% (5)	100% (5)	S	...	...
Venezuela, B. R.	Justiciable	Yes	8	...	49%	20% (5)	100% (5)	...	ISCED 5A	ISCED 5A
Northern Africa and Western Asia										
Algeria	Not Justiciable	No	19	...	62%	0% (1)	100% (1)	...	ISCED 5A	ISCED 5A
Bahrain	Not Justiciable	Yes	...	...	...	...	...	...	...	...
Egypt	Justiciable	No	16	...	67%	0% (1)	0% (1)	...	ISCED 5A	ISCED 5A
Iraq	Not Justiciable	No	3	...	22%	0% (1)	0% (1)	...	...	...
Israel	Not Included	Yes	...	...	23%	100% (8)	100% (8)	E	...	...
Jordan	Justiciable	Yes	55	...	...	...	...	S	ISCED 5A	Above ISCED 5A
Kuwait	Not Justiciable	No	...	...	...	...	...	...	...	...
Lebanon	Not Included	No	2	...	67%	0% (4)	50% (4)	...	At or below ISCED 4A	ISCED 5A
Libya	Justiciable	No	...	...	47%	...	...	...	...	...
Morocco	Not Justiciable	Yes	38	...	60%	0% (1)	100% (1)	...	...	...
Oman	Not Justiciable	Yes	...	...	...	...	...	...	...	...
Palestine	Justiciable	Yes	...	...	19%	...	...	...	...	...
Qatar	Not Justiciable	No	0	...	...	...	...	E	ISCED 5A	ISCED 5A
Saudi Arabia	Not Justiciable	No	0	...	...	...	...	...	8	8
Sudan	Justiciable	No	10	2.2	61%	0% (2)	0% (2)	...	...	...
Syrian Arab Republic	Justiciable	No	...	...	...	...	...	...	...	...
Tunisia	Not Included	Yes	42	...	39%	...	...	S	ISCED 5A	ISCED 5A
Turkey	Justiciable	Yes	44	...	42%	83.3% (6)	100% (6)	E	...	...
United Arab Emirates	Not Justiciable	Yes	...	...	...	...	...	S	...	...
Yemen	Justiciable	No	34	2.4	62%	0% (1)	0% (1)	...	At or below ISCED 4A	ISCED 5B

	GOVERNMENT							SCHOOLS	TEACHERS	
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Score options	Justiciable; not justiciable; not included	Yes: at least one report in the period; No: no report in the period	0 (=lack of transparency) - 100 (=full transparency)	0 (=low capacity) to 6 (=high capacity)	% who think education system is corrupt or extremely corrupt	% free (number of elections)	% fair (number of elections)	Sanction and reward (P); market competition (E); not for school accountability (S); no national test (N)	At or below ISCED 4A; ISCED 5A; ISCED 5B; above ISCED 5A [what order for these?]	At or below ISCED 4A; ISCED 5B; ISCED 5A; above ISCED 5A [what order for these?]
Data source(s)	ActionAid International	GEM Report team analysis of national education monitoring reports	International Budget Partnership	World Bank CPIA	Transparency International Global Corruption Barometer	Free and Fair Elections Database	Free and Fair Elections Database	Smith (2017) and GEM Report team analysis	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys
Year of data	2017	2010–2016[15]	2015	2013–2015^	2013	1975–2011[13]	1975–2011[13]	2017	2010–2016^	2010–2016^
Pacific										
Australia	Not Included	Yes	...	...	19%	100% (14)	100% (14)	P	...	...
Cook Islands	Not Included	Yes	...	...	...	...	...	...	...	...
Fiji	Justiciable	Yes	15	...	24%	75% (4)	100% (4)	S	...	...
Kiribati	Not Included	Yes	...	3.2	...	...	...	...	...	...
Marshall Islands	Justiciable	Yes	...	2.8	...	...	...	...	...	...
Micronesia, F. S.	Not Justiciable	Yes	...	2.9	...	...	...	...	...	...
Nauru	Not Included	No	...	...	...	0% (1)	100% (1)	...	...	...
New Zealand	Not Included	Yes	88	...	16%	100% (12)	100% (12)	S	...	...
Niue	Not Included	No	...	...	...	...	...	...	...	...
Palau	Not Justiciable	No	...	...	...	...	...	...	...	...
Papua New Guinea	Not Included	No	55	2.9	47%	33.3% (3)	0% (3)	...	ISCED 5B	ISCED 5B
Samoa	Not Included	No	...	4.1	...	0% (1)	100% (1)	E	ISCED 5B	ISCED 5B
Solomon Islands	Not Included	Yes	...	2.7	29%	40% (5)	80% (5)	E	ISCED 5B	ISCED 5B
Tokelau	...	Yes	...	...	...	...	...	...	...	...
Tonga	Not Included	No	...	3.7	...	...	...	...	...	...
Tuvalu	Not Included	No	...	3.2	...	...	...	...	...	...
Vanuatu	Not Included	Yes	...	3.3	41%	80% (5)	100% (5)	S	ISCED 4A5	ISCED 4A5
Southern Asia										
Afghanistan	Not Justiciable	Yes	42	2.5	33%	50% (2)	0% (2)	S	...	...
Bangladesh	Not Justiciable	Yes	56	2.9	12%	66.7% (3)	100% (3)	P	...	...
Bhutan	Not Justiciable	Yes	...	3.8	...	0% (1)	100% (1)	S	...	...
India	Justiciable	Yes	46	3.6	61%	0% (1)	0% (1)	S	ISCED 5B12	ISCED 5A12
Iran, Islamic Republic of	Justiciable	No	...	...	...	0% (2)	50% (2)	...	...	...
Maldives	Justiciable	No	...	3.1	26%	0% (1)	100% (1)	...	...	...
Nepal	Justiciable	Yes	24	3.1	45%	33.3% (3)	100% (3)	P	...	...
Pakistan	Justiciable	Yes	43	3.1	43%	20% (5)	40% (5)	E	...	...
Sri Lanka	Not Justiciable	Yes	39	3.4	33%	0% (4)	25% (4)	E	...	...
Sub-Saharan Africa										
Angola	Not Justiciable	No	26	2.3	...	...	...	...	...	...
Benin	Justiciable	Yes	45	3.3	...	50% (2)	50% (2)	...	ISCED 4A	ISCED 5B10
Botswana	Not Included	Yes	47	...	...	100% (7)	100% (7)	S	...	...
Burkina Faso	Not Justiciable	No	43	3.5	...	0% (1)	100% (1)	...	...	...
Burundi	Justiciable	No	...	2.5	46%	0% (1)	100% (1)	...	...	...
Cabo Verde	Justiciable	No	...	4	...	100% (4)	100% (4)	...	...	...
Cameroon	Not Justiciable	No	44	2.9	72%	0% (4)	25% (4)	...	...	...
Central African Republic	Justiciable	No	...	2.2	...	0% (3)	33.3% (3)	...	...	...
Chad	Justiciable	No	4	2.7	...	...	...	...	...	...
Comoros	Justiciable	No	...	2.6	...	100% (1)	0% (1)	...	...	...
Congo	Justiciable	No	...	2.5	...	...	...	...	...	...
Côte d'Ivoire	Not Included	No	...	...	...	0% (2)	0% (2)	...	ISCED 5B	ISCED 5A
D. R. Congo	Justiciable	Yes	39	2.5	75%	0% (2)	50% (2)	...	At or below ISCED 4A	ISCED 5B
Djibouti	Not Included	No	...	2.7	...	0% (3)	33.3% (3)	...	At or below ISCED 4A	At or below ISCED 4A
Equatorial Guinea	Justiciable	Yes	4	...	...	0% (2)	0% (2)	...	...	...
Eritrea	Justiciable	No	...	...	...	...	...	...	...	...
Ethiopia	Not Justiciable	No	...	3.5	36%	0% (3)	0% (3)	S	...	...
Gabon	Justiciable	No	...	...	...	0% (1)	0% (1)	...	...	...
Gambia	Justiciable	Yes	...	2.9	...	0% (3)	0% (3)	E	...	...
Ghana	Justiciable	No	51	3.7	66%	75% (4)	100% (4)	E	ISCED 5B	ISCED 5B
Guinea	Justiciable	No	...	2.8	...	0% (2)	50% (2)	...	...	...
Guinea-Bissau	Justiciable	Yes	...	2.2	...	100% (2)	100% (2)	...	At or below ISCED 4A	ISCED 5B
Kenya	Justiciable	Yes	48	3.4	37%	25% (4)	50% (4)	S	At or below ISCED 4A	ISCED 5B
Lesotho	Not Justiciable	No	...	3.3	...	60% (5)	100% (5)	...	...	...
Liberia	Not Justiciable	No	38	2.9	87%	66.7% (3)	66.7% (3)	...	...	...
Madagascar	Justiciable	No	...	2.7	56%	75% (4)	100% (4)	...	...	...
Malawi	Justiciable	No	65	3.1	71%	50% (4)	75% (4)	E	...	...
Mali	Not Justiciable	Yes	46	3	...	33.3% (3)	100% (3)	...	At or below ISCED 4A	At or below ISCED 4A
Mauritania	Not Included	Yes	...	3.2	...	0% (1)	100% (1)	...	At or below ISCED 4A	ISCED 5B
Mauritius	Not Included	Yes	...	...	...	100% (7)	100% (7)	E	...	...
Mozambique	Justiciable	Yes	38	3.2	79%	66.7% (3)	100% (3)	...	...	...
Namibia	Justiciable	No	46	...	...	33.3% (3)	100% (3)	...	ISCED 5B	ISCED 5A
Niger	Justiciable	Yes	17	3.2	...	50% (4)	75% (4)	...	...	...
Nigeria	Not Justiciable	No	24	2.8	54%	0% (6)	16.7% (6)	...	...	...
Rwanda	Justiciable	Yes	36	3.7	4%	0% (2)	0% (2)	...	...	...
Sao Tome and Principe	Justiciable	Yes	29	3.1	...	...	...	...	...	...
Senegal	Not Justiciable	Yes	43	3.6	54%	20% (5)	40% (5)	...	At or below ISCED 4A	ISCED 5B
Seychelles	Justiciable	No	...	...	...	66.7% (3)	100% (3)	...	...	...
Sierra Leone	Not Justiciable	Yes	52	3.1	64%	50% (2)	0% (2)	...	...	...
Somalia	Not Justiciable	Yes	...	...	...	...	...	...	...	...
South Africa	Justiciable	Yes	86	...	32%	33.3% (6)	83.3% (6)	S	...	...
South Sudan	Justiciable	No	...	1.7	48%	...	...	...	...	...

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Score options	Justiciable; not justiciable; not included	Yes: at least one report in the period; No: no report in the period	0 (=lack of transparency) - 100 (=full transparency)	0 (=low capacity) to 6 (=high capacity)	% who think education system is corrupt or extremely corrupt	% free (number of elections)	% fair (number of elections)	Sanction and reward (P); market competition (E); not for school accountability (S); no national test (N)	At or below ISCED 4A; ISCED 5A; ISCED 5B; above ISCED 5A [what order for these?]	At or below ISCED 4A; ISCED 5B; ISCED 5A; above ISCED 5A [what order for these?]
Data source(s)	ActionAid International	GEM Report team analysis of national education monitoring reports	International Budget Partnership	World Bank CPIA	Transparency International Global Corruption Barometer	Free and Fair Elections Database	Free and Fair Elections Database	Smith (2017) and GEM Report team analysis	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys	GEM Report team analysis of World Bank SABER and International Task Force on Teachers for Education 2030 surveys
Year of data	2017	2010–2016[15]	2015	2013–2015^	2013	1975–2011[13]	1975–2011[13]	2017	2010–2016^	2010–2016^
Swaziland	Not Justiciable	No	...	...	...	...	...	...	...	...
Togo	Not Justiciable	Yes	...	2.6	...	0% (4)	0% (4)	...	...	...
Uganda	Justiciable	Yes	62	3.1	46%	0% (4)	50% (4)	E	At or below ISCED 4A	ISCED 5B
United Republic of Tanzania	Not Justiciable	Yes	46	3.3	74%	50% (4)	25% (4)	P	...	...
Zambia	Not Justiciable	No	39	3.2	77%	20% (5)	80% (5)	E	...	...
Zimbabwe	Not Justiciable	No	35	2.8	67%	0% (2)	0% (2)	...	...	...

^ Data are for the most recent year available in the period specified. For details see relevant sources.

1. Saskatchewan and Quebec provinces have education monitoring reports.

2. *S* represents the French and German communities, which do not use student test scores for school accountability. The Flemish community uses test scores for market competition (*E*).

3. Ontario province uses test scores for market competition (*E*).

4. *P* represents São Paulo, Pernambuco and Ceara, which apply sanctions or rewards to schools or educators based on student test scores.

5. New information provided by UNESCO education field officer as 'diploma for teaching', updated to ISCED 4A following figure 19 from Keevy and Jansen (2010).

6. New information provided by Ministry of Education.

7. New information provided by Ministry of Education, for reference only as the ministry is working on the national qualification framework and National System of Tertiary Education.

8. New information provided by Ministry of Education. ISCED level not identified. The ministry indicated that for both levels teachers need their education diploma, special education diploma, mentoring and orientation diploma, educational planning diploma and learning resources diploma.

9. Updated information from UNESCO permanent delegation.

10. Updated information from UNESCO education field officer.

11. Updated information from Ministry of Education.

12. Information represents Karnataka state.

13. All leadership elections with sufficient data in the period specified are included.

14. Leadership elections for the State Union of Serbia and Montenegro between 1997 and 2012 are not included.

15. National monitoring report is present if at least one was published in the period specified.

(...) Data not available.

Glossary

Adjusted net enrolment ratio (ANER). Enrolment of the official age group for a given level of education either at that level or the levels above, expressed as a percentage of the population in that age group.

Adult educational attainment rate. Number of persons aged 25 and above by the highest level of education attained, expressed as a percentage of the total population in that age group.

Adult literacy rate. Number of literate persons aged 15 and above, expressed as a percentage of the total population in that age group.

Age-specific enrolment ratio (ASER). Enrolment of a given age or age group, regardless of the level of education in which pupils or students are enrolled, expressed as a percentage of the population of the same age or age group.

Child or under-5 mortality rate. Probability of dying between birth and the fifth birthday, expressed per 1,000 live births.

Completion rate by level. Percentage of children aged three to five years older than the official age of entry into the last grade of an education level who have reached the last grade of that level. For example, the primary attainment rate in a country with a 6-year cycle where the official age of entry into the last grade is 11 years is the percentage of 14- to 16-year-olds who have reached grade 6.

Conflict-affected country. For a given year, any country with 1,000 or more battle-related deaths (including fatalities among civilians and military actors) over the preceding 10-year period and/or more than 200 battle-related deaths in any one year over the preceding 3-year period, according to the Uppsala Conflict Data Program Battle-Related Deaths Dataset.

Constant price. Price of a particular item adjusted to remove the overall effect of general price changes (inflation) since a given baseline year.

Early childhood care and education (ECCE). Services and programmes that support children's survival, growth, development and learning – including health, nutrition and hygiene, and cognitive, social, emotional and physical development – from birth to entry into primary school.

Early Child Development Index (ECDI). Index of fulfilment of developmental potential that assesses children aged 36 to 59 months in four domains: literacy/ numeracy, physical, socio-emotional, and cognitive development. The information is collected through the UNICEF Multiple Indicators Cluster Surveys. A child is 'on track' overall if it is 'on track' in at least three of the four domains.

Education levels according to the International Standard Classification of Education (ISCED), which is the classification system designed to serve as an instrument for assembling, compiling and presenting comparable indicators and statistics of education both within countries and internationally. The system, introduced in 1976, was revised in 1997 and 2011.

- **Pre-primary education (ISCED level 0).** Programmes at the initial stage of organized instruction, primarily designed to introduce very young children, aged at least 3 years, to a school-type environment and provide a bridge between home and school. Variously referred to as infant education, nursery education, pre-school education, kindergarten or early childhood education, such programmes are the more formal component of ECCE. Upon completion of these programmes, children continue their education at ISCED 1 (primary education).

- **Primary education (ISCED level 1).** Programmes generally designed to give pupils a sound basic education in reading, writing and mathematics, and an elementary understanding of subjects such as history, geography, natural sciences, social sciences, art and music.

- **Secondary education (ISCED levels 2 and 3).** Programmes made up of two stages: lower and upper secondary. Lower secondary education (ISCED 2) is generally designed to continue the basic programmes of the primary level but the teaching is typically more subject- focused, requiring more specialized teachers for each subject area. The end of this level often coincides with the end of compulsory education. In upper secondary education (ISCED 3), the final stage of secondary education in most countries, instruction is often organized even more along subject lines and teachers typically need a higher or more subject-specific qualification than at ISCED level 2.

- **Post-secondary non-tertiary education (ISCED level 4).** It provides learning experiences building on secondary education, preparing for labour market entry as well as tertiary education.

- **Tertiary education (ISCED levels 5–8).** It builds on secondary education, providing learning activities in specialized fields of education. It aims at learning at a high level of complexity and specialization. It comprises:

  - Level 5: Short-cycle tertiary education, often designed to provide participants with professional knowledge, skills and competences. It is practically based, occupationally specific and prepares students to enter the labour market.

  - Level 6: Bachelor's, often designed to provide participants with intermediate academic and/or professional knowledge, skills and competences, leading to a first degree or equivalent qualification.

  - Level 7: Master's or equivalent level, often designed to provide participants with advanced academic and/or professional knowledge, skills and competences, leading to a second degree or equivalent qualification.

  - Level 8: Doctoral or equivalent level, designed primarily to lead to an advanced research qualification.

Education for Sustainable Development (ESD). A type of education that aims to enable learners to constructively and creatively address present and future global challenges and create more sustainable and resilient societies.

Global Citizenship Education (GCED). A type of education that aims to empower learners to assume active roles to face and resolve global challenges and to become proactive contributors to a more peaceful, tolerant, inclusive and secure world.

Gross domestic product (GDP). The value of all final goods and services produced in a country in one year (see also Gross national product).

Gross enrolment ratio (GER). Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education. The GER can exceed 100% because of early or late entry and/or grade repetition.

Gross intake rate (GIR). Total number of new entrants to a given grade of primary education, regardless of age, expressed as a percentage of the population at the official school entrance age for that grade.

Gross national income (GNI). The value of all final goods and services produced in a country in one year (gross domestic product) plus income that residents have received from abroad, minus income claimed by non- residents.

Information and communications technology (ICT) skills. Individuals are considered to have such skills if they have undertaken certain computer-related activities in the last three months: copying or moving a file or folder; using copy and paste tools to duplicate or move information within a document; sending emails with attached files (e.g. document, picture, video); using basic arithmetic formulas in a spreadsheet; connecting and installing new devices (e.g. a modem, camera, printer); finding, downloading, installing and configuring software; creating electronic presentations with presentation software (including text, images, sound, video or charts); transferring files between a computer and other devices; and writing a computer program using a specialized programming language.

Literacy. According to UNESCO's 1958 definition, the term refers to the ability of an individual to read and write with understanding a simple short statement related to his/her everyday life. The concept of literacy has since evolved to embrace several skill domains, each conceived on a scale of different mastery levels and serving different purposes.

Net attendance rate (NAR). Number of pupils in the official age group for a given level of education who attend school at that level, expressed as a percentage of the population in that age group.

Net enrolment ratio (NER). Enrolment of the official age group for a given level of education, expressed as a percentage of the population in that age group.

New entrants. Pupils entering a given level of education for the first time; the difference between enrolment and repeaters in the first grade of the level.

Never been to school rate. Percentage of children aged three to five years older than the official entrance age into primary education who have never been to school. For example, in a country where the official entrance age is 6 years, the indicator is calculated over the age group 9 to 11 years.

Out-of-school adolescents and youth. Those of lower or upper secondary school age who are not enrolled in primary, secondary, post-secondary non-tertiary or tertiary education.

Out-of-school children. Children in the official primary school age range who are not enrolled in either primary or secondary school.

Over-age for grade rate. The percentage of pupils in each level of education (primary, lower secondary, and upper secondary) who are two years or more above the intended age for their grade.

Parity index. It is a measure of inequality defined as the ratio of the values of an education indicator of two population groups. Typically, the numerator is the value of the disadvantaged group and the denominator is the value of the advantaged group). An index value between 0.97 and 1.03 indicates parity. A value below 0.97 indicates disparity in favour of the advantaged group. A GPI above 1.03 indicates disparity in favour of the disadvantaged group. Groups can be defined by:

- Gender. Ratio of female to male values of a given indicator.
- Location. Ratio of rural to urban values of a given indicator.
- Wealth/income. Ratio of the poorest 20% to the richest 20% of a given indicator.

Private institutions. Institutions that are not operated by public authorities but are controlled and managed, whether for profit or not, by private bodies such as non-government organizations, religious bodies, special interest groups, foundations or business enterprises.

Public expenditure on education. Total current and capital expenditure on education by local, regional and national governments, including municipalities. Household contributions are excluded. The term covers public expenditure for both public and private institutions.

Pupil/teacher ratio (PTR). Average number of pupils per teacher at a specific level of education.

Pupil/qualified teacher ratio. Average number of pupils per qualified teacher at a specific level of education.

Pupil/trained teacher ratio (PTTR). Average number of pupils per trained teacher at a specific level of education.

Purchasing power parity (PPP). An exchange rate adjustment that accounts for price differences between countries, allowing international comparisons of real output and income.

Qualified teacher. Teacher who has the minimum academic qualification necessary to teach at a specific level of education in a given country.

School age population. Population of the age group officially corresponding to a given level of education, whether enrolled in school or not.

Skills. Non-innate capabilities that can be learned and transmitted, and have economic or social benefits to both individuals and their societies.

Stunting rate. Proportion of children in a given age group whose height for their age is between two and three standard deviations below the reference median established by the National Center for Health Statistics and the World Health Organization.

Teacher attrition rate. Number of teachers at a given level of education leaving the profession in a given school year, expressed as a percentage of teachers at that level and in that school year.

Technical and vocational education and training (TVET). Programmes designed mainly to prepare students for direct entry into a particular occupation or trade (or class of occupations or trades).

Total net enrolment rate. Number of pupils of the official school age group for a given level of education who are enrolled in any level of education (primary, secondary, post-secondary or tertiary education), expressed as a percentage of the corresponding school age population.

Trained teacher. Teacher who has fulfilled at least the minimum organized teacher-training requirements (pre-service or in-service) to teach a specific level of education according to the relevant national policy or law.

Transition rate to secondary education. Number of new entrants to the first grade of secondary education in a given year, expressed as a percentage of the number of pupils who were enrolled in the final grade of primary education in the previous year and who do not repeat that grade the following year. The indicator measures transition to secondary general education only.

Youth literacy rate. Number of literate persons aged 15 to 24, expressed as a percentage of the total population in that age group.

Abbreviations

ACIJ	Civil Association for Equality and Justice (Argentina)
AIDS	Acquired immunodeficiency syndrome
ALL	Adult Literacy and Life Skills Survey (OECD)
ASER	Annual Status of Education Report (India, Pakistan)
BIA	Bridge International Academies
CCT	Conditional cash transfer
CRPD	Convention on the Rights of Persons with Disabilities (United Nations)
CRS	Creditor Reporting System (OECD)
CSO	Civil society organization
DAC	Development Assistance Committee (OECD)
DFID	Department for International Development (United Kingdom)
DHS	Demographic and Health Survey
DLI	Disbursement-linked indicator
ECCE	Early childhood care and education
ECDI	Early Child Development Index (UNICEF)
ECE	Early childhood education
ECERS	Early Childhood Environment Rating Scale
ECW	Education Cannot Wait
EFA	Education for All
EI	Education International
EU	European Union
Eurostat	Statistical office of the European Union
F/M	Female/male
FAO	Food and Agriculture Organization of the United Nations
GAML	Global Alliance to Monitor Learning
GDP	Gross domestic product
GEM Report	Global Education Monitoring Report
GER	Gross enrolment ratio
GMR	Global Monitoring Report
GNI	Gross national income
GPE	Global Partnership for Education
GPI	Gender parity index
HIV	Human immunodeficiency virus

HLPF	High-Level Political Forum on Sustainable Development
IAEG-SDGs	Inter-agency and Expert Group on SDG Indicators
IALS	International Adult Literacy Survey
IBE	International Bureau of Education (UNESCO)
ICCS	International Civics and Citizen Survey
ICLS	International Congress of Labour Statisticians
ICT	Information and communications technology
IDA	International Development Association (World Bank)
IEA	International Association for the Evaluation of Educational Achievement
IFFEd	International Finance Facility for Education (proposed)
IIEP	International Institute for Educational Planning (UNESCO)
ILO	International Labour Office/Organization
IMF	International Monetary Fund
ISCED	International Standard Classification of Education
ISSA	International Step By Step Association
ITU	International Telecommunications Union
LCD	Link Community Development
LEG	Local education groups (Global Partnership for Education)
LFS	Labour Force Survey (European Union)
LLECE	Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación (Latin American Laboratory for Assessment of the Quality of Education)
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
NAEQ	National Assessment of Education Quality (China)
NCLB	No Child Left Behind (United States)
NEA	National education accounts
NER	Net enrolment ratio
NGO	Non-government organization
NSDC	National Skill Development Corporation (India)
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
Ofsted	Office for Standards in Education, Children's Services and Skills (United Kingdom)
OHCHR	Office of the United Nations High Commissioner for Human Rights
PASEC	Programme d'Analyse des Systèmes Educatifs de la CONFEMEN (Programme of Analysis of Education Systems of the CONFEMEN – Conference of Education Ministers of Countries Using French as a Common Language)
PforR	Program-for-Results (World Bank)

PIAAC	Programme for the International Assessment of Adult Competencies (OECD)
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment (OECD)
PLC	Professional learning community
PPP	Purchasing power parity
PRT	Peer review of teaching
R&D	Research and development
SABER	Systems Approach for Better Education Results (World Bank)
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SBM	School-based management
SDG	Sustainable Development Goal
SERCE	Segundo Estudio Regional Comparativo y Explicativo (Second Regional Comparative and Explanatory Study)
STEM	Science, technology, engineering and mathematics
TALIS	Teaching and Learning International Survey (OECD)
TCG	Technical Cooperation Group
TERCE	Tercer Estudio Regional Comparativo y Explicativo (Third Regional Comparative and Explanatory Study)
TIMSS	Trends in International Mathematics and Science Study
TIP	Teachers Investigation Panel (Nigeria)
TRCN	Teachers Registration Council of Nigeria
TURN	Teacher Union Reform Network (United States)
TVET	Technical and vocational education and training
UIL	UNESCO Institute for Lifelong Learning
UIS	UNESCO Institute for Statistics
UK	United Kingdom
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGEI	United Nations Girls' Education Initiative
UNICEF	United Nations Children's Fund
UNPD	United Nations Population Division
UNSC	United Nations Statistical Commission
UNU-IAS	United Nations University Institute for the Advanced Study of Sustainability

UOE	UIS/OECD/Eurostat
US	United States
USAID	United States Agency for International Development
VAM	Value-added model
WEF	World Education Forum
WEI	World Education Indicators
WFP	World Food Programme (United Nations)
WHO	World Health Organization (United Nations)
WIDE	World Inequality Database on Education
WSSD	World Summit on Sustainable Development
WVS	World Values Survey

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Accountability in education:

MEETING OUR COMMITMENTS

The second edition of the *Global Education Monitoring Report* (GEM Report) presents the latest evidence on global progress towards the education targets of the UN Sustainable Development Goals.

With hundreds of millions of people still not going to school, and many not achieving minimum skills at school, it is clear education systems are off track to achieve global goals. The marginalized currently bear the most consequences but also stand to benefit the most if policy-makers pay sufficient attention to their needs. Faced with these challenges, along with tight budgets and increased emphasis on results-oriented value for money, countries are searching for solutions. Increased accountability often tops the list.

The 2017/8 GEM Report shows the entire array of approaches to accountability in education. It ranges from countries unused to the concept, where violations of the right to education go unchallenged, to countries where accountability has become an end in itself instead of a means to inclusive, equitable and high-quality education and lifelong learning for all.

The report emphasizes that education is a shared responsibility. While governments have primary responsibility, all actors – schools, teachers, parents, students, international organizations, private sector providers, civil society and the media – have a role in improving education systems. The report emphasizes the importance of transparency and availability of information but urges caution in how data are used. It makes the case for avoiding accountability systems with a disproportionate focus on narrowly defined results and punitive sanctions. In an era of multiple accountability tools, the report provides clear evidence on those that are working and those that are not.

Global Education Monitoring Report

United Nations Educational, Scientific and Cultural Organization

Sustainable Development Goals

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4 QUALITY EDUCATION

Sustainable Development Goals