GLOBAL EDUCATION MONITORING REPORT

2024/5

Leadership in education

LEAD FOR LEARNING

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Sustainable Development Goals

Global Education Monitoring Report

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Leadership in education

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The Education 2030 Incheon Declaration and Framework for Action specifies that the mandate of the Global Education Monitoring Report is to be "the mechanism for monitoring and reporting on SDG 4 and on education in the other SDGs" with the responsibility 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". It is prepared by an independent team hosted by UNESCO.

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Photography caption: On 3 March 2022 at Al Tasneem School in Basra, Iraq, school principal Ansal stands for a portrait in her office. She says,"Poverty, mental health, child labour, child marriage, are some of the main factors for our students … Poverty is the main issue that makes them drop out school".

Photo credit: © UNICEF/UN0614639/Ibarra Sánchez*

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SHORT SUMMARY

How can education systems attract, appoint and retain good education leaders?

Leadership matters in education. Strong leaders are needed to help institutions, systems and societies change for the better. Strong leaders work in collaboration with other actors towards the same goals. At the school level, they are the principals but also those who surround them, in the school and in the community, in positions of responsibility. At the system level, they are civil servants working as district officers, supervisors or planners. At the societal level, they are political leaders, as well as a very broad range of actors who help shape education goals, from unions and researchers to civil society and the media.

Entitled Lead for learning, this report argues that, in pursuing specific goals, education leaders are more than just managers. They are change agents, who need the time, trust and support to focus on setting a vision and developing the people they serve and work with. The report calls for investment in and empowerment of school and system leaders. There should be fair hiring processes and growth opportunities that recognize the full scope of leaders' roles. Moreover, leadership works best when it is shared, empowering others to lead as they can within their roles.

There is no one leadership style that works. Different contexts, capacities and personalities mean that styles vary, and rightfully so. This, combined with the different goals that each leader is trying to achieve, means that their impact is hard to fully assess. Yet, all research points towards the critical need for strong leaders to continuously improve education quality. School leaders are second only to teachers for transforming student outcomes. Meanwhile, politicians wield huge influence in making equitable and inclusive education a national priority.

Supporting this seventh *Global Education Monitoring Report* is a new series of country profiles on PEER, an online resource supporting policy dialogue and describing policies and regulations on school principal selection, preparation and development in the world's education systems.

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Since wars begin in the minds of men and women, it is in the minds of men and women that the defenses of peace must be constructed

Foreword

Despite significant strides in widening access to education globally over the past decades, this *Global Education Monitoring Report* reveals that 251 million children are still not in school today. This is a number that has fallen by only 1% since 2015.

Even for those who are in school, the education they receive is not always up to standard: three out of four children in developing countries cannot read and understand a simple text by the age of 10. To advance progress in education, strong leadership is needed at all levels.

Indeed, at its heart, education is an activity centred around people.

Quality education is a collective endeavour that requires qualified human beings, driven by a sense of purpose. Whether they are policymakers, school directors or head teachers — educational leaders are catalysts for change deserving of greater attention. This report sheds light on their instrumental role in retaining children in school and improving learning outcomes.

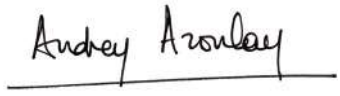
Effective school leaders bring out the best in teachers, who in turn deliver the best courses. School leaders are also key figures in ensuring that school environments are safe and inclusive, free from violence and bullying. The responsibilities they bear are heavy. For this reason, it is critical to ensure that they are well selected, trained, trusted and supported throughout their career.

Yet, over a third of countries do not have open and competitive school principal recruitment processes in place. Even in wealthier nations, half of principals do not receive training for their role before they take up their posts.

As in other domains, leadership in education is also marked by significant gender biases. Most teachers are women, while most of school leaders are men. The share of female principals in primary and secondary education is on average at least 20 percentage points lower than the average share of female teachers. This must change.

In addition to challenging gender norms in education leadership, we must also challenge the assumptions of hierarchy that exist in education worldwide. This report gives clear recommendations to shift from hierarchical and centralized education systems to more inclusive leadership in education that engages principals, teachers, parents, student representatives, and community members. In order to build a shared vision of education that takes into account all of these stakeholders, school leaders must be given space and training.

Many leaders in education are passionate about their work and dedicated to making a difference on the ground, but rigid systems prevent them from striving for excellence. By enabling them to fulfil their potential, we can bring new energy into educational systems and inspire younger generations whose schooling experience can shape their views of leadership.



Audrey Azoulay
Director-General of UNESCO

Foreword

From the classroom to the boardroom, from offices to the global stage, leaders shape education. I am honoured to introduce the 2024/5 GEM Report, which this year focuses on the critical role of leadership in education. As Chair of the Advisory Board for this Report and a member of the SDG 4-Education 2030 High-level Steering Committee, I believe that fostering cooperation in education leadership is the most powerful tool for achieving the Sustainable Development Goals.

In recent years, during my mandate as European Commissioner for International Partnerships, I have dedicated myself to advocating for education as a catalyst for social and economic change. Education is transformative but the need for political leaders to step up advocacy and drive education in the right direction remains as vital as ever.

Education spending in many countries cannot compete with the calls for debt servicing; a USD 100 billion annual education finance gap in the poorest 80 countries remains to be filled. Without the necessary resources, education quality suffers. Teachers are frequently hired without meeting national qualification standards or training, and the promise of a quality education is left unfulfilled. But achieving inclusive, quality education for all is still within our grasp – leaders at all levels just need to be united behind a shared agenda.

While we often celebrate heroic figures in education, the report highlights the invaluable contributions of unsung leaders – district officials, education officers, inspectors and supervisors. As a former teacher, I know that school principals, often invisible, can make or break a reform with their leadership. Connecting vision with practical reality is critical.

Collective and collaborative action by these leaders can drive progress. It requires emotional intelligence, self-awareness and social awareness. Education ministers, juggling multiple demands and tenures lasting often little more than two years, must employ strategic approaches such as coalition building to implement policies. Principals, too, face time constraints that hinder their ability to focus on core challenges like improving learning outcomes.

With such complex roles, leaders deserve training, particularly to learn how they can draw in others to support them achieve their goals. But this publication shows us that fewer than half of countries explicitly emphasise teacher collaboration and only one-third focus on it in leadership programs.

Without ever mentioning it, this report modestly exemplifies leadership. It provides valuable knowledge, expertise, and potential solutions and invites education actors at all levels to discuss how they can contribute to improvement. Learning is about collaboration, and this report facilitates that process. We must seize this opportunity to elevate leadership as a powerful tool for improving education from within.

Jutta Urpilainen
European Commissioner for International Partnerships and Chair of the Advisory Board for the GEM Report

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Contents

Short summary v
Forewords vii
Acknowledgements x
Contents xiii
List of figures, tables and boxes xvi

Leadership in education 1

CHAPTER 1. Introduction 5
Expectations of leaders at the school and system level have been changing 10
Guide to the report 13
Recommendations 17

CHAPTER 2. School leadership: Roles, impact and standards 23
School principals are expected to fulfil various leadership roles 25
The impact of school principals can be significant 31
Leadership standards can guide action and certification 39
Conclusion 42

CHAPTER 3. School leadership: Selection, training and conditions 45
Improving selection processes is needed to professionalize principals' careers 47
Countries need to do more to prepare and train school leaders 57
Countries try to make principalship an attractive career path 67
Conclusion 74

CHAPTER 4. Shared school leadership 77
School personnel can lead if given opportunities and support 79
Students can exercise leadership through formal channels and informally 87
Engaged parents and community members can steer schools towards their goals 90
Conclusion 94

CHAPTER 5. System leadership 97
System leaders need to set expectations for quality and equity 99
System leaders should be instructional leaders 105
Civil servants are often not selected to serve as system leaders 108
Conclusion 112

CHAPTER 6. Political leadership 115
Political motivations determine education system development 117
The direction of education is influenced by many other actors 127
Conclusion 137

Monitoring education in the Sustainable Development Goals 139

CHAPTER 7. Introduction 143
Conference on Education Data and Statistics 145
SDG 4 Scorecard 145
2025 Comprehensive Review 147

CHAPTER 8. Primary and secondary education 150
Access and completion 152
Learning 157
Focus 8.1. Mathematics anxiety negatively affects mathematics performance 164

CHAPTER 9. Early childhood education 170
Focus 9.1. Preschool leadership needs attention 177
Focus 9.2. Training for parents and caregivers can support early childhood development 179

CHAPTER 10. Technical, vocational, tertiary and adult education 182
Focus 10.1. Higher education leaders face major challenges 190
Focus 10.2. Women are under-represented in higher education leadership 194

CHAPTER 11. Skills for work 196
Focus 11.1. Can leadership be taught? 201

CHAPTER 12. Equity 206
Focus 12.1. Peers affect individual education outcomes 214

CHAPTER 13. Youth and adult literacy 218
Focus 13.1. Family literacy programmes are as relevant as ever 223

CHAPTER 14. Sustainable development and global citizenship 228
Focus 14.1. Civic education can shape young citizens' political behaviour 234

CHAPTER 15. Education facilities and learning environments 238
Focus 15.1. School infrastructure must adapt to climate change 245

CHAPTER 16. Scholarships 252
Focus 16.1. New funding sources of scholarships are emerging 258

CHAPTER 17. Teachers 260
Focus 17.1. 'Teacher shortages' is used to describe different problems which require different policies 268

CHAPTER 18. Finance 273
Public expenditure 275
Focus 18.1. Are school principals' salaries attractive? 281
Aid expenditure 287
Aid to education reached a record absolute level but continues to decline in relative terms 287
Focus 18.2. Tapping climate finance to mobilize resources in education 292
Household expenditure 296

Annex
Statistical tables 301
Aid tables 387
Glossary 396
Acronyms and abbreviations 401

List of figures, tables and boxes

FIGURES

Figure 1.1 School leadership is at the centre of a framework of education quality 12
Figure 2.1 School principals have reported a decrease in their oversight of teaching activities in high-income countries 27
Figure 2.2 Just over one in three principals reported having a significant responsibility for determining course content 28
Figure 2.3 Principals have significant decision-making power in setting disciplinary policies but not teacher salaries 39
Figure 2.4 Higher-performing education systems tend to grant greater autonomy over human and financial resources decisions to principals 40
Figure 2.5 Not all leadership dimensions are equally embedded in national professional standards 41
Figure 3.1 Principals' academic qualifications vary across countries 53
Figure 3.2 In wealthier countries, average principal tenure varies by a factor of three 54
Figure 3.3 Women are much less likely to be principals than teachers 55
Figure 3.4 In francophone Africa, female principals have less school management experience than men 56
Figure 3.5 Relatively few principals begin their tenure having done a course in school administration 57
Figure 3.6 A quarter of principals report a need for professional development 58
Figure 3.7 Pre-service and induction training are insufficiently emphasized 59
Figure 3.8 Only one fifth of principal preparation and training programmes cover all four dimensions of leadership 63
Figure 3.9 The extent to which countries focus on principal certification varies by country 65
Figure 3.10 Principals in some countries spend at least twice as much time in teaching-related tasks than in other countries 68
Figure 3.11 Principals appear to enjoy high levels of job satisfaction 69
Figure 4.1 A variety of stakeholders are represented in school management teams 80
Figure 4.2 Most teachers in middle leadership positions are involved in teacher appraisal 83
Figure 4.3 Parents are more likely than community members to be mandated to participate in school management committees 91
Figure 4.4 Parental engagement in school governance is high in Latin America 92
Figure 5.1 In Latvia, one third of education ministry officials reported high levels of professional development on commissioning and using research 104
Figure 5.2 In Latvia, one half of local education officials reported high levels of need for professional development on methodological and subject support to teachers 104
Figure 5.3 External school inspection is becoming less common in OECD countries 107
Figure 6.1 Curriculum emphasis varies by type of political regime 118
Figure 6.2 Teacher hiring and firing is politically influenced in many countries 120
Figure 6.3 Within two years of their appointment, 51% of education ministers have left office 123
Figure 7.1 A country-led process will be used to make decisions on education statistics 146
Figure 7.2 Some SDG 4 indicators have been under scrutiny due to low data coverage 147
Figure 8.1 Since 2015, the out-of-school population has stagnated 152
Figure 8.2 Sub-Saharan Africa accounts for more than half of the total number out-of-school children and adolescents 154
Figure 8.3 COVID-19 does not appear to have had a negative impact on out-of-school rates 155

Figure 8.4 The gaps between timely and ultimate completion rates have remained persistently high in sub-Saharan Africa 158
Figure 8.5 In Yemen, conflict has compromised the education opportunities of an entire generation 159
Figure 8.6 Completion rates in Yemen show significant regional variation 159
Figure 8.7 Adolescents' learning outcome levels fell in reading and especially mathematics between 2018 and 2022 160
Figure 8.8 Since 2012, the percentage of students achieving minimum proficiency has fallen by 12 percentage points in reading and 6 percentage points in mathematics 162
Figure 8.9 Those who drop out of school or do not attend school regularly are highly unlikely to achieve minimum proficiency levels 163
Figure 8.10 By the end of primary school, only about 1 in 10 children read with comprehension in poorer African countries 165
Figure 8.11 Students' mathematics anxiety levels have risen 166
Figure 9.1 Education participation has increased for younger but not for older children 172
Figure 9.2 Many children are enrolled in primary education one year before the official entry age 173
Figure 9.3 Countries show different patterns in early entry to primary education 174
Figure 9.4 Increased education participation of children one year before primary entry age can be due to an increase in pre-primary or in primary enrolment 175
Figure 9.5 Children attending pre-primary education are more likely to be developmentally on track 176
Figure 9.6 Inadequate supervision is associated with a lower prevalence of positive and stimulating home environments 177
Figure 9.7 Early childhood care and education leaders devote more time to administration than pedagogy 178
Figure 10.1 Adult formal and non-formal education participation rates exceed 10% in very few countries 184
Figure 10.2 More than half of countries have seen a decline in formal and non-formal education participation rates in the last 10 years 186
Figure 10.3 There is a large gender disparity in adult education and training participation 188
Figure 10.4 Vocational education participation rates have seen only marginal growth in the past 10 years 189
Figure 10.5 Gender disparity in tertiary education enrolment has continued unabated 191
Figure 10.6 Gender gaps favour women in tertiary education but men in TVET 191
Figure 11.1 In high-income countries, adults have much higher levels of ICT skills than in middle-income countries 198
Figure 11.2 No more than 1 in 20 Bangladeshi, Iranian and Vietnamese youth and adults can verify the reliability of online information 199
Figure 11.3 Men are even more likely than women to have ICT skills as the skill level rises 200
Figure 11.4 Secondary school teachers' skills in using devices increased rapidly during COVID-19 202
Figure 11.5 The share of the population with at least secondary education increased by 5 percentage points in 10 years 203
Figure 11.6 Disadvantaged students are less assertive than their more privileged peers 204
Figure 12.1 Globally, gender disparity in out-of-school rates has significantly decreased in recent years 208
Figure 12.2 Central and Southern Asia has made faster progress in achieving gender parity secondary completion compared to sub-Saharan Africa 210
Figure 12.3 Disadvantaged populations have been catching up with their peers in completing each education level 211
Figure 12.4 Gender differences in reading, which disadvantage boys, are more pronounced in middle-income countries than in higher-income countries 212
Figure 12.5 In recent years, there has been a slight decline in the proportion of early-grade students receiving instruction in their home language 213
Figure 12.6 Socioeconomic background has a higher influence in schools with high concentrations of low-achieving students 215
Figure 13.1 Literacy rates have increased in two generations 221
Figure 13.2 Gender disparities disappear at high literacy rate levels 222
Figure 13.3 In Peru, wide disparities remain despite overall high levels of literacy 223
Figure 14.1 Syllabi are more likely to include green content in lower secondary than in primary education 231

Figure 14.2 A large majority of students achieve the minimum proficiency level in earth science ... 233
Figure 14.3 Girls are less likely than boys to expect to actively participate in politics, but more likely to expect to vote and get informed about candidates ... 235
Figure 14.4 Intended electoral participation is significantly higher among richer students ... 236
Figure 15.1 Fast progress on access to WASH services is possible from all starting points ... 240
Figure 15.2 Progress on school internet connectivity has been fast but uneven ... 241
Figure 15.3 The prevalence of bullying has increased more for girls than for boys ... 242
Figure 15.4 More countries are suffering attacks on education, though most attacks remain concentrated in a few countries ... 244
Figure 15.5 Coverage of school meals varies widely between countries ... 246
Figure 15.6 The actual coverage of school meals programmes is higher if private school students are excluded ... 248
Figure 15.7 In Brazil, schools in hotter regions are less likely to have green spaces ... 249
Figure 15.8 Disasters have caused significant damage to critical infrastructure in Pacific Island countries ... 250
Figure 16.1 COVID-19 affected scholarship spending ... 255
Figure 16.2 France and Germany stand out among the country donors ... 255
Figure 16.3 In Germany, the number of students from low- and lower-middle-income countries has increased almost fivefold in the past 20 years ... 257
Figure 16.4 The number of international students has been steadily rising since 2000 ... 257
Figure 16.5 International student mobility increased in some countries while it fell in others ... 258
Figure 16.6 Contributions from non-major industrialized nations are on the rise ... 259
Figure 17.1 In some regions, increases in the number of teachers means more untrained teachers ... 263
Figure 17.2 Low shares of trained teachers increase the pupil/trained teacher ratio ... 264
Figure 17.3 Trends in pupil/trained teacher ratios can reflect changes in the share of trained teachers or in the relative number of teachers ... 265
Figure 17.4 Pupil/teacher ratios can be considerably higher when taking into account teachers' working hours ... 266
Figure 17.5 Format and content of in-service training matter ... 267
Figure 17.6 More training on a given topic is associated with a higher need for that training ... 268
Figure 17.7 Richer countries often set higher minimum qualifications for teachers ... 270
Figure 18.1 In 2022, sub-Saharan Africa accounted for 21% of the global school-age population but 1.6% of global public education expenditure ... 276
Figure 18.2 Global public education expenditure has fallen slightly since 2015 ... 277
Figure 18.3 Education has been receiving lower priority in government budgets since 2015 ... 277
Figure 18.4 About 70% of countries have reduced their priority to education since 2015 ... 278
Figure 18.5 More than one in three countries fall short of both international public spending benchmarks ... 280
Figure 18.6 School principal salaries increase with the level of education ... 281
Figure 18.7 Principal salaries are particularly competitive in a few countries ... 282
Figure 18.8 Principals' salaries mostly align with or outpace economic growth, especially in primary education ... 283
Figure 18.9 Principals receive high relative salaries in some lower middle-income countries ... 283
Figure 18.10 Principals' starting salaries are about 20% higher on average than those of experienced teachers ... 284
Figure 18.11 Education aid reached USD 16.6 billion in 2022 ... 287
Figure 18.12 Recent increase in aid to education is mainly allocated to lower-middle-income countries ... 288
Figure 18.13 The World Bank increased its aid to education by nearly 90% in five years ... 289
Figure 18.14 There was a decline in Chinese aid to education activity during COVID-19 ... 291
Figure 18.15 Climate finance is estimated at USD 1.3 trillion but education gets a tiny fraction ... 293
Figure 18.16 Households in lower-middle-income countries spend at least twice as high a share of their budget on education as households in high-income countries ... 296
Figure 18.17 Household education spending tends to be stable ... 297

TABLES

Table 1.1 There are diverse leadership roles in education 11
Table 1.2 Four school leadership dimensions describe principals' core practices 13
Table 5.1 System leaders' roles, functions and practices 100
Table 6.1 Average tenure of education ministers, by country and individual characteristics, 2010–23 122
Table 6.2 Education, health and finance ministers, by background characteristics, 1990–2021 124

BOXES

Box 1.1 Autonomy and accountability reforms in some countries have shaped perceptions of education leadership roles globally 8
Box 1.2 Four regional editions accompany the 2024/5 *Global Education Monitoring Report* cycle on leadership 17
Box 2.1 Various terms are used to designate school principals in national regulations 26
Box 2.2 Principals focused on reducing stress related to COVID-19 34
Box 2.3 Indian and South African teachers recognize school principals as key supporters 36
Box 3.1 The degree of decentralization influences recruitment and selection 48
Box 3.2 African countries are strengthening their selection systems for principals, but challenges remain 50
Box 3.3 Some countries regulate private school principals' selection 51
Box 3.4 In Brazil, political appointment is a formal method for principal selection 52
Box 3.5 Induction processes involving coaches and mentors are essential for novice principals 59
Box 3.6 Practice in realistic situations is essential for developing leadership skills 61
Box 3.7 In the United States, research has helped improve training content 63
Box 3.8 School leaders in the Pacific express job satisfaction despite stress and pressure 70
Box 4.1 The Bamboo School in Thailand involves students in all its operations 89
Box 5.1 Local officials with strong autonomy have more space to be leaders 101
Box 5.2 Responsibility for reforms is often withheld from those who are supposed to carry them out 103
Box 5.3 Latvia aims to strengthen its education system's institutional capacity 104
Box 5.4 Political influence on staffing challenges effective system leadership 109
Box 6.1 Ministers have to lead coalitions and change the public's opinion to achieve their main targets 125
Box 6.2 Students led political efforts to transform education in Chile 129
Box 6.3 Film makers can be education leaders too 131
Box 8.1 How can the impact of crises on out-of-school populations be estimated? 156
Box 8.2 In Yemen, conflict has denied an entire generation of education opportunities 159
Box 8.3 Those who do not reach the end of lower secondary school are highly unlikely to be proficient in reading and mathematics 163
Box 8.4 The Assessment for Minimum Proficiency Level is a new source of evidence on learning in low- and lower-middle-income countries 164
Box 12.1 There is a huge variety globally in the extent to which children are educated in their home language 213
Box 15.2 Education is severely under attack in the State of Palestine 243
Box 15.3 Schools in the Pacific Islands are particularly threatened by climate hazards 249
Box 16.1 Germany leads in funding international students 256
Box 18.1 After a significant period of expansion, Chinese aid to education has declined 290
Box 18.2 Japan has built a disaster-resilient education system 294


SD

Leadership in education

KEY MESSAGES

Education leaders are more than managers. They are change agents.

- **Policymakers face a major challenge:** how to ensure that people with the right skills and vision are identified, selected, prepared and supported as leaders.
- **National plans at the school, system and political level need to nurture four essential leadership dimensions:** set expectations, focus on learning, foster collaboration and develop people. Yet a global review of school principal preparation and training programmes and courses suggests that barely half of them focus on any of these four dimensions – and just one third focus on all four.

Good schools need good school leaders.

- **Effective principals bring out the best in students.** In the United States, it was estimated that principal and teacher leadership inputs contributed up to 27% of the variance in student outcomes, ranking just below teachers' impact on learning among school-controlled factors.
- **Effective principals bring out the best in teachers.** A study of 32 countries affirmed that strong leadership correlates with improved teaching practices. Globally, 57% of countries expect principals to provide feedback to teachers based on their observations. However, the share of secondary school principals overseeing teaching activities fell from 81% in 2015 to 77% in 2022 in high-income countries.
- **Effective principals ensure their schools are safe, healthy and inclusive.** Preventing bullying and ensuring student safety are key objectives for school leaders. In the United States, principals adapted the curriculum to prioritize social and emotional well-being during the COVID-19 pandemic. In Malta, principals worked with communities to develop an inclusive school culture for migrants with language support.

Effective leadership demands fair hiring practices, trust and growth opportunities.

- **Talent recruitment and retention requires open and competitive hiring processes.** Limiting political discretion in appointing school principals improves school outcomes. Yet globally, only 63% of countries have open and competitive school principal recruitment processes in primary and secondary education.
- **The best teachers do not necessarily make the best principals.** But while 76% of countries require principals to be fully qualified teachers, some 3 in 10 also specify management experience.
- **Autonomy can unlock leaders' potential.** Higher-performing education systems tend to grant greater autonomy to principals over decisions on human and financial resources. But in richer countries, less than half of principals are responsible for course content or establishing teacher salary levels. And almost 40% of countries do not recognize higher education institutions' autonomy by law.
- **Professional leaders need preparation and training.** School leadership standards can help guide training by outlining the required competencies, which almost all countries have set. However, almost half of principals in richer countries do not receive any training before appointment and only 31% of all countries have regulations for the induction of new principals. Practical skills like data use, financial management and digital literacy are also essential, yet a quarter of principals in richer countries lack adequate training in such areas.

School leaders are expected to do too much with too little.

- **There are too many demands on school operations to leave enough time for principals to set a vision.** Expectations of principals are often too high. Principals are key to effective implementation of reforms. In some countries, they are also under intense scrutiny due to new accountability mechanisms. Yet a survey of principals in 14 middle-income countries showed that 68% of their time is spent on routine management tasks. About one third of public school principals and one fifth of private school principals in OECD countries reported lacking sufficient time for instructional leadership.

School leaders should not be heroes. Sharing leadership builds better schools.

- **Sharing leadership throughout the school creates a collaborative learning environment.** It empowers teachers to lead within their classrooms, students to be active leaders with their peers, and parents and community members to be involved. Yet collaboration is the most underemphasized of the four leadership dimensions in training programmes.
- **School leadership is too often hierarchical.** Assistant principals and teachers can help achieve school goals when enabled with clear roles, training and incentives. But only half of countries explicitly emphasize teacher collaboration in their leadership standards and barely one third of leadership training programmes focus on it. Some 81% of countries require school boards to include teachers and 83% to include parents, 62% community members and 57% students.

System leaders do not receive sufficient attention in leadership plans.

- **Education officials at the central and local levels are potential leaders.** They can drive system-wide improvement and alignment in education reform and policy. Countries increasingly recognize that these officials can have greater influence if they are given greater autonomy.
- **System leaders are effective when they work with other actors.** In the Mexican state of Puebla, the success of the education reform was the result of coordinated system-wide efforts that included the leadership of education officials.

Education ministers work in complex political environments and are stymied by short tenures.

- **Ministers balance multiple demands during short tenures and often do not have a background in teaching.** A new global database shows that half of education ministers since 2010 leave office within two years after their appointment; only 23% have prior experience of teaching in schools.
- **Political leaders need to be astute in political compromise and outreach to make reform happen.** Coalition and relationship building can make up for a lack of time and good data and in the face of conflicting opinions.
- **Short tenures make it hard to deliver reform.** Analysis of World Bank education projects between 2000 and 2017 in 114 countries found a substantive negative correlation between ministerial turnover and project performance.

More women in leadership can have positive outcomes in education.

- **Female political leaders have prioritized education more than their male peers.** Female parliamentarians have helped increase primary education spending globally. Yet, the percentage of female ministers has increased only from 23% in 2010–13 to 30% in 2020–23.
- **Some studies suggest that women achieve better learning outcomes than men as principals.** In francophone Africa, students in primary schools led by female principals outperformed those in schools led by male principals in mathematics and reading by at least six months.
- **While many women teach, far fewer lead schools.** The share of female principals in primary and secondary education is on average at least 20 percentage points lower than the average share of female teachers. Only 11% of countries globally have measures in place to address gender diversity in principal recruitment.

Many actors exercise leadership by influencing the direction of education systems.

- **Teacher unions, student unions, business leaders, academics and civil society hold governments to account, lobby and raise awareness.** Influence matters: In the United States, some think tanks score low on expertise but high on education discussions in Congress, with the reverse being the case for others.
- **International organizations help frame and inform the global debate on education, as well as fund countries' education systems.** However, competition for space and influence can distract them from the goal of education improvement and their legitimacy can be challenged by a lack of capacity or efficiency.

On 12 June 2023, a school principal, Rita Sokoy, surrounded by her students at Yayasan Pendidikan Kristen (YPK) Kanda Primary School in Waibu, Jayapura District, Papua Province Indonesia.

Credit: © UNICEF/UNI430754/Al Asad*

CHAPTER

1

Introduction

KEY MESSAGES

Leadership takes many forms and is hard to measure concretely, but it is critical for education success at all levels: institutional, systemic and political.

- In education, as in politics and business, leadership is a process of social influence aimed at maximizing joint efforts towards a common goal.
- Leadership styles differ depending on the context, personalities and organizational goals.
- The multiple forms of leadership – and its multiple outcomes – means it can be hard to demonstrate its impact on education, and why that impact is frequently overlooked.
- But there is virtually no documented instance of troubled schools being turned around without intervention by a good leader.

Leaders need to define their purpose and plan how they will influence change, taking into account their capacity and context.

- While there is an emphasis on learning, leaders need to think what learning outcomes to focus on as well as to deliver on a wide range of goals related to equity, quality and inclusion.
- Influencing change has increasingly been associated with sharing leadership functions to achieve education goals – moving from perhaps too much emphasis on individuals.
- Freedom to make decisions, which is the result of rules that reflect cultural norms, frees leaders' potential to exercise leadership, although leaders also work in constrained contexts.

In designing a leadership policy, attention needs to shift from exceptional individuals to systematic processes.

- It is often difficult to distinguish a good leader from a good manager. Managing daily activities effectively to make time for future planning is at the heart of what leaders do.
- Although being a change agent is what often distinguishes a leader, leadership may be more important for maintaining stability in some cases than for seeking change.
- The focus of a leadership policy should be how to encourage and nurture diverse groups of people with good leadership potential to pursue such careers through appropriate institutional and organizational structures.

Four dimensions of school leadership are important for leadership at all levels of education.

- Setting expectations, focusing on learning, fostering collaboration and developing people are important not only for school principals and teacher leaders, but also for system leaders.

Expectations of leaders at the school and system level have been changing 10
Guide to the report 13
Recommendations 17

The role of education leaders is taken for granted. Yet, often invisibly, they shape the direction of their schools, universities, departments and ministries. Their leadership styles reflect their personalities and expertise but also adapt to fit their teams' characteristics, their organizations' goals and their context. The variety of leadership styles is precisely why there is no easy way of demonstrating how they impact education. It is also why that impact is frequently overlooked. Yet the need for good school, system and political leaders is acute to help drive education in the right direction, particularly as education challenges remain daunting.

> The need for good school, system and political leaders is acute to help drive education in the right direction

Leadership is often associated with politics and business. Popular literature on management gives many examples of considering the skills, personality traits, behaviours, styles, motivations and values of leaders, with a tendency to focus on them as exceptional individuals. In one such example, a five-item list describes 'what effective leaders do'. The authors say that they set standards of excellence and an example for others to follow ('model the way'); envision an ideal of what an organization can become ('inspire a shared vision'); look for innovative ways to improve an organization ('challenge the process'); foster collaboration, strive to create an atmosphere of trust and make each person feel capable ('enable others to act'); and recognize the contributions that individuals make ('encourage the heart') (Kouzes and Posner, 2017).

In another well-read publication targeting the business world, leadership is defined as 'a process of social influence, which maximizes the efforts of others, towards the achievement of a goal' (Kruse, 2013). This definition has two implications: first, that leadership is not conferred automatically by being in a position of power but by an ability to affect other people's actions, and second, that leadership is framed in terms of a goal for which leaders play an important role in its formulation and behind which members of a team, organization or society can rally.

In education, a recent definition mirrors these two concepts: 'leadership is the advocacy of a particular form of organizing' (Eacott, 2022): 'advocacy' stands for an influence process, while the 'form of organizing' alludes to the existence of a goal. Considering that leadership in education involves specific goals, a process of influence to mobilize people towards them, and opportunities but also constraints to achieving them, three questions arise.

First, what goals do education leaders try to achieve? This report calls all those interested in education to #LeadforLearning. Defining the objectives of learning is a political process that involves everyone with a stake in education. There is a perception – to which this report even sometimes contributes inadvertently given its mandate to report on comparable education indicators – that learning objectives can be narrowed down to a set of measurable outcomes in subjects such as reading, mathematics and science. However, education has a much broader set of learning objectives, not only the transmission of knowledge and the acquisition of skills that lead to qualifications but also the empowerment of students to think and act responsibly and their socialization into shared practices and traditions (Biesta, 2017). Defining the **purpose** must be the starting point in any discussion of leadership in education.

Second, how do education leaders try to achieve these goals? It is the growth of schools and other education institutions into large organizations and the evolution of simple education bureaucracies into complex systems in industrialized countries that has generated interest in education administration and management as a field. The role of education leaders was subsumed in

these analyses, with researchers initially analysing the achievements of leaders as the work of great men. Gradually, a more systematic scientific approach was adopted, which started seeing leadership as a potentially distinct element of education management. Researchers believed they could identify individual practices and organizational arrangements relating to leadership, which led to the critique that these two factors cannot be seen separately, as individuals make up organizations. More recently, the exercise of leadership has been recognized as determined by the social **relations** within these education institutions and systems (Bates, 2010; Bush, 2020). Those working in education depend on each other and leadership functions therefore need to be to be shared to achieve education goals.

Third, what may get in education leaders' way? Those in education leadership roles need to have the **capacity** to exercise the functions expected of them. But **context** matters too. Formal and informal social, economic, political and cultural rules and norms expand or limit individual education leaders' initiative and scope for action. Their freedom to make decisions is the result of governance and accountability rules, which vary greatly between countries, often reflecting cultural norms (**Box 1.1**) (Ärlestig et al., 2016). Opportunities to exercise leadership also vary within countries, especially among education institutions. Each preschool, school, technical and vocational institute, college, university, and adult education centre is situated in a different context and their leaders are faced with different expectations by the community they serve. Small and big, public and private, urban and rural, well-resourced and under-resourced education institutions face different conditions. Institutions operating in emergency contexts or in ethnically and linguistically diverse communities require leaders to be deeply knowledgeable and responsive to their environment.

These three questions help frame a discussion on the roles of education leaders. For the first question – the purpose of education – education leaders may be torn between the small picture and the big picture – and constantly face the risk of missing the wood for the trees. It is possible that focusing on the improvement of measurable learning outcomes, which is the outcome examined by most research studies, may come at the expense of improvements in a range of other desirable education outcomes, such as establishing an inclusive environment or preparing learners to adapt to the future challenges of citizenship and climate change. Standardized performance measures risk leading to standardized approaches to management and leadership, which may not suit individual

BOX 1.1:

Autonomy and accountability reforms in some countries have shaped perceptions of education leadership roles globally

One of the challenges of a global report on leadership is that, while most people would agree that leadership matters for education, much of the evidence comes from a relatively small number of high-income, mainly English-speaking countries that for historical and cultural reasons have experimented with particular governance approaches. Their reforms set them apart from the rest of the world yet have a strong influence on global debates on education leadership.

School autonomy in planning, budgeting and allocating educational resources, including personnel, depends on the centralization of the education system. Countries that have advanced research on the impact of school leadership are also those that have promoted decentralization and were particularly interested in understanding the effect of these management changes on education outcomes. In these contexts, institutional autonomy, granted through policies, regulations and procedures, needs to be accompanied by professional autonomy where principals and teachers have the capacity to make good decisions. Conversely, the scope of leadership may be compromised in countries where schools are subject to bureaucratic control for every decision or can only implement decisions made elsewhere. In such hierarchical systems, principals and teachers may not be able to depart from tightly defined rules and regulations.

Institutional and professional autonomy in some high-income countries has been accompanied by accountability mechanisms designed to monitor and steer school improvement (UNESCO, 2017). Accountability for complying with regulations and achieving results aims to strengthen extrinsic motivation. School performance is regularly reviewed and publicly reported in some cases, while school choice and competition for students may add market-like pressures. This type of accountability contrasts with notions of moral accountability, in which principals and teachers are responsible for meeting the needs of parents and students, and professional accountability, where principals and teachers meet their own self-expectations as well as those of their colleagues and peers, both of which aim to strengthen intrinsic motivation.

contexts. While this report looks at how countries have approached the questions of leadership standards, it only aims to describe their efforts and not to prescribe their content or enforcement.

In terms of relationships, the dilemma is whether personalities or effective teams, whose members learn from each other, are the drivers of results in education. Critics argue too much importance has been placed on individuals – and point out that leadership has risen from a modest role to being singled out as the second most important factor which explains learning outcomes (Lakomski et al., 2018). It might be misleading to credit individuals with single-handedly transforming education systems – and that might be a bias inherent in Western culture. Appropriate institutional environments and good organizational structures may be more important. This does not mean that principals do not play a critical role, but that this role is nuanced. A closer look at the operation of an education institution could reveal that a positive education outcome may have been the work of several intrinsically motivated people who contributed their commitment and expertise. Portraying these people as followers, who are dependent on a leader, underestimates their contributions.

In relation to context, the contrast is between control and the empowerment of people at different levels of the education system to make decisions. Another opposition is rules and the discretion to react at the right moment to local circumstances. Structure can be at odds with agency. While capacity and personal attributes matter, it may only be possible to put them to good use in enabling environments. However, an emphasis on autonomy should not distract from the fact that education leaders work towards achieving results, regardless of the governance regime under which they operate. Leaders also work in constrained contexts. While some leaders have the resources to implement their plans, others have to find solutions under adverse circumstances.

While leadership is an appealing concept, it is not clear cut. It is often difficult to distinguish a good leader from a good manager. Despite lofty objectives, education leaders' work tends to be mundane. School principals need to manage school budgets or hold meetings to make disciplinary decisions. Department heads and teacher leaders are likely to spend a lot of time preparing timetables and organizing teacher recruitment. Local education officers will fret over getting textbooks delivered on time or paying subsistence allowances to teachers travelling for a training course. Ministers will need to respond to members of their constituency to satisfy petty requests or fend off media criticism about an official's transgression. All these small acts are a far cry from what leaders are usually associated with. Yet managing daily activities effectively to make time for future planning is at the heart of what leaders do. In reality, there is a continuum of activities and the distinction between education management and leadership can be artificial.

> "It is often difficult to distinguish a good leader from a good manager"

A related issue is whether leadership has to be associated with change. Some argue that being a change agent is what distinguishes a leader (Fullan, 1996). While management is about preserving the status quo, leadership is about changing it. Change management refers to implementing a change that has been decided upon. Change leadership is about the need for change and rallying people behind that change. Still, it is necessary to ask if all change is good or whether resisting change, especially when imposed externally, is also a sign of leadership. One commentator described, 'One element of recent times has been the constant change directed at schools: a stream of new movements, new programs and new directions. Unfortunately, some at all levels in education seem to be forever rushing to catch the next bandwagon that hits the scene … However, it is quite incorrect to assume that a school is effective only if it is undergoing change … We need to be reminded that change for the sake of change, including technological change, is not necessarily good; it must be tempered with wisdom, compassion and justice' (Mulford, 2008, p. 13–14).

Even the definition of leadership as influence, as endorsed in this report, can raise questions. Leadership generally has favourable connotations but its sources (which may include power) and its means (which may include manipulation) can have negative associations. Even influence can equally be seen as positive or negative. But is that sufficient for leadership to stand apart? Another commentator even asked: 'if leadership is a type, or aspect, of influence, doesn't that make 'leadership' unnecessary? That is, if it is influence we are really talking about, then why not stay with that word? … In short, when describing and analysing the flow of collective action and the conduct of persons as part of that process, why is it leadership we are talking about rather than influence or power?' (Gronn, 2003, p. 276–277).

One of the most quoted findings in literature on education leadership is that 'there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader' (Leithwood et al., 2004). The intention of this report is to see how this insight can be used to help decision makers design policies to ensure that each education institution and office will have leaders who are prepared to competently address and resolve education problems. This shifts the attention away from exceptional individuals to systematic processes. Do we need another hero, or do we need to encourage and nurture diverse groups of people with good leadership potential to pursue such careers? If people currently in leadership positions are vulnerable to being too sure of themselves, their abilities and their views, how can education systems be organized to support the recruitment in these positions of people who are committed and will not act alone but with and for their community?

> "Do we need another hero?"

Defining leadership in education in terms of influence and goals opens up the scope of this report. At the school, local, national and global levels, people and organizations need to be mobilized, from a range of positions, to shape goals and work collectively towards their achievement (**Table 1.1**).

- School leaders receive the most attention in research and policy. Depending on country, culture, context, governance and practice, terms such as 'administrator', 'director', 'principal' and 'head teacher' can be used. Originally perceived as responsible for day-to-day operations, their roles have expanded and diversified over time, calling for a range of skills. Leaders of preschools, technical and vocational institutes, colleges, universities, and adult education centres require similar but also very different capacities to do their jobs well.
- Within the school: In addition to the school principal, the contribution of vice -principals and of teaching staff who are assigned formal or informal responsibility for selected grades or subjects is increasingly recognized. Non-teaching staff can also be influential. The role of school governing boards or management committees is crucial though their existence and decision-making power varies. Students, parents and community members also have leadership potential.
- Outside the school: At local levels of the education administration, structures are in place to support schools in academic and operational matters. At the central level, education ministry and agency staff are expected to exercise system leadership in the design and implementation of national laws, policies and reforms.
- Outside the education system: Political leaders formulate an education vision, directions and priorities, which is usually part of their election platforms. The oversight of government work and approval of draft laws related to education is the responsibility of the legislature, which can steer debate. But this debate on the future of education is open to all. Researchers, civil society organizations, employer organizations, teacher and student unions, intellectuals, and the media – all monitor, influence and put pressure on national education system leaders to live up to or change their commitments, often pulling in different directions. International organizations are another group of actors with considerable influence on governments.

EXPECTATIONS OF LEADERS AT THE SCHOOL AND SYSTEM LEVEL HAVE BEEN CHANGING

Around the world, the concept of school leadership and perceptions of leaders' roles have been changing over the past few decades (Gurr, 2023). The general shift has been from seeing the school principal playing an administrative and bureaucratic function to expecting more involvement in working with teachers and other staff to improve school 'results' (Pont, 2020). Expectations about the form of these results are shaped by social preferences and the beliefs of education authorities and the education community, including leaders themselves.

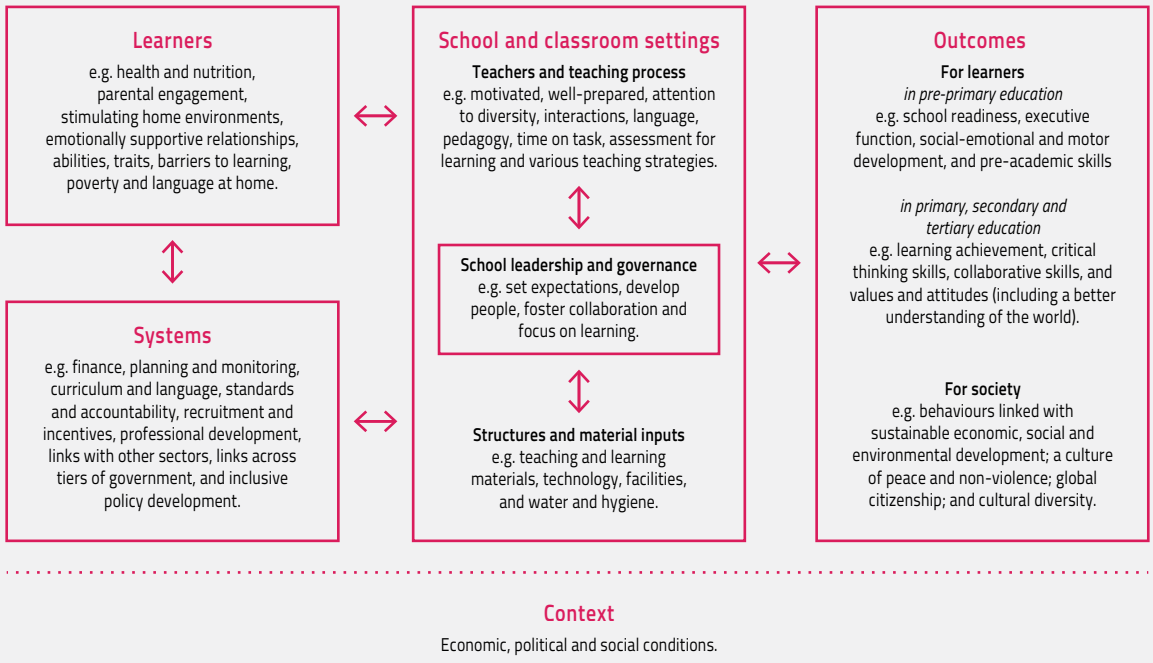
> "The concept of school leadership and perceptions of leaders' roles have been changing over the last few decades"

TABLE 1.1:
There are diverse leadership roles in education

School leaders manage human and financial resources but can shape schools' objectives (from inclusion to well-being), steer teaching and learning, develop staff, and foster collaborations.		Yoana Quintero is a rural school principal in Mexico in a challenging area plagued with a lack of public services, marginalized populations, gang violence and drug trafficking. Facilities are poor. Water, electricity and telephone services are scarce. Drawing on her knowledge of the community, she has forged partnerships with local institutions, including the health centre, police station and community services, to address school needs. She motivates and empowers her teaching staff, fostering a culture of care and support that extends beyond the classroom to create a favourable and supportive environment for teaching and learning.
		Sok Weng is a principal at the Bunrany Hun Sen Romeas Primary School in Cambodia. He has been working in education for 40 years. During COVID-19, he worked hard to prevent any children at his school from dropping out. He coordinated home learning packages to help students stay in school and keep up with their learning.
Teacher leaders are crucial for fostering collaboration within schools, balancing their teaching with oversight of specific areas, such as curricula, school welfare and professional development.		Sharhabeel Marashdeh is an assistant school principal at the Al-Dhiraa Secondary School for Boys in Jordan. He has a bachelor's in mathematics and an advanced professional diploma from the Queen Rania Teacher Academy. He works closely with the principal and school staff to improve instructional practices and help students overcome the challenges associated with their rural, economically disadvantaged community.
Education officials at the central and local levels, often referred to as middle or system leaders, take actions to implement government policy and support schools to achieve their goals.		Uma Mahadevan Dasgupta is Additional Chief Secretary at the Ministry of Panchayati Raj, in the Indian state of Karnataka. With the help of panchayats (village councils in India), she has worked to improve literacy by opening rural libraries for children. She helped build a movement around the Oduva Belaku (The Light of Reading) initiative, with the support of many individuals, non-governmental organizations and businesses. Over 1 million books have been collected and 4,000 libraries have been given with computers and internet connections.
Political leaders, such as ministers of education or parliamentarians, can shape the direction of an education system.		Tozen Leokana took office as the Minister of Education of the Solomon Islands in May 2024. He was a secondary school tutor before earning a Master's in Business Management while serving as president of the Solomon Islands Student Association. He was a technical advisor for Plan International before being appointed as Minister of Education. He described, 'my vision for education is one that is student-centred, innovative and forward-thinking', and stated his desire 'to work together with the senior management team and staff to implement the ministry's education reform plan in the next four years'.
Student leaders, when involved in education governance, can foster a sense of ownership and responsibility for learning.		Ester Simon is a youth leader and education activist who became the first female president of the Namibia National Students Union. She has continuously advocated for access to quality, relevant education for all at the national level, and subsequently also at the regional level as the Secretary General of the Southern Africa Students Union, a coordination body, and at the continental level through the All African Students Union.
Education journalists can drive debate and discussion, acting as thought leaders for education and holding others to account for their promises and record.		Liz Willen is editor in chief of the award-winning education-focused *Hechinger Report* online media outlet. At the start of her career, she spent nearly a decade at *Newsday*, another outlet, where she won numerous prizes for covering New York City public school issues before becoming a senior writer focused on higher education at *Bloomberg Markets* magazine. At the *Hechinger Report*, she has covered issues such as affirmative action in US college admissions. She won the Above & Beyond award from the media company City and State that recognizes exceptional professional women in New York City.

Photo credit, from top to bottom: Quintero_20245GEMReport*, © UNICEF/UN0714415/Raab*, Sharhabeel Marashdeh Marashdeh_20245GEMReport*, UMA_20245GEMReport*, Leokana_20245GEMReport*, Ester 20245GEMReport*,Photo by The Hechinger Report*.

FIGURE 1.1:
School leadership is at the centre of a framework of education quality



GEM StatLink: https://bit.ly/GEM2024_fig1_1
Source: UNESCO (2016).

The first in a set of well-publicized 'seven strong claims about successful school leadership' published two decades ago was that leadership stood out among reasons for education success: 'Of all the factors that contribute to what students learn at school … leadership is second in strength only to classroom instruction. Furthermore, effective leadership has the greatest impact in those circumstances (e.g. schools "in trouble") in which it is most needed. This evidence supports the present widespread interest in improving leadership as a key to the successful implementation of large-scale reforms' (Leithwood et al., 2004, p. 70). These claims were recently revisited and demonstrated to be valid with stronger evidence supporting them (Leithwood et al., 2020a).

One reason why leadership has such impact is that 'leaders have the potential to unleash latent capacities in organizations. Put somewhat differently: most school variables, considered separately, have only small effects on student learning. To obtain large effects, educators need to create synergy across the relevant variables. Among all the teachers, parents and policy makers who work hard to improve education, educators in leadership positions are uniquely positioned to ensure the necessary synergy' (Louis et al., 2010, p. 9).

The *Global Education Monitoring Report* has long considered school leadership as one of three key school-level factors within its broad framework of education quality (UNESCO, 2005, 2016), which captures inputs, processes and individual- and societal-level outcomes of education (**Figure 1.1**). Within the framework, learners and systems influence school and classroom settings, resulting in education outcomes, within a context of economic, social and political conditions. Various aspects of the framework relate to school leaders. Learners bring their home backgrounds, including parental attitudes towards school leaders, into schools. Education systems determine the context in which school principals work, for example standards and accountability mechanisms, rules that determine the scope for school-level decisions such as teacher hiring, and the presence of initial training and professional development opportunities for school leaders. At the school level, conditions related to teachers and their professional interactions, teaching and learning practices, resources, and facilities form the environment in which school leaders work. The context for leadership affects the types of hierarchical relationships, cultural responses to individual initiative and levels of social trust.

TABLE 1.2:
Four school leadership dimensions describe principals' core practices

Dimensions	Indicative practices
Set expectations	Develop, communicate and explain a shared vision, mission and goals, including a focus on student achievement Hold high performance expectations, for staff and students Provide inspirational motivation, exerting influence by setting a personal example and representing the community Stay current and use data for decision making
Focus on learning	Focus on instructional development, e.g. through pedagogical supervision Provide instructional resources and materials and align them to instructional goals Plan, coordinate and evaluate the curriculum Protect staff from work distractions Monitor student progress
Foster collaboration	Develop a school culture and positive climate Maintain a safe, healthy school environment Raise resources strategically, build networks and manage risk Nurture collaboration, especially between teachers, and enable action Build relations and consult with families and community
Develop people	Keep track of teacher professional development needs Provide individualized professional support and mentoring opportunities for teachers Evaluate teachers and reward good performance Provide intellectual stimulation Establish trusting relationships and manage conflict Be accessible

Source: Leithwood (2012) and Leithwood et al. (2020a).

Three dimensions of school leadership mentioned in the framework – setting expectations, focusing on learning and fostering collaboration – roughly correspond to the three leadership concepts – transformational, instructional and distributed – that have received the most attention in research, and a fourth dimension is closely linked to all three concepts:

- Setting expectations is related to transformational leadership, involving behaviours that influence, inspire and motivate school community members to improve the school.
- Focusing on learning is related to instructional leadership, involving behaviours that influence, inspire and motivate the school community to improve learning outcomes.
- Fostering collaboration is related to distributed or shared leadership, which refers to how leaders interact and collaborate with others and share their responsibilities.
- Developing people is part of school leaders' human resource management responsibilities but requires them to further help their teams learn and grow.

In each of the four dimensions, good leaders have been observed drawing from a repertoire of basic practices (**Table 1.2**). In fact, variations of these practices are relevant not only for school principals and teacher leaders but also for system leaders, especially at the local level. These four leadership dimensions are considered throughout the report.

GUIDE TO THE REPORT

This report looks into leadership in education from a global perspective. It brings together evidence, analysis and country practices on different issues and at different levels related to leadership. In particular, it draws on a review of legislation and policies on selection, preparation and working conditions from 211 education systems for this report, the PEER country profiles. Following this introductory chapter, the next three chapters focus on school leadership.

Chapter 2 on school leadership roles, standards and impact describes how school leadership is becoming more and more challenging as education institutions are expected to deliver an expanding set of results. School leaders are typically called upon to respond to difficult circumstances, but their capacity was tested to the extreme during the COVID-19 pandemic. The management tools at school leaders' disposal and the regulations which they have to follow are also becoming more sophisticated.

> School leadership is becoming more and more challenging as education institutions are expected to deliver an expanding set of results

School leadership is conceptualized and enacted in various ways, along the four dimensions of setting expectations, focusing on learning, fostering collaboration and developing people. The focus of school leadership is generally on the three areas of knowledge and skills related to people (e.g. caring, communication, networking, trust and confidence), instruction (e.g. observation, feedback, pedagogy, curriculum and assessment expertise) and organization (e.g. data use, technology, strategic thinking, resource allocation, management and reporting). The different contexts of schools – for example, urban vs rural, poor vs well-resourced, small vs large, public vs private, homogenous vs diverse, stable vs in emergency, and autonomous vs controlled – affect leadership. School leaders may be constrained by the context in which they operate in enacting leadership.

Evidence on leadership's impact on the achievement of education goals focuses on two levels – the academic, social, emotional and other personal development needs of *individual students and teachers*; and *school community* objectives, such as learning, equality, inclusion, respect, engagement, harmony, cohesion, solidarity, justice, innovation, efficiency, sustainability, resilience, satisfaction and well-being – which are stepping stones to achieving these goals at the societal level. Research often focuses on whether observable characteristics, such as gender, formal education qualifications, socioeconomic and cultural background, beliefs, or personality traits, are associated with good leadership and positive education outcomes.

However, such variables are not easy to measure, whether inputs, such as the nature and qualities of leadership, or outcomes, especially if one goes beyond numeracy and literacy skills. For example, it is difficult to assess whether a school promotes equity and inclusion. While a particular school leader might promote a chosen ethos, such outcomes are not the result of one person but of a succession of people, each of whom have left their mark, cumulatively establishing a school culture that may attract like-minded individuals. Such compounding factors make it difficult to draw causal interpretations. Small-scale, ethnographic research may better suit such analyses, but its guidance will be limited as the conclusions are highly dependent on context.

Standards of good leadership have emerged, at least partly informed by evidence. The report reviews the global prevalence of such standards and the extent to which they are related to various governance and accountability regimes. Standards can influence the development of professionalism, certification, initial and continuous education policies, and appraisal, although care has to be exercised for these not to constrain innovation and promote uniformity.

Chapter 3 on school leadership selection, training and conditions starts from the premise that, although research from around the world links school leadership to positive education outcomes, many countries' policies appear to pay insufficient attention to school leaders. In many countries, principals are still expected primarily to focus on administrative matters. Selection, preparation and development processes are often not designed well enough to create the conditions for good school leadership. The implementation of such policies varies considerably.

> Selection, preparation and development processes are often not designed well enough to create the conditions for good school leadership

The appointment of school leaders tends to be related to seniority. In some cases, recruitment decisions are politically motivated, based on patronage rather than a transparent selection process. Selection may involve explicit or tacit discriminatory bias, which may manifest in the under-representation of women and ethnic minorities in leadership positions. The report reviews hiring practices around the world, including the extent to which school directors are exclusively selected from the teacher pool or to which alternative paths are available for other professionals. Aspiring principals are typically identified through self-selection or professional recommendation. Talent management systems that

identify leadership potential early in the career and provide targeted leadership development opportunities are rare, revealing limited expectations about the role of the school director as a leader with a mission to improve education. The chapter also examines the role of school boards and local and central authorities in appointment decisions. Multiple criteria may apply, including performance in interviews and tests, portfolios, certification, or even actively practising a faith. School directors' working conditions include workplace satisfaction, turnover, incentives and appraisal mechanisms.

Initial preparation programmes sometimes start from encouraging teachers to follow a career path into school leadership, creating a talent pool from which the best can be selected. School leader preparation programmes vary by characteristics including duration, timing (before or after recruitment), sector (public or private), location (universities, associations or other providers), modality (on site or distance) and content (management or pedagogy). The content of such programmes should be aligned with emerging standards. Sufficient incentives should be provided for aspiring or practising school directors to invest in training. Coaching and mentoring programmes for first-year principals are needed. The programme quality relates to processes (e.g. opportunity to practise, learn from others, understand context, prepare for challenges and update content) and results (such as work placements and student learning).

In-service professional learning may be the only opportunity for principals in some countries. Again, the characteristics vary, including coverage; the offer of practicums; responsiveness to the needs of principals; emphasis on instructional leadership; and the degree of formality as opposed to more collaborative approaches such as mentoring, networking, study groups, school visits and peer coaching.

The chapter draws on research and evidence from comparative studies, such as the Teaching and Learning International Survey (OECD, 2019, 2020), the International Successful School Principalship Project (University of Nottingham, 2020), the International Study of Principal Preparation (Slater et al., 2018), the 7 System Leadership Study (Harris and Jones, 2015; 2018), the International School Leadership Development Network (ISLDN, 2024), and the World School Leadership Study (WSLS, 2024).

Chapter 4 on shared school leadership emphasizes that school leaders cannot lead schools alone, especially when they have major responsibilities. While they may have the most responsibility and opportunities to exercise leadership and are loaded with the biggest expectations, other stakeholders in schools must also provide leadership. There is, therefore, interest in how leadership is distributed. Vice principals, teacher or middle leaders, non-teaching staff, school management committees or boards, and student leaders are among those that may be drawn into decision making.

> "School leaders cannot lead schools alone"

Middle leaders are teachers who have a substantial teaching workload in addition to a substantial leadership role, such as head of a curriculum area (e.g. mathematics) or a grade. These are often the leaders who are most in contact with teachers, parents and guardians and play a significant role in teachers' well-being, collective action, mutual support, pedagogical innovation, parental and student involvement, professional learning, community development, and student outcomes. Their responsibilities include decisions on curricular emphasis, resource acquisition and distribution, staff development, and a supportive culture. They may or may not succeed in their role, depending on factors such as support received from school principals, recognition in the form of time assigned to leadership tasks, and the burden posed by administrative responsibilities. The review draws on evidence from comparative studies such as the International Study of Teacher Leadership (ISTL, 2024). It also examines the role of teachers in informal leadership roles and of non-teaching staff.

In some countries, school management committees and boards share management responsibilities with school leaders. Parent–teacher associations offer other channels of communication with the school community. These bodies have varying formal responsibilities enshrined in legislation and regulations. Member selection processes aim to ensure representation, although the actual selection is the result of social dynamics and may lead to exclusions. Even when they convene, these management bodies tend to be consumed with day-to-day affairs instead of leadership, and operate with caution, focusing on legal responsibilities. Yet, in some cases, they have played a leadership role, helping shape school priorities and steer school directors.

Students participate in school councils, although rarely with a leadership element. Such instances are more common in university governance and management, especially in richer countries, where student participation is considered a measure of institutional excellence. The ability of the student body to select its representatives

transparently; agree on clear positions on issues related to student outcomes, inclusion and welfare; and demonstrate leadership varies not only in terms of legal frameworks but also by the political culture. Certain conditions enable the meaningful participation of student leaders.

Chapter 5 on system leadership points at several key positions in education administration at the local and central levels where officials can exercise leadership through their commitment to the achievement of national education goals and through their effectiveness in carrying out their responsibilities. At the local level, the roles and responsibilities of system leaders support schools. At the central level, system leaders, by definition, design change that can potentially affect all parts of the system.

> “Officials can exercise leadership through their commitment to the achievement of national education goals”

At the local level, depending on the education system's governance structures, district education officers, inspectors, supervisors and superintendents may or may not demonstrate a commitment to raising standards, improving individual learning, supporting schools and accounting to communities for the quality of service provided. They may be proactive and resourceful, seeking advice for professional improvement, taking initiative, looking for evidence, planning ahead, anticipating needs and finding solutions, often beyond the call of duty. But even when their roles are clearly described, they may fear taking responsibility and be negligent and insensitive to community needs, and unaware of priorities or ways to address them. They may show favouritism or biases, breach duties, and regard their position not as a public service but as an opportunity for private benefit.

At the central level, there are similar issues but an even broader scope to exercise leadership instead of just implementing protocols and procedures. This is because system leadership involves the ability to generate change through existing or new connections. System leaders must plan and budget for fiscal and human resources that will achieve education goals. Officials in education ministries and national education implementation agencies need to be able to process and analyse data, monitor and evaluate, develop policy recommendations, design programmes, prepare draft laws, and advise political leaders.

System leaders could be leaders, part or products of system change. Seniority should not be the main selection criterion for them to have a positive influence on others. They need to have not only relevant knowledge but also skills to facilitate, advocate, mobilize and challenge – and build the professional capacity of others. They need to be thought leaders as well as practical leaders. They should have status, recognition and understanding of how change is led and managed. They also need to act as models for future practices instead of simply sharing existing best practice. Fulfilling these roles usually depends on a country's public administration and civil service structures and traditions, with respect to selection, promotion, professionalism, internal and external motivation, empowerment, expertise, and capacity – and the extent to which these cultivate a leadership perspective in the exercise of public functions.

Chapter 6 on political leadership returns to the issue of the purpose of education. Ultimately, it falls to political leaders to develop a vision and set the expectations for an education system of good quality that captures popular aspirations and is aligned with national development objectives. This vision may be expressed in political party agendas and be part of a political programme that is questioned by voters. Presidents, prime ministers, ministers and deputy ministers of education are responsible for providing a long-term education perspective, seeking consensus in formulating reforms, offering continuity where necessary, and ensuring that plans are credible and matched with the required resources. Not only the executive but also the legislative branch of government needs to demonstrate leadership: parliamentary committees of education can make major contributions through the passing of laws and scrutinizing the work of government.

> “It falls to political leaders to develop a vision and set the expectations for an education system of good quality”

Political leaders have opportunities and constraints in fulfilling their responsibilities. They differ in how their political visions of education are formed, how they serve society, and how often they are sidetracked by short-term considerations and political calculations. Short tenures, coalition and alliance demands, and narrow and entrenched interests get in the way of evidence-based policymaking.

BOX 1.2:

Four regional editions accompany the 2024/5 *Global Education Monitoring Report* cycle on leadership

It is impossible to do justice to such a broad range of topics in a single publication. For this reason, throughout 2025, four regional editions will explore selected issues in more detail that resonate in different parts of the world.

- The third edition of the Spotlight series on universal basic education completion and foundational learning in **Africa** will focus on instructional leadership, drawing on research focusing on five countries.
- A regional edition on **Central and Eastern Europe, the Caucasus, and Central Asia** will focus on leadership for inclusive education, drawing on eight country case studies.
- A regional edition on **East Asia** will focus on leadership and digital transformation, drawing on four country case studies.
- A regional edition on **Latin America** will examine distributed and shared leadership, drawing on seven country case studies.

Other actors can help ensure that public policy debate on education stays focused on the issues that matter most. There are interest groups that balance their concern for their members with their engagement in broader questions. These include teacher unions that defend working conditions and scrutinize reforms; student unions that strive for a seat at the table but also for deeper political and social change; and employer organizations that push for education to play a stronger role in national development. A range of expert perspectives influence government policy direction as well as social preferences for education. These include intellectuals and artists who take positions on the direction of the national education system through their public interventions, stirring debate; academics, think tanks and policy entrepreneurs who identify key issues in their research and publicize them and are invited to give advice; and international organizations that provide a cross-national perspective to education priorities. Finally, education leadership is often best exercised by civil society organizations and activists who champion the right to education and critically review the government's policy record; and by journalists who investigate weaknesses, expose negligence and analyse government reports.

All these actors can also have the opposite effect through narrow, self-serving and divisive agendas. Yet their potential to play a positive role cannot be underestimated, as they have helped trigger far-reaching changes in education, often through advocating for openness, transparency and accountability as enabling conditions for dialogue.

The **monitoring part** of the report consists of **Chapters 7 to 18**. A short introductory chapter reviews recent developments in Sustainable Development Goal (SDG) 4 progress monitoring, including the 2025 Comprehensive Review of the SDG monitoring framework, the first Conference on Education Data and Statistics, and updates to the national SDG 4 benchmarking process. The following 10 chapters provide updates on progress towards each of the SDG 4 targets, accompanied by a policy focus section of interest. Some of these sections are related to leadership issues, such as university leadership, leadership education and school principal salaries. The last chapter examines education financing.

RECOMMENDATIONS

Leadership matters in education. It helps education institutions, education systems and societies to change for the better. Leaders do not act on their own – they respond to other actors who help shift the political system: members of parliament, researchers, international organizations, civil society, trade unions, media and many others. All of them exercise leadership, helping influence countries towards specific education and broader societal goals. Some politicians, for example, have made inclusive and equitable education of good quality a priority in their countries through forward-looking reforms and adequate resource allocation. But before delving into the 'how' of leadership – and risk it becoming an end in itself – it is therefore important not to lose sight of 'what' leadership is meant to achieve.

Leadership is exercised in many ways and multiple forms, given differences in contexts, values, personalities and organizations. And the range of outcomes to which leaders contribute is so wide that focusing on any single one for analytical convenience underestimates their full impact. Stories of good leaders inspire but can only offer direct lessons to those who may find themselves in similar situations. The challenge is to draw from these individual

stories and focus on institutional mechanisms that nurture rather than stifle talented leaders of all styles and backgrounds, in all contexts. In many countries, education leaders are often thought of only as administrators or managers. Yet in recent years some countries have recognized the full scope of their roles and built foundations for their professionalization. Other countries have even taken steps to shape approaches to leadership, urging leaders to engage more with those around them. Change can be slow, however, when it involves long-standing cultures and traditions.

This report's four recommendations focus on actions governments can take to foster leadership in education at school and in the civil service. They are underpinned by four dimensions of an education leader's role that are relevant for them to lead effectively, whether they work in a school or a government education office: to set expectations, to focus on learning, to foster collaboration and to develop capacity. These dimensions should be the basis upon which to build coherent national strategies of education leadership that cut across all levels of the system. For an education system to work well, leaders at different levels need to be working in the same direction to achieve common goals.

RECOMMENDATION 1. TRUST AND EMPOWER

Create the enabling conditions for school principals to improve education

There can be no leadership when there is no opportunity to make decisions. Education leaders contribute to education improvement in all circumstances and contexts, but their influence is greater the more they are trusted to use their skills. Education systems therefore need to empower school principals with sufficient autonomy to manage financial and human resources and to make decisions related to teaching and learning.

But introducing autonomy will not be sufficient without support measures. Governments must be clear about the scope of school leaders' decision-making authority. They need to allocate adequate resources in a timely, equitable and predictable manner. School leaders need to be accountable to governments and communities for the responsible use of these resources to achieve feasible education outcomes. Governments must develop leaders' capacity to use resources effectively and their own capacity to monitor schools and use the information effectively. Trust should be developed further by meaningful and regular engagement. And governments need to be aware of and protect school leaders from the potential downsides of greater autonomy.

RECOMMENDATION 2. SELECT, DEVELOP AND RECOGNIZE

Invest in the professionalization of school principals

a. Select talented school principals through inclusive recruitment

Approaches to recruitment need to be inclusive and recognize that good leadership potential can be found in those who are 'modest and self-effacing, surprised to be singled out as effective leaders'. Talented people are likely to be discouraged if processes are closed and inequitable. While there may be alternative pathways to becoming a school leader, it is highly unlikely that someone could be appointed outside of the pool of current teachers. It, therefore, makes sense for initial teacher training to incorporate elements of leadership development. Talent spotting and succession planning should be integral components of recruitment strategies. Offering management and leadership roles in advance is desirable where circumstances allow. However, it is crucial to ensure that these approaches are free of bias, stereotypes and favouritism, and to avoid hierarchical structures, partisanship or patronage.

Selection criteria should be clearly defined, objective and transparent to ensure that qualified candidates, regardless of their background or gender, have equal opportunities to demonstrate their diverse leadership skills. Politics should not play a role in the choice of school leaders. The lack of diversity in leadership positions is a problem for education decision making at all levels. Currently, 8 in 10 countries do not have measures in place to ensure balanced representation. Open selection processes could help reduce disparity in representation in leadership positions, but temporary quotas may be needed where problems persist.

The best teachers need not make the best principals – and care should be exercised to avoid signalling that the position of a principal is a reward for the best teachers. On the other hand, being a good teacher is important to succeed as a principal. The review of selection processes for this report shows 76% of countries require principals to be fully qualified teachers. But only some 3 in 10 also specify management experience. Selection criteria should therefore be broadened and diversified.

b. Prepare, train and support school principals to focus on the core dimensions of their role

A global review of training courses for this report, both pre-service and in-service, suggests that barely half of training courses focus on any of the four dimensions of instructional leadership, expectations and vision, collaboration and alliances, and staff development – and just one-fifth on all four. Training programmes need to pay attention to each of these four dimensions but tend to be primarily academic and do not distinguish between needs arising at different career stages.

Some types of support, such as induction, coaching and mentorship, are critical for novice and early career leaders' success, yet their role is downplayed. Only 3 in 10 countries have regulations to provide training for new principals after their appointment. Preparation programmes should include a practice or experiential learning element and enlist the support of coaches and mentors.

Professional development programmes should fill gaps, especially for leaders whose previous training did not cover the four core dimensions. Competences that can be nurtured include a range of good observation, listening, social, emotional and analytical skills. Training should also cover any government reform priorities to support their implementation, including familiarizing school leaders with core legislation and regulations, and developing practical skills in data, financial, human resource and pedagogical management. Ultimately, principals need to feel comfortable in making decisions. One quarter of school principals in upper-middle- and high-income countries have expressed the need for training in these areas. Specialized knowledge is needed to implement policies on inclusion and on digital transformation. Other education policy areas, such as greening and health and nutrition, will also require school leaders to develop capacity.

With a growing range of responsibilities, leadership is often associated with stress and burnout. It is therefore necessary to give access to professional counselling and mental health services, and to create a supportive network within the school environment where leaders can discuss challenges and seek assistance. The costs of these investments will be offset because sufficiently supported school leaders will be less likely to quit.

c. Set and implement school leadership standards and recognize their achievement

Globally, almost half of countries have adopted stand-alone national professional standards or competency frameworks which outline the required competencies of aspiring and practising school principals and indicate desirable practices. Standards are particularly important where perceptions of school principals' roles remain limited to administration and management. They help communicate national priorities and can be used to guide selection, preparation and training. But they should not create uniformity and should reflect the country's education and cultural context, avoiding the temptation to import standards from other countries without adapting them to the local context.

School leaders' performance should be assessed against these standards and intended education outcomes. The primary intention of such appraisal should be formative: to give feedback and recommend changes in practice. Appraisal systems can be used as a basis to develop a certification process that recognizes the professional competences of school leaders. Well-organized appraisal systems can further be used to develop career advancement pathways.

RECOMMENDATION 3. SHARE

Promote shared leadership and collaborative school cultures

Leadership is sometimes thought of as a series of heroic acts. But school leaders are not and should not be seen as heroes; it is not possible for them to do everything and do it on their own. They need to lead through collaboration to achieve common goals so that all stakeholders are motivated to work in the same direction using their respective strengths.

Leadership status needs to have deeper roots than a position of power. It needs to be earned through daily practice that demonstrates integrity, commitment, ability and humanity. These qualities are strengthened if leadership functions are shared, formally and informally, with members of a management team (e.g. the vice principal or heads of department), teachers and school support staff, students, parents, and community members. School principals need to know how to meaningfully use structures, such as school management committees and student councils, as forums for consultation and engagement. Such collaborative relationships strengthen governance, improve decision making,

enhance accountability, and foster inclusive and resilient environments. Policies on shared school leadership should be developed and implemented. Yet only about half of countries emphasize teacher collaboration in their leadership standards. And barely one third of leadership programmes reviewed for this report focused on developing school leaders' preparedness to share responsibilities through openness, collaboration and partnerships.

Professional development programmes should, therefore, help school principals to clarify roles; delegate responsibilities; empower colleagues, students and parents and recognize their unique contributions; create an environment where everyone feels valued; establish clear communication channels and regular feedback mechanisms; build teams; and see the school as a learning organization that works toward common goals.

RECOMMENDATION 4. INVEST IN SYSTEM LEADERS

Develop education officials' capacity to serve as system leaders

Education system leaders are among the least studied education actors – and quite possibly not sufficiently prepared. Yet they are entrusted with major responsibilities to initiate and implement education system reforms instigated by the government and to support quality assurance processes. Sometimes, instead of empowering them, their functions are outsourced or transferred to new governance structures.

The same challenges that affect the professionalization of school principals are exacerbated for these civil servants. Recruitment and selection processes are slow to change because public administration reforms move at a slow pace. Preparation and professional development are hampered by the fact that education sector expertise may not be a prerequisite. This makes it very difficult for officials to fulfil one of their main functions: to lead instructional support. They also tend to see their role as one of control rather than support. Appraisal mechanisms lack measurable objectives, which could be used to give feedback.

Professional development programmes need to build capacity for education officials, with a particular emphasis on instructional leadership and quality assurance. In increasingly complex environments, education officials also need preparation in crisis management.

Jamba Chongo, teacher and vice-principal, teaches the pupils of Lubile Primary School in Mpungwe, a village about 20 kilometers from Kalemie in the Tanganyika province of the Democratic Republic of the Congo, on November 28, 2023.

Credit: © UNICEF/UNI548673/Benekire*

CHAPTER

2

School leadership: Roles, impact and standards

KEY MESSAGES

Principals balance a wide range of responsibilities, and often do not have enough time to focus on teaching and learning.

- Principals are expected to shape a school's vision, design its curriculum, ensure students' well-being and monitor their progress. Yet in 14 low- and middle-income countries, principals spent 68% of their time on management tasks.
- There is a growing focus on principals' role in teacher development. Globally, 54% of countries expect principals to provide feedback to teachers based on observation. In practice, evidence from high-income countries suggests that the share of principals observing lessons fell from 81% in 2015 to 77% in 2022.

Strong school leadership is essential for students' success.

- Principals' impact on student success ranks just below teachers' influence among school-controlled factors. Most evidence comes from the United States. A review of leadership practices at all levels – senior, middle and teacher leaders – found that they explained up to 27% of the variance in student outcomes. An experiment in six urban districts found that schools with strategically placed principals improved by over 6 percentile points in reading after three years.
- Leadership can improve academic achievement, reduce dropout rates and foster a positive school climate. A study of 32 countries showed that strong leadership also leads to improved teaching practices.

A principal's effectiveness is influenced by context and their capacity and background.

- Principals in disadvantaged schools tend to have less experience compared to their peers in non-disadvantaged schools.
- Principals from diverse backgrounds can enhance the success and well-being of minority students. Black principals in the United States are associated with improved mathematics scores and reduced suspensions for Black students. Diversity among principals in Europe has improved migrant students' learning outcomes and self-esteem.
- Female leaders can contribute to students' success in some contexts. In francophone Africa, primary school students led by female principals outperformed those led by male principals in mathematics and reading by the equivalent of at least six months of learning.
- The key institutional feature that enables principals to exercise leadership skills and show initiative to improve education outcomes is the extent of their decision-making power. In 20 high-income countries, the more principals had the primary responsibility for human and financial resource decisions, the more likely it was that a country would be among those ranked more highly in terms of average performance in mathematics.

Leadership standards outline leadership practices conducive to teaching and learning.

- Globally, 49% of countries have adopted stand-alone national professional leadership standards or competency frameworks, independent of laws or policies, which outline the competencies principals are required to demonstrate.
- The four key dimensions of leadership are adopted to different degrees in professional leadership standards, frameworks and regulations. Only half of countries have standards for school principals that explicitly address collaboration.

School principals are expected to fulfil various leadership roles 25
The impact of school principals can be significant 31
Leadership standards can guide action and certification 39
Conclusion 42

School leadership involves steering educational institutions to achieve their goals, such as improving student learning and fostering a positive school environment (UNESCO, 2018). School principals bear responsibilities such as shaping an educational vision, aligning teaching practices with standards and student needs, encouraging professional development and collaboration, and ensuring student well-being and safety. Such responsibilities require them to both manage and lead under resource constraints and frequent education policy shifts. Principals have to address the needs of diverse student populations; respond to the exigencies of digital technology (UNESCO, 2023b); and deal with emergencies such as displacement (UNESCO, 2019), natural disasters and health crises like COVID-19 (Longmuir, 2023). They need to deal with community expectations and navigate accountability pressures (Lee, 2016).

In some contexts, decentralized arrangements empower principals to take the action they deem appropriate to address problems. Principals also increasingly have access to better management tools, regulatory frameworks and communication channels. These resources can develop their capacity to build trust and effective collaborative relationships with staff, students, parents and community stakeholders for joint action (UNESCO, 2023a).

This chapter examines principals' roles, with an emphasis on primary and secondary education. The term 'principal' refers to the individual responsible for leading a school, either independently or within an administrative organization like a board or council, overseeing its guidance, organization and operation (**Box 2.1**). Their roles are generally described as expectations, which are outlined in various government texts. The chapter also examines the impact principals have on educational outcomes and how this is mediated by individual and governance characteristics. Finally, the chapter looks at how this understanding is being codified in leadership standards.

SCHOOL PRINCIPALS ARE EXPECTED TO FULFIL VARIOUS LEADERSHIP ROLES

Principals have historically been seen mainly as administrators focused on tasks like setting budgets and timetables. But they are increasingly expected to take on roles with broader impact. This section focuses on four key roles: set a vision, lead instruction, foster collaboration and support teachers to improve school outcomes (Bush, 2008; Hallinger and Kovačević, 2019).

> School principals are increasingly expected to take on roles with broader impact

School principals need to master a large set of skills to play these roles. They need to be able to use data, prioritize, plan, implement, supervise and assess to solve problems (Bouchamma et al., 2020). They need to communicate effectively to develop a shared understanding, mobilize teams around objectives and promote professional growth (Ramos et al., 2021). They need to have emotional intelligence, self-awareness, social awareness and self-regulation skills to build constructive relationships (Bouchamma et al., 2019).

The extent to which these four school principal leadership role expectations are shared is significantly conditioned by context. For instance, a review of six studies in Africa suggested that there were few expectations on principals to be instructional leaders (Bush et al., 2021). But in high-income, mainly anglophone countries, the rise of standardized testing and accountability mechanisms has placed high expectations on principals to be responsible for student achievement (Cranston, 2013; Leithwood, 2001; Leithwood et al., 2002; Moller, 2007).

BOX 2.1:

Various terms are used to designate school principals in national regulations

The term 'principal' is common worldwide, reflecting various educational traditions and structures. In the Caribbean, the term is used, for example, in the education acts of Barbados and Saint Lucia (Barbados Government, 2007; Saint Lucia Government, 1999). In the Pacific, Kiribati and Nauru define a principal as the person responsible for daily school management (Kiribati Government, 2013; Nauru Government, 2011), while New Zealand's Education and Training Act designates the principal as the chief executive (New Zealand Government, 2023). In Africa, Lesotho's 2010 Education Act defines a school principal as a teacher in charge of a school, with a range of roles, including instructional leadership (Lesotho Government, 2010).

Alternative terms such as 'school head', 'head teacher' or 'headmaster' are also used. In Nepal, the 1971 Education Act uses 'headmaster' and the 2018 Act defines the 'head teacher' as the executive chief responsible for management (Nepal Government, 2010, 2018). The 1978 Education Act in the United Republic of Tanzania refers to head teachers, headmasters and managers (United Republic of Tanzania Government, 1978).

The terms principal and head teacher are often used interchangeably. In Brunei Darussalam, the 2003 Education Act considers them synonymous (Brunei Darussalam Government, 2011). Uganda's 2008 Education Act defines 'head teacher' to include 'headmistress, headmaster, principal or director' (Uganda Government, 2008). But some countries draw clear distinctions between these terms. Sierra Leone's 2023 Education Act distinguishes 'head teacher' for primary schools from 'principal' for secondary schools (Sierra Leone Government, 2023). South Sudan's 2012 Act defines a head teacher as the 'senior teacher responsible for the administration of a school' and a principal as the 'chief administrator' (South Sudan Ministry of General Education and Instruction, 2017). Zambia's 2011 Education Act defines 'head of institution' to include both, with head teachers leading schools and principals leading colleges (Zambia Government, 2011).

The term 'director' is common in many countries that do not have English as their official language. In Chile, the 2023 Education Law designates school directors as leaders of the institutional educational project and continuous improvement (Chile Ministry of Education, 2023). In Denmark, the principal is called inspektor (supervisor), and in Sweden, they are rektor, a term used since the 13th century for church school leaders (Pont et al., 2008).

Terms like 'school administrators' or 'school managers' denote school heads in some countries. Thailand's regulations describe them as professionals managing educational institutions at various levels (Thailand Government, 2003; Thailand Office of the National Education Commission, 1999). In Namibia, managers may be principals, deputies or department heads (Namibia Ministry of Education, 2006).

PRINCIPALS ARE EXPECTED TO A SET A VISION FOR THE SCHOOL COMMUNITY

School principals' vision, values, philosophy, passion and knowledge determine their leadership practices and give their work meaning, enabling them to fully explore the potential of their roles.

Principals are expected to develop and communicate a shared school vision and to set performance expectations, especially on student learning. In their regulations, Brunei Darussalam and Malaysia emphasize the need for principals to have visionary and strategic planning skills to contribute to organizational excellence (Brunei Darussalam Ministry of Education, 2015; Malaysia Ministry of Education, 2020). In Quebec, Canada, under a result-based management framework, principals play a crucial role in setting and adjusting high performance expectations in schools. They focus on establishing ambitious academic goals linked to past performance, using feedback to motivate teachers, and promoting participative leadership to maintain collaborative goal-setting and accountability (April and Bouchamma, 2017). In Namibia, principals are mandated to have a clear vision, effective communication skills and a commitment to school improvement (Namibia Ministry of Education, 2016). They are also tasked with shaping a vision of academic success and developing a school development plan to foster high levels of achievement (Namibia Ministry of Education, Arts and Culture and UNICEF, 2018).

Principals are expected to stay informed about and align their vision with education theory, national legislation and global trends. In Albania, school directors must understand legislation, theories and emerging practices in education (Albania Ministry of Education and Science, 2013). In Hong Kong, China, principals are expected to inform their school's vision and mission based on global trends and follow a systems thinking approach (COTAP Secretariat, 2015). In Japan, principals are expected to formulate their

school's vision in alignment with national, prefectural and municipal education policies (Japan Ministry of Education, Culture, Sports, Science and Technology, 2020). In the Netherlands, principals are expected to stay up to date with local, national and societal developments (SRVO, 2021).

Principals are also expected to uphold moral and ethical standards in exercising their leadership, where possible inspiring and leading by example. Kazakhstan emphasizes intolerance for corruption and academic dishonesty among principals (Kazakhstan Ministry of Education and Science, 2009). In Kenya, heads of institutions are expected to demonstrate collegiality, honesty, integrity, fairness and accountability (Kenya Ministry of Education, 2023). They must sign a mandatory code of conduct, which sets ethical standards for all Teacher Service Commission employees (Kenya Teachers Service Commission, 2015). In Oman, principals are expected to uphold professional values, while prioritizing staff belonging and loyalty (Oman Ministry of Education, 2017). In Sierra Leone, professional standards also outline expectations, such as managing finances with transparency and reporting ethics breaches (Sierra Leone Teaching Service Commission, 2017, 2020). In South Africa, principals are expected to lead by embodying the school's values (South Africa Department of Basic Education, 2015).

PRINCIPALS ARE EXPECTED TO BE INSTRUCTIONAL LEADERS

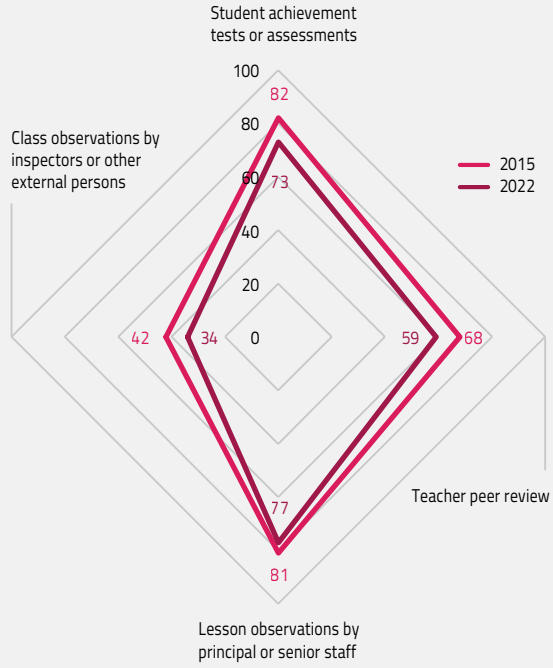
There is a growing focus on school principals' crucial role in supporting teaching and learning and empowering teachers to improve student outcomes (Grissom et al., 2013, 2021a). It is important to recognize that this focus mainly features in high-income countries. One review found that Africa, Asia and Latin America collectively had contributed only one quarter of instructional leadership studies published until 2018 while more than half covered the United States (Hallinger et al., 2020).

> "There is a growing focus on school principals' crucial role in supporting teaching and learning and empowering teachers"

Analysis of regulations in 211 education systems for this report shows that 57% expect principals to provide feedback to teachers based on observation. In the Gambia, head teachers are responsible for classroom observation, daily supervision and formal monitoring of staff performance, as outlined in the School Management Manual (Gambia Ministry of Basic and Secondary Education, 2011). In North Macedonia, school directors are required to schedule class visits and make recommendations for the teachers' professional files (North Macedonia Government, 2007).

But practice may depart from what regulations demand on paper. According to the 2018 Teaching and Learning International Survey (TALIS), which focused on lower secondary schools in 48 education systems, mainly from upper-middle- and high-income countries, only 50% of school principals in 30 member countries of the Organisation for Economic Co-operation and Development (OECD) often provided teachers with feedback after observation (OECD, 2020a). Evidence from the Programme for International Student Assessment (PISA) also suggests that oversight of teaching activities has slightly declined in recent years. The percentage of secondary school principals who reported that they or their senior staff colleagues observed lessons fell from 81% in 2015 to 77% in 2022 (**Figure 2.1**) (OECD, 2023a).

FIGURE 2.1:
School principals have reported a decrease in their oversight of teaching activities in high-income countries
Percentage of secondary school principals reporting selected teaching oversight activities, OECD countries, 2015 and 2022



GEM StatLink: https://bit.ly/GEM2024_fig2_1
Source: OECD (2023)

Principals shape students' educational experiences through various curriculum responsibilities. In Aruba, school heads must annually design the curriculum, lesson schedules and learning materials in consultation with teachers to comply with national regulations (Aruba Government, 1989). In Eswatini, they have to ensure comprehensive curriculum coverage and adherence to subject-specific time allocations (Eswatini Ministry of Education, 2018). In Kenya, principals oversee curriculum implementation and syllabus coverage as part of quality assurance (Kenya Government, 2015). In Saint Vincent and the Grenadines, principals have to organize and implement the curriculum to meet student needs and interests at various developmental stages (Saint Vincent and the Grenadines Government, 2005). In Tonga, principals must align school plans with the curriculum, tailoring programmes to meet student and parental expectations (Tonga Ministry of Education and Training, 2012). A growing expectation for principals is to integrate technology into curriculum design (Gençer and Samur, 2016; Gravelle et al., 2022; Keane et al., 2020).

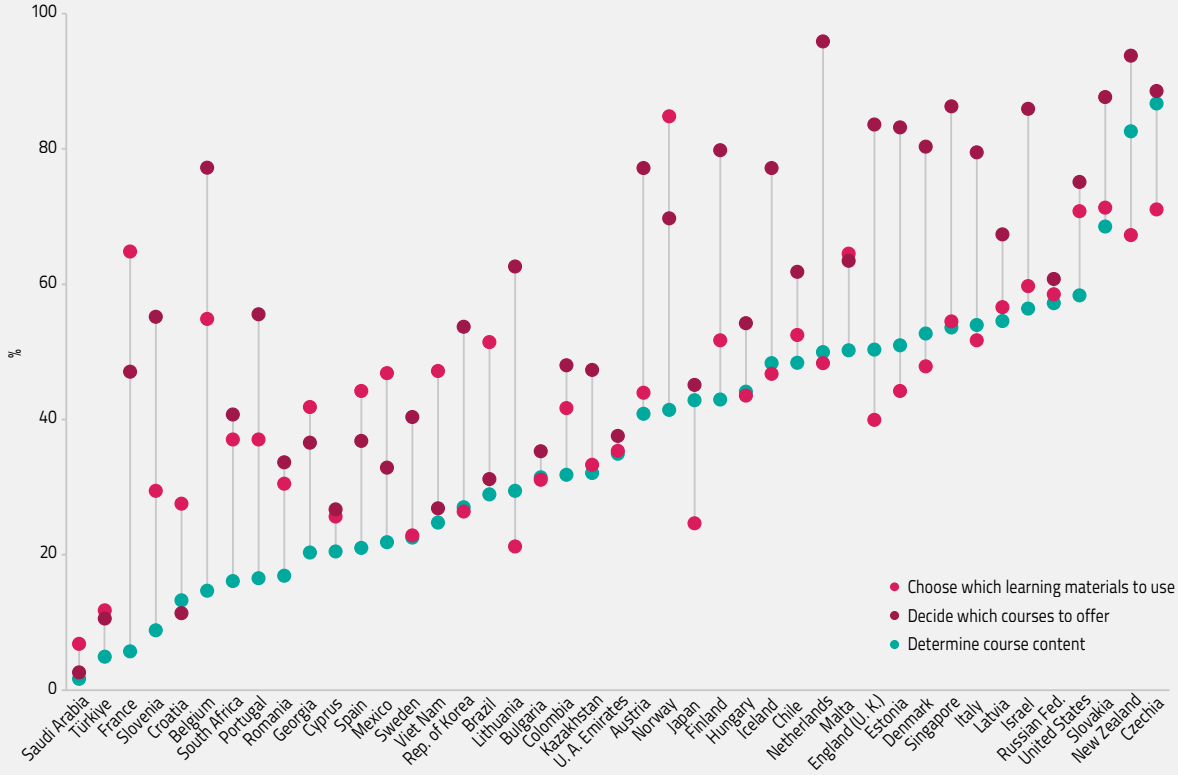
According to 2018 TALIS data, many lower secondary education principals have significant responsibilities related to the curriculum: determine the courses offered (57%), develop course content (37%) and select learning materials (45%), although there is significant variation among countries. In France, Saudi Arabia, Slovenia and Türkiye, less than 10% of principals develop course content while at least 50% of principals have this responsibility in 14 of 48 education systems, including in Denmark, Israel and New Zealand (**Figure 2.2**) (OECD, 2020).

In Bulgaria, although the 2019 State Educational Standards mandate school directors to oversee curriculum development (Bulgaria National Agency for Vocational Education and Training, 2019), only 35% reported significant responsibility on the curriculum in the 2018 TALIS. In Croatia, Article 125 of the Primary and Secondary Education Act empowers principals to develop the school curriculum (Croatia Government, 2020) but only 11% of principals reported such responsibility. In Georgia, the Law on General Education places responsibility for

FIGURE 2.2:

Just over one in three principals reported having a significant responsibility for determining course content

Percentage of lower secondary school principals with significant responsibility for selected curricular tasks, selected upper-middle- and high-income countries, 2018



GEM StatLink: https://bit.ly/GEM2024_fig2_2

Source: OECD (2020a).

course offerings on principals and the teacher council (Georgia Government, 2010) but only 37% of principals reported such involvement.

In recent decades, many education systems in high-income countries have delegated more curriculum planning responsibility to local authorities and schools (Burns and Köster, 2016). In OECD countries, 22% of lower secondary school students attended schools where principals made such decisions according to the 2022 PISA. Decision making in these matters was more prominent in Canada, Czechia, Ireland, Japan, the Netherlands, the Republic of Korea, Portugal and the United States (OECD, 2023a). Private school principals tended to have more curriculum planning autonomy than their public school peers, especially in non-OECD countries such as Brazil, Malaysia, the Philippines, Qatar and Serbia (OECD, 2023a).

In Georgia, school principals collaborate with the teacher council to develop the school curriculum, which is then subject to approval in coordination with the board of trustees (Georgia Government, 2010). In Hungary, school directors develop the pedagogical programme, approved by local governments or educational authorities responsible for funding. This programme combines a local curriculum with national curricula from the Ministry of Education, blending national standards with local educational priorities (Hungary Government, 2011). In the Netherlands, schools and principals enjoy significant freedom in designing their education content and methods without a national curriculum while adhering to centralized quality standards and national learning goals. This autonomy is overseen and balanced by accountability measures, attainment targets and a national examination system managed by the Inspectorate of Education under the Minister of Education (Neeleman, 2019). In Malaysia, principals can select co-curricular activities and elective subjects, particularly in designated high-performing schools (Malaysia Ministry of Education, 2013).

But in other countries, principals face challenges in setting curriculum goals and content. In Saudi Arabia, principals felt neglected and voiceless in curriculum development and willing to collaborate more with teachers (Almalki, 2019). In Türkiye, school teams perceive limited influence over curriculum objectives and content but persist in making adaptations despite centralized systems and limited autonomy (Tokgoz and Bumen, 2021).

Many countries require principals to monitor student progress, which is crucial for supporting academic achievement, assessing teaching methods and improving educational quality (UNESCO, 2017, 2023a). In Victoria, Australia, principals develop and monitor students' individual education plans, assessing student progress and adjusting support mechanisms to better meet their needs (Timothy and Agbenyega, 2018). Some countries also mandate principals to monitor student well-being. In Denmark, school heads annually monitor students' well-being and integrate the findings into their teaching environment assessments (Denmark Government, 2021). Monitoring student progress is closely linked to accountability. In European countries, over 60% of principals feel compelled to meet standards, which drives them to develop management skills, improve self-evaluation processes and increase teacher involvement in decision making. However, inspections and high accountability measures can unintentionally restrict innovative teaching approaches and curriculum flexibility, particularly in highly regulated environments (Altrichter and Kemethofer, 2015).

> A review of 14 low- and middle-income countries found that principals spent 68% of their time on management tasks

One of the biggest challenges to a focus on instructional leadership is management responsibilities. A review of 14 low- and middle-income countries, including Ecuador, Kenya, Pakistan and the Philippines, found that principals spent 68% of their time on management tasks (Global School Leaders, 2023). About one third of public school principals and one fifth of private school principals in OECD countries reported lacking sufficient time for instructional leadership. Time-consuming activities included administrative tasks (e.g. managing reports, budgeting, timetables and responding to education officials) (30%) and leadership duties and meetings (e.g. strategic planning and human resources) (21%) (OECD, 2020). In Ireland, secondary school principals are burdened by increasing administrative demands, which hinder their focus on leading teaching and learning. A survey by the National Association of Principals and Deputies found that 73% felt overwhelmed by duties like financial, procurement, human resources, health and safety, and facilities management (O'Brien, 2023).

PRINCIPALS ARE EXPECTED TO FOSTER COLLABORATION

Encouraging collaboration is crucial for creating an effective learning environment (Bush, 2008, 2020) (see **Chapter 4**). Collaboration can enhance professional

development, promote mutual support and strengthen bonds among all school community members dedicated to student success and well-being (Pont et al., 2008). Analysis of 211 education systems for this report shows that half require principals to promote teacher cooperation, for example fostering internal collaboration through professional learning communities, collaborative planning, interdisciplinary projects, teacher teams, peer feedback, shared leadership and technology integration. In New Zealand, the Kiwi Leadership for Principals, a guidance document, emphasized ako (being a learner), an approach based on collaboration that promotes mentorship in teaching and learning and supports collective growth (New Zealand Ministry of Education, 2008). In Türkiye, national regulations emphasize the principal's role in fostering a team spirit and a collaborative culture among teachers (Türkiye Ministry of National Education, 2013). In Zambia, educational leadership standards emphasize promoting teacher collaboration through shared experiences and materials (Zambia Ministry of General Education, 2019).

In the 2018 TALIS, principals in Japan (32%), France (41%) and Sweden (49%) reported less engagement in fostering teacher cooperation compared to Spain (75%), Türkiye (81%) and Viet Nam (85%) (OECD, 2020a). According to the 2022 PISA, 22% of lower secondary school students in OECD countries attended schools where principals or management consistently encouraged teacher collaboration at least on a monthly basis. However, 33% attended schools where such encouragement was very infrequent, occurring once or twice a year (OECD, 2023a).

Principals are expected to foster teacher collaboration through professional learning communities and teams. In Viet Nam, principals establish professional teams of teachers grouped by grade level or subject area to focus on issues such as educational technology, support for learners with disability, school counselling, school educational plan development and textbook selection. Biweekly meetings foster a supportive environment to enhance teacher professional development (Viet Nam Ministry of Education and Training, 2020). Principals have promoted teacher collaboration and growth through observations, seminars, mentoring, coaching and meetings, encouraging teachers to be active participants and learn from each other (Tran et al., 2020).

Countries also expect principals to build schools' relations with a diverse range of external stakeholders. In three of Canada's provinces and territories with substantial indigenous populations, principals are expected to collaborate with school communities. In Nunavut, they are mandated to work with community organizations to develop programmes that improve communication in Inuit languages (Nunavut Government, 2021). In Yukon, principals focus on partnerships with First Nation communities, parents, school councils and organizations (Yukon Education, 2011). Alberta mandates principals to actively involve community members and establish relationships with indigenous parents, elders, local leaders and community members (Alberta Education, 2023).

In Spain, school directors are expected to promote collaboration with families, institutions and other organizations to foster community relations and create a supportive school environment (Spain Government, 2006). In Andalusia, principals have promoted inclusive education through collaboration plans, enhanced communication and preventive measures (Gómez-Hurtado et al., 2023).

In Ghana, Kenya and Zambia, principals are expected to cultivate robust community relationships; encourage active involvement in school activities; and foster teamwork among staff, students and parents. They are also expected to identify and leverage local resources to support school goals, reflecting the ubuntu principle of shared responsibility (Lopez et al., 2024).

Principals' time spent collaborating with parents and guardians varies widely. In the 2018 TALIS, they dedicate roughly twice as much time on it in Brazil and Italy (14%) than in the Netherlands and Norway (7%) (OECD, 2020). According to the 2022 PISA, approximately one quarter of students in OECD countries attended secondary schools where principals shared information with parents or guardians about school matters and student performance at least once a week; 41% were in schools where this communication happened about once or twice a month; and over one third in schools where such communication was sporadic (OECD, 2023a).

PRINCIPALS ARE EXPECTED TO HELP STAFF GROW

Principals are expected to empower school team members to reach their full potential through supervision, assessment, mentorship, feedback and recognition, enhancing individual capabilities, and the school's overall effectiveness (Grissom et al., 2021; Leithwood and Levin, 2010). As part of overseeing teacher development, school principals are often tasked with assessing and evaluating teachers to offer support, foster their growth and ensure accountability. These assessments typically involve observing lessons and analysing student performance data to understand teachers' impact on learning.

Analysis of 211 education systems for this report found that 70% assigned teacher evaluation to principals with objectives such as promotion, career advancement, quality assurance and accountability. In Barbados, principals must ensure that teacher evaluations adhere to the Guide to Teacher Evaluation (Barbados Government, 2008a, 2008b). In Ontario, Canada, principals must appraise teachers' performance. If a teacher's rating is unsatisfactory, the principal discusses the shortcomings and develops a written improvement plan, outlining next steps for the teacher (Ontario Government, 2023). In Estonia, school leader associations develop assessment models for principals to measure teachers' contributions and effectiveness. Principals customize and apply these models, considering their schools' unique characteristics (Estonia Ministry of Education and Research, 2020).

According to the 2018 TALIS, 64% of teachers in OECD countries and 71% of all participating countries are formally appraised by their principals every year. Evaluation methods include analysing student results (94%), student surveys (82%), assessing teachers' content knowledge (70%) and self-assessments (68%). An appraisal process is universal in Shanghai (China), Romania, Slovenia and Viet Nam, but an exception in Austria, Belgium, the Netherlands and Portugal (below 25%) (OECD, 2020a). This may change in Belgium. In the French Community, as mandated by a 2023 Decree on Support, Professional Skills Development and Evaluation of Education Staff, teachers must now undergo evaluation, including a skills development plan and an interview with the school director. The evaluation, overseen by the Wallonia-Brussels Education Authority, results in a 'favourable' or 'unfavourable' rating, potentially leading to a termination if there is no improvement (Wallonia-Brussels Federation Ministry of the French Community, 2023). Originally scheduled for January 2024, widespread teacher protests postponed implementation to mid-2026 (Belga, 2023).

> Globally, 73% of countries expect principals to support staff professional development

In many countries, principals lead plans to ensure teachers receive relevant training and support. Globally, 73% of countries expect principals to support staff professional development. In Central and Southern Asia and in Europe and Northern America, over 80% of countries require principals to develop school-wide professional development plans. In Japan, principals and teachers collaborate on comprehensive training plans to address diverse needs (Japan Government, 2020).

Principals also play a critical role in supporting and mentoring teachers. In Kenya, they are encouraged to develop mentoring programmes for teacher development, serving as guides and role models (Kenya Government, 2015). They are also expected to promote capacity building, foster professional learning communities, and personally mentor and coach teachers (Kenya Ministry of Education, 2023). In Uganda, head teachers are expected to help build staff capacity, identify performance gaps and organize tailored professional development programmes (Uganda Ministry of Education and Sports, 2020). In Ukraine, institution heads are tasked with motivating and mentoring teachers and facilitating their training and certification (Ukraine Government, 2022).

THE IMPACT OF SCHOOL PRINCIPALS CAN BE SIGNIFICANT

It is very difficult to evaluate the impact of principals. On the input side, practices are difficult to observe. They are hard to measure and put on a scale. Practices also interact with each other and with the context. On the output side, there are multiple units of observation – students, teachers, schools, communities. There are also multiple outcomes, although most studies tend to focus on student learning, which is easier to quantify. Many other outcomes are difficult to measure, while the impact takes time to be realized, often even after the principal has moved to another school. Yet layers of studies have been accumulating evidence of the impact of specific leadership practices on school organization, culture and teachers (Bush, 2021, 2024; Grissom et al., 2021b; Gümüş et al., 2018), which influence teaching quality and student learning outcomes (Leithwood et al., 2020a).

References to good, successful and effective leadership practices are commonly found in research, although the use of these adjectives can be controversial (Darling-Hammond et al., 2022; Day et al., 2014, 2020; Leithwood et al., 2020b). Principals who have a big impact on schools tend to set transformative directions, build relationships, develop people and improve instruction (Leithwood et al., 2004, 2020a). They also share similar values and improvement strategies despite cultural differences (ISSPP, 2024). They observe and provide feedback; enable a positive, safe and collaborative school environment; and manage resources strategically (Burkhauser, 2017; Hallinger, 2005). They use policies and reforms to drive purposeful change (Gu et al., 2018; ISSPP, 2024). Autonomy, support and well-defined responsibilities affect the chances principals have to make a difference (Pont et al., 2008).

...ON STUDENT ATTENDANCE AND DROPOUT RATES

Principals can significantly influence student attendance and retention through effective leadership (Attendance Works, 2020). They can analyse data to identify students at risk and advocate for resources. Involving and communicating transparently with parents, teachers and students can also improve graduation rates (Evans-Brown, 2015). Being consistent and fostering trust within and beyond the school is essential for preventing dropouts (York, 2022).

In Victoria, Australia, collaborative efforts among principals raised attendance rates from 87% in 2022 to 89% in 2023, narrowing attendance gaps between school types (Koehn, 2023; Victoria Department of Education and Training, 2023). In Rwanda, during the COVID-19 pandemic, collaboration between communities and principals was crucial in supporting students and reducing dropouts, with over 80% of principals confident in their community's role in promoting student retention and pedagogical continuity (The Education Commission, 2023). In Puerto Rico, United States, principals who used distance learning tools effectively were better able to retain students during COVID-related school closures (Bobonis et al., 2020; Global School Leaders, 2020). In Tennessee, United States, improving principal quality has been associated with a reduction in student absenteeism by almost 1 percentage point, leading to an average of 1.4 additional instructional days per student (Bartanen, 2020).

...ON STUDENT LEARNING OUTCOMES

Given that different learning assessments measure different learning outcome scores expressed in different scales, it is not possible to express the impact in terms of a comparable absolute measure, such as the change in the percentage of students who meet the global minimum proficiency level. To communicate impact across studies, comparable relative measures are used instead, such as the change relative to the previous distribution of test scores (standard deviation) and the impact in terms of learning time gained.

There is a correlation between effective school leader practices and student learning outcomes of the order of 0.25 of a standard deviation, which is considered low. Instructional leadership practices have a stronger, moderate impact (0.42 of a standard deviation) than transformative leadership practices (0.11 of a standard deviation), although this may only reflect how difficult it is to capture transformative leadership practices (Leithwood et al., 2006; Marzano et al., 2005; Robinson et al., 2008; Teig et al., 2024). In a frequently quoted study, leadership practices at all levels – senior, middle and teacher leaders – were found to explain up to 27% of the variance in student outcomes, making leaders the second most influential factor after teachers (Leithwood et al., 2006).

Comparative studies have highlighted the role of leadership quality in student achievement. The International Successful School Principals Project, which spans over 20 years in 25 countries, has defined successful principals as those addressing moral, social and ethical issues while achieving academic excellence across diverse student populations (ISSPP, 2024). Another analysis of 1,800 schools in 8 countries found that improving a measure of management quality by 1 standard deviation led to an improvement in student outcomes by 0.23 to 0.43 of a standard deviation (Bloom et al., 2015). Data from 15,000 schools in 65 countries showed a positive correlation between effective school management practices and student learning outcomes (Leaver et al., 2019).

> Data from 65 countries showed a positive correlation between effective school management practices and student learning outcomes

Analysis of TALIS and PISA data has shown that pre- and post-appointment training for principals contributed to improved student performance in reading, science and mathematics. Professional development focused on teaching also enhanced mathematics achievement (Gümüş et al., 2024).

Several meta-analyses have helped summarize research findings. A review of 51 studies found significant associations between principal behaviour, instructional practice and student achievement in the order of 0.35 of a standard deviation (Liebowitz and Porter, 2019). A review of 144 research articles found that principals' leadership – primarily setting a learning vision, monitoring teaching and encouraging professional development – significantly affects student achievement (Özdemir et al., 2022). A review of 14 studies from 2006 to 2019 demonstrated a positive link between transformational leadership and student outcomes (Li and Karanxha, 2024). Synthesis of 6 studies covering over 22,000 principals in the United States estimated that replacing a below-average with an above-average primary school principal led, respectively, to 2.9 and 2.7 additional months of learning in mathematics and

reading annually (Grissom et al., 2021). However, a large-scale meta-analysis that covered 1.5 million students in 75 countries cautioned that this effect varied greatly between countries. Some countries, like Peru, showed positive effects while others, like Belgium, showed negative or negligible effects. Differences in instructional leadership measures between countries also suggest that cultural and developmental factors influence the impact on student achievement (Pietsch et al., 2023).

Selected national research studies are also indicative of principals' influence on students' academic achievement. In Norway, a study of rural schools showed that principal practices such as setting direction and leading instruction were more favourably rated by teachers in data from 10 high-performing schools than in 10 low-performing schools. These practices fostered a positive organizational climate and enhanced student achievement, with collaborative teacher learning being key (Forfang and Paulsen, 2024). A study tracking over 20,000 head teachers in England, United Kingdom, from 2004 to 2019 showed that replacing an ineffective head teacher (from the bottom 16%) with an effective one (from the top 15%) led to a two-grade improvement across all subjects or one grade in a single subject in secondary schools. Effective leadership in primary schools also resulted in three additional months of learning (Zuccollo et al., 2023).

Most of the evidence comes from the United States, where researchers have access to large, high-quality datasets that account for multiple factors. The Principal Pipeline Initiative in six urban districts showed that schools with strategically placed principals outperformed others by six percentile points in reading and three in mathematics, with higher gains for primary and lower secondary schools (Gates et al., 2019). In Florida, a longitudinal study of 100 urban school principals observed over 3 years found that coaching teachers, evaluating their performance and developing educational programmes predicted student progress. Informal classroom walkthroughs in secondary schools have been linked to lower student progress, possibly because they are not part of improvement plans (Grissom et al., 2013).

In Texas, an analysis that linked administrative records to student transitions between secondary school, post-secondary education and the labour market could control for leadership changes, local government area finances and demographics, and school curriculum and disciplinary policies. It found that a change in the order of one standard deviation in principals' added value translated into 0.12 of a standard deviation change in student achievement, a 2% increase in post-secondary attendance, a 4% increase in post-secondary persistence and a higher probability of full-time employment (Hanushek et al., 2024). While some research studies simulate the impact of replacing 'ineffective' with 'effective' principals, a study using administrative data from New York City, Oregon and Tennessee cautioned that the effectiveness of the average principal in improving student achievement did not change with experience (Bartanen et al., 2023).

Some studies emphasize that the impact of principals on student achievement will be stronger in struggling schools facing adverse circumstances. In Rwanda, a large-scale evaluation assessed the impact of an accredited diploma programme, gradually rolled out in different regions, that aimed to develop school leaders' knowledge and skills towards five professional standards: strategic direction, leading learning, leading teaching, organization management and community relations. The evaluation linked multiple datasets: information on selected schools and school leaders who participated in the programme; student primary school completion examination scores; annual school census data; and information on nightlight activity to assess the remoteness and poverty of the school area. The analysis found an increase in examination scores of 0.11 of a standard deviation in government but not in government-aided schools. It also found that impact was greater in schools located in rural and poorer areas, which were more likely to have fewer resources, weaker management quality and lower student scores. Interviews with participants found that the impact may have worked through changes in practices such as induction processes for teachers and more frequent meetings with parents (Lauterbach et al., 2024).

An inspired principal can revitalize a struggling school's mission and foster a culture of learning and growth (Green, 2020; Setlhodi, 2020). In Haiti, an analysis of school closures caused by Hurricane Matthew in 2016 found that better routine management practices by principals significantly improved early grade reading scores by 0.43 of a standard deviation in heavily damaged schools (Adelman and Lemos, 2021). An analysis for this report, which used linked data from the 2018 TALIS and PISA surveys and data from the Young Lives study, examines how leadership practices impact resilient schools, i.e. those with the capacity to enhance student potential in the middle of challenges. Effective instruction, shared decision making and equity orientation to foster supportive environments are leadership characteristics associated with resilience. In Australia and Denmark, principals in disadvantaged schools exhibited higher levels of instructional leadership compared to their peers in non-disadvantaged schools (Teig et al., 2024).

...ON STUDENT SOCIO-EMOTIONAL NEEDS

School principals recognize that addressing student socio-emotional needs is an essential part of instructional leadership. Effective principals create supportive environments that foster both student academic growth and emotional well-being (Ashdown and Bernard, 2012; Castro et al., 2021). In many countries, school principals help students access counselling and support services, promoting socialization and emotional growth. In Palau, principals are expected to supervise counselling and tutoring to enhance safety, well-being and academic success (Palau Ministry of Education, 2019).

> “Effective principals create supportive environments that foster both student academic growth and emotional well-being”

Principals also influence student health (WHO and UNESCO, 2021) and well-being, including as seen during the COVID-19 pandemic (**Box 2.2**). In Jamaica, where principals designate personnel to provide students with health services information (Jamaica Ministry of Education, 2010), a study of 12 secondary school principals highlighted their role in hiring additional counsellors, allocating funds for student and staff support, and ensuring resources like breakfast programmes are available (Walker, 2021). In the United States, supported by the Patient Protection and Affordable Care Act, principals collaborate with school psychologists and social workers to develop crisis plans and safety protocols. This collaboration fosters culturally competent mental health services benefiting children and adolescents (Doll et al., 2017).

Principals may also support socio-emotional learning initiatives. The EU-project Hand in Hand in Croatia, Denmark, Germany, Slovenia and Sweden emphasized a whole-school approach to develop students' social, emotional and intercultural competencies, with the active engagement of school leaders (Nielsen et al., 2019). The Promoting Mental Health at School programme in Croatia, Greece, Italy, Latvia, Malta, Portugal and Romania focused on students' socio-emotional skills and psychosocial challenges through comprehensive training led by school principals (Colomeischi et al., 2022). A nationally

BOX 2.2:

Principals focused on reducing stress related to COVID-19

During the pandemic, principals used emotional intelligence, including self-awareness, self-regulation and empathetic communication, to foster a supportive school culture and navigate the challenges of remote learning and isolation (Charalampous et al., 2021; Doe et al., 2015), which had a positive impact on educational outcomes and community cohesion (Dare and Saleem, 2022). The pandemic also had an impact on raising awareness and responsiveness to mental health issues.

In low- and middle-income countries, national mental health and psychosocial support plans in countries such as India, Kenya, the Maldives, South Africa and Uganda, aimed to bolster mental health awareness, alleviate stress and ensure the continuity of student support services. Principals helped develop mental health-focused educational materials and used online platforms to share information, offering counselling sessions and helplines. Such remote services helped maintain access to mental healthcare. Efforts were made to train educators and community health workers to deliver essential psychological support, thus expanding the reach of mental health services beyond traditional clinical settings (Kola et al., 2021). In Eastern Cape, South Africa, principals adapted support measures during the pandemic to provide emotional and psychosocial assistance, using home visits and encouraging teachers to use technology. Clear communication, safe facilities and workload management were prioritized to support staff. Principals also provided counselling and flexible work arrangements to alleviate staff stress and foster a healthy workplace environment (Mutongoza et al., 2021).

In high-income countries, principals could rely more on technology. In Greece, as in many countries with prolonged school closures, principals recognized the importance of maintaining communication and human connections through digital technology, integrating it into their daily leadership routines. Most principals employed emotional intelligence extensively to bring together teachers virtually and enhance student engagement to ensure equitable learning opportunities (Argiropoulou et al., 2021). In the United States, principals implemented strategies to support marginalized families during the pandemic, including Wi-Fi hotspots, and adapted the curriculum to prioritize socio-emotional well-being (Okilwa and Barnett, 2021, 2023). In 2023, the National the Association of Secondary School Principals launched a campaign advocating for innovative practices and increased funding for school health services (NASSP, 2023). Principals established the Network on Mental Health and Wellbeing to empower student leadership in mental health and well-being issues (National Honor Society, 2021).

representative survey of almost 900 public primary and secondary school principals in the United States showed that they had improved their understanding that socio-emotional competencies were teachable, believed in the need to develop them in students and knew their impact on students in the long term (DePaoli et al., 2017).

...ON SCHOOL INCLUSIVENESS

Principals follow inclusive and culturally responsive practices to foster an environment where every student, regardless of background or ability, can thrive academically and socially (DeMatthews, 2014; European Agency for Special Needs and Inclusive Education, 2020; Inclusion International, 2024; Karakose et al., 2023). In Malta, which is in the middle of a major international migration route, principals have promoted an inclusive school culture to support immigrant families and students. Strategies include conceptualizing diversity, providing language support and building relationships with the community (Vassallo, 2024). In New Zealand, principals have integrated Māori language and cultural practices into their schools. They have also created dedicated spaces for Māori and Pasifika families, enhancing engagement and support. These efforts help reflect students' cultures more effectively, promoting a more inclusive and responsive educational environment (Shiller, 2020).

> Principals can foster an environment where every student, regardless of background or ability, can thrive academically and socially

In Portugal, school principals implement inclusion measures such as differentiated curricular pathways and psycho-pedagogical support, appointing inclusive education coordinators and teams (Portugal Government, 2018), as long as resource constraints allow (Lopes and Oliveira, 2021).

Some principals work to ensure that diversity in sexual orientation, gender identity and expression is recognized, respected and celebrated. For example, a survey of lower secondary school principals in Indiana, United States, highlighted practices for supporting lesbian, gay, bisexual and transgender students, such as fostering inclusive school cultures (29%), having supportive staff designated as counsellors (26%), collaborating with parents (17%), and implementing anti-bullying policies and Gay-Straight Alliance clubs (14%). These initiatives have helped combat discrimination and foster a positive school climate where students feel respected (Boyland et al., 2020).

Principals also work to prevent bullying in their schools. A study of lower secondary school principals in Mersin, Türkiye, showed how they identified bullying incidents through victim, bystander, teacher, counsellor and parent reports. They dealt with them through counselling, warnings, reconciliation, disciplinary actions and character education, collaborating closely with all parties involved. Challenges included teacher workload and reluctance to directly confront bullying (Saldiraner and Gizir, 2021). In the United States, all states have passed laws to prevent bullying, guiding principals on how to ensure safe environments (Hatzenbuehler et al., 2015). In Indiana, principals implementing evidence-based programmes like Positive Behaviour Intervention Supports and restorative justice have reduced bullying. They educate students and staff, foster empathy, and support victims and perpetrators. Collaboration with community organizations and mental health professionals further help address bullying, reduce incidents and improve school climate (Brown et al., 2020).

... ON TEACHERS' DEVELOPMENT AND WELL-BEING

Principals can strengthen teachers' motivation and commitment by setting clear goals, providing personalized support, promoting professional development and encouraging innovation (Berkovich and Eyal, 2017; Bogler and Berkovich, 2022). In Indonesia, a study of 25 primary schools showed that principals who had been trained to help teachers implement differentiated remedial teaching improved teachers' effectiveness significantly more than principals who had not been trained (Susanti et al., 2023). In Israel, a study of 122 primary school teachers showed that transformational leadership, focusing on vision and empowerment, reduced teacher burnout by enhancing intrinsic motivation, while transactional leadership, based on rewards and punishments, was associated with higher burnout and extrinsic motivation (Eyal and Roth, 2011). In Türkiye, two studies have shown that principals whose leadership practices were empowering teachers resulted in their higher job satisfaction and motivation, contributing to a positive school environment (Limon, 2022). These results were obtained through increased teacher collaboration, reflection, experimentation and engagement (Bektaș et al., 2022). Analysis of 45 countries using data from the 2015 Trends in International Mathematics and Science Study for this report also found that teacher job satisfaction was higher when school leaders were accessible and supported instructional planning (Eryilmaz and Strietholt, 2024).

Supportive principals can inspire teachers to adopt innovative teaching practices and think creatively in their classrooms. A study of 32 countries found that instructional leadership directly improved teaching quality, while sharing leadership enhanced teacher collaboration indirectly benefiting teaching quality (Bellibaș et al., 2021). In Malaysia, a study found that teachers' self-efficacy and principals' transformational leadership practices accounted for half of the variance in teachers' innovative behaviour (Zainal and Mohd Matore, 2021).

> A study of 32 countries found that instructional leadership directly improved teaching quality

Principals can promote teacher retention by fostering a shared vision, building relational trust, sharing instructional leadership, ensuring safe working conditions and acting as a bureaucratic shield (Becker and Grob, 2021). Supportive leadership that makes teachers feel valued by senior leadership teams, mentoring and induction programmes for new teachers, and ongoing professional development also affect long-term retention (Perryman and Calvert, 2020). Analysis of teachers in India and South Africa for this report shows how they see their school principals as supporters (**Box 2.3**). A study tracking over 20,000 head teachers in England, United Kingdom, from 2004 to 2019 showed that effective leadership in primary schools resulted in reduced staff absenteeism and turnover (Zuccollo et al., 2023). In New Orleans, United States, principals use diverse strategies to retain talented teachers. Some offer incentives like performance-based pay, extra work opportunities, stipends for added responsibilities and hiring bonuses. Benefits packages, such as extended health coverage, are also used to attract and retain skilled educators (Jabbar, 2018).

INDIVIDUAL, SCHOOL AND SYSTEM CHARACTERISTICS SHAPE PRINCIPALS' IMPACT

A principal's age, experience, gender and ethnicity can influence their leadership practices and impact on student achievement, as can school characteristics and contextual or system factors, such as autonomy.

Age, experience, race and ethnicity condition leadership

Research does not indicate a clear link between a principal's age and performance, especially when accounting for their experience (Grissom et al., 2021b). A TALIS index of instructional leadership, which measures the frequency with which principals facilitate teacher collaboration, does not show a significant correlation with age (OECD, 2020a). A study of 11 countries for this report also found no clear pattern between principal age and school resilience, except in Colombia, where younger principals were more common in non-resilient schools (Teig et al., 2024).

BOX 2.3:

Indian and South African teachers recognize school principals as key supporters

In India, teachers interviewed for this report perceived their school principals to be the most critical leaders and saw them as providing higher quality support than other stakeholders. Among these teachers, 62% rated support from principals as the most beneficial, 60% identified support from peers, 43% teacher development coordinators and 35% mentor teachers. By contrast, less than a quarter ranked state, district, block or cluster staff as their top support. Principals are particularly valued due to their experience and their role as a link between school staff and decision makers.

The study also showed that teachers in India often collaborate with school principals for professional development, noting their accessibility and responsiveness. While teachers viewed State Council for Educational Research and Training faculty as crucial for curriculum and professional development support, they also emphasized the roles of principals and peers. Principals were also seen as supportive in teacher assessment, with 78% of teachers rating their assistance as good or excellent, followed by the support from peers and mentor teachers.

In South Africa, principals and deputy principals reported frequent face-to-face interactions with middle-tier officials during scheduled teacher visits, which were generally seen as beneficial by teachers. However, despite this interaction, most school leadership team members felt burdened by compliance and administrative tasks, expressing a desire for greater recognition and opportunities to fulfil their pedagogic roles with teachers.

Source: Sayed et al. (2024).

Studies vary in their assessment of the impact of age on collaboration, resilience and innovation. Younger principals may bring a flexible leadership style as well as fresh perspectives and energy, which are crucial in a technology-rich educational environment. In Spain, a study that linked principal demographic profiles to decision making showed a correlation between younger principals (in their 40s) and the adoption of participative strategic decision making (Campos-García and Zúñiga-Vicente, 2019). Another study from Spain showed that, having grown up in a digital era, younger principals are often more adept at integrating new technologies and innovative practices into schools (Navaridas-Nalda et al., 2020). Other studies show that older principals tend to be more resilient and may view adversity as an opportunity, unlike younger principals who see it as an obstacle to their goals (Lavretsky, 2014; Reed and Reedman, 2020).

Studies show mixed evidence regarding the impact of principals' experience (Bastian and Henry, 2015; Carson, 2013; Gümüş et al., 2024). Greater experience may enhance leadership skills, educational knowledge, problem-solving abilities, relationship-building skills and institutional insights (Grissom et al., 2021a). In the United States, schools with more experienced principals often show faster student achievement growth, as experience correlates with superior leadership practice ratings (Grissom et al., 2018). Effective performance as a teacher or in an assistant principal role before becoming a principal may also positively influence a principal's effectiveness, leading to faster student achievement growth and better practice ratings (Goldhaber et al., 2019; Grissom et al., 2020). Increased experience typically results in greater confidence in managing job responsibilities, although these principals may get more frustrated with workplace dynamics and perceive inefficiencies among colleagues (Darmody and Smyth, 2016).

Principals in disadvantaged schools tend to have less experience compared to those in schools that are not disadvantaged. For example, among 11 countries reviewed for this report, principals in disadvantaged schools in Argentina had less than half the years of experience compared to their peers in non-disadvantaged schools. But exceptions were noted in Czechia, Denmark and Georgia, where principals in disadvantaged schools had significantly more experience than those in non-disadvantaged schools (Teig et al., 2024).

Principals from ethnic and linguistic minorities can positively impact the academic achievement, behaviour, motivation and sense of belonging of minority students (Lee and Mao, 2023). There are also benefits for all students, including higher achievement, more positive community attitudes and better preparation for diverse work environments (Gershenson et al., 2022; Wells et al., 2016). In Europe, while students with migrant backgrounds often have lower learning outcomes compared to native students, principal diversity boosts learner achievement, enhances migrant students' performance and self-esteem, and improves native students' perceptions of immigrants. It also promotes intercultural awareness and acts as bridges between schools, families and migrant communities (Brown et al., 2022; Donlevy et al., 2015).

“Principals in disadvantaged schools tend to have less experience compared to those in schools that are not disadvantaged”

Extensive research in the United States has focused on the impact of non-White principals on student achievement and equity. The hiring and retaining teachers of diverse backgrounds is often prioritized (Bailes and Guthery, 2020; Farinde-Wu et al., 2020; Gilbert et al., 2022). Research involving 200 principals found that Black principals blended authority and emotional support more confidently than their White counterparts, shaping interactions with staff and fostering a supportive school climate (Ispa-Landa and Thomas, 2019). In the states of Missouri and Tennessee, Black principals positively influenced Black students' mathematics achievement over time and reduced in-school suspensions by two percentage points (Bartanen and Grissom, 2019). They also increased the proportion of Black teachers by about two percentage points on average (Bartanen and Grissom, 2023). In Texas, a study of Latino administrators found that shared ethnicity improved connections, trust, pride and comfort among students and parents (Murakami et al., 2018).

Female leaders contribute to educational success in some contexts

One of the most active research areas is on the impact of the school leader's gender on the school climate and student achievement (Global School Leaders, 2024; Guilbert et al., 2024). A key question is whether female school leaders, who are under-represented, are better at promoting collaboration and a supportive school environment.

In the United States, the National Institute of School Leadership found that female principals dedicated more time to goal setting than male principals, often adopting a more participatory style (Sebastian and Moon, 2017).

A systematic review on Africa found that women principals tend to show effective instructional leadership qualities and have a leadership style that is collaborative, caring and collegial (Bush et al., 2022). Research in West and Central Africa indicates that schools led by women have lower teacher absenteeism rates and are more effective in tracking attendance, leading to fewer instances of absenteeism in Benin, Cameroon, Madagascar, Senegal and Togo (Alban Conto et al., 2023). In South Africa, female principals are recognized for creating safer and more collegial learning environments, with clear staff responsibilities (Zuze, 2023). They contribute to a more inclusive environment for girls, effectively addressing health and menstruation issues (Cotropia, 2019). In Uganda, the GEARR-ing Up for Success After School project highlighted the influential role of female principals as motivators and role models in supporting girls' successful transitions after school (PEAS, 2021).

> Research in West and Central Africa indicates that schools led by women have lower teacher absenteeism rates

Some studies indicate that schools led by women tend to achieve higher academic outcomes. In a study of 14 francophone African countries that took part in the 2019 Programme d'analyse des systèmes éducatifs de la Confemen (PASEC) learning achievement survey, primary school students did better in mathematics (by 25 points) and reading (by 36 points) under female school leadership (CONFEMEN, 2020). In Benin, Madagascar, Senegal and Togo, student performance in reading and mathematics was higher by 0.30 of a standard deviation in primary schools led by women compared to those led by men based on the 2019 PASEC. In Togo, both girls and boys in female-led schools achieved higher primary school examination results. In Kenya, students in female-led schools did better in oral reading fluency in English and Kiswahili than those in male-led schools (Bergmann et al., 2022). In the Lao People's Democratic Republic, schools with higher student learning outcomes are twice as likely to be led by female principals (41%) compared to those with lower outcomes (18%) (UNICEF Innocenti and the Lao People's Democratic Republic Ministry of Education and Sports, 2020).

It is important to ask the extent to which these differences are related to gender or are at least partially also affected by context. Women are greatly under-represented in school leadership positions; it is therefore possible that women with higher-than-average leadership skills become school leaders first. Social norms may also constrain women to working more often in urban schools, which have higher scores on average. Another study in West and Central Africa found no significant difference in pupil performance attributed to female leadership in 10 countries, indicating the influence of additional contextual factors (Alban Conto et al., 2023).

Autonomy tends to lead to improvements in practice if there is support

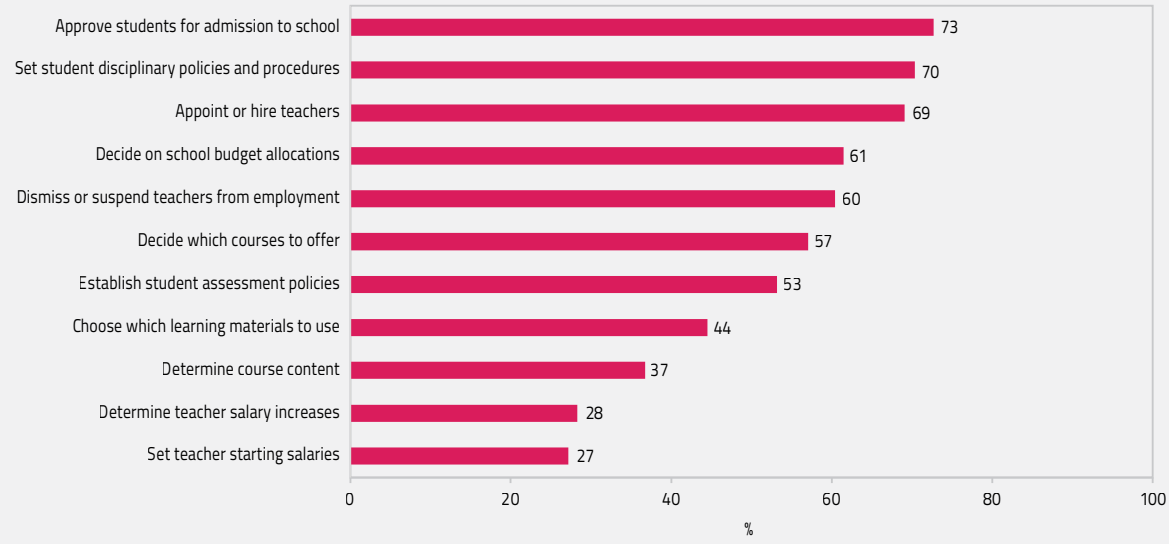
Institutions and culture are contextual factors that influence principals' roles, practices and effectiveness (Tamadoni et al., 2021). Among these contextual factors, institutional structure is a major influence on a principal's roles, practices and effectiveness. Lack of financial and other resources is an institutional characteristic that restricts a principal's range of activities. But the key institutional feature that enables principals to exercise leadership skills and show initiative to improve education outcomes is the extent of their decision-making power. More autonomy enables innovation and adaptation to school needs while less autonomy hinders change and collaboration.

The 2018 TALIS highlighted differences in levels of school and principal autonomy. Principals held significant decision-making authority in admissions (73%), disciplinary sanctions (70%), and staff hiring and firing (69%). However, less than half held significant responsibility in selecting learning materials (44%) or determining course content (37%), and even fewer in establishing teacher salary levels (28%) (**Figure 2.3**).

Efforts to increase autonomy have also been introduced in low- and middle-income countries. In Bhutan, the Central School initiative, launched in 2014, aimed to enhance school autonomy to improve education quality. Analysis of four years of examination results showed overall performance improvements (Dukpa et al., 2023). But often reforms are incomplete. In Kazakhstan, a reform that saw some schools receive capitation grants, as a form of increased decision-making autonomy, did not change principal perceptions that autonomy was limited (Kasa and Ait Si Mhamed, 2023). Analysis of PISA data suggested autonomy raised achievement in high-performing but reduced achievement in low-performing education systems (Hanushek et al., 2013).

More robust evidence tends to come from high-income countries, where there is more access to data of higher quality. In Chicago, United States, the Independent School Principal programme, started in 2016, granted autonomy

FIGURE 2.3:
Principals have significant decision-making power in setting disciplinary policies but not teacher salaries
Percentage of lower secondary school principals reporting significant responsibility, by decision type, selected middle- and high-income countries, 2018



GEM StatLink: https://bit.ly/GEM2024_fig2_3
Source: OECD (2020a).

to high-performing principals by exempting them from network oversight and budget constraints. To qualify, principals had to demonstrate strong performance and a plan to address the loss of centralized support (Travlos, 2020). This autonomy generally improved school performance, with schools experiencing an increase in mathematics and English passing rates by four percentage points, at almost no additional cost, although results varied widely by school and principal (Jackson, 2023). As part of the 2022 PISA, principals in 20 education systems were asked to report which actor held primary responsibility for a range of school decisions. The more principals had the primary responsibility for human and financial resource decisions, the more likely it was that a country would be among those ranked more highly in terms of average performance in mathematics (OECD, 2023a) (**Figure 2.4**).

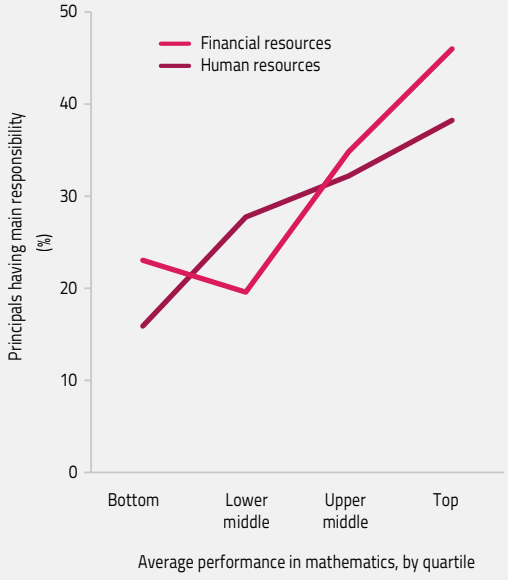
Despite these findings, the reality is more complex, with tensions often arising when increased responsibility is not accompanied by sufficient support or resources (Cheng et al., 2016; Pont, 2020). In England, United Kingdom, schools that were granted a high degree of autonomy under recent reforms were also saddled with a high degree of accountability.

This combination tends to put pressure on principals who report feeling overworked and conflicted between policy demands and their desire to innovate (Mincu, 2024). In that sense, 'effective' leadership which delivers central policy targets and functions may not necessarily be 'successful' leadership; the latter requires such targets and functions to serve broader humanistic goals (Mincu et al., 2024). Analysis of PISA data from 40 education systems found that system-level accountability was associated with more stress among principals. There was also evidence of contagion: teachers were more likely to feel stressed by accountability if their peers did as well (Jerrim and Sims, 2022).

LEADERSHIP STANDARDS CAN GUIDE ACTION AND CERTIFICATION

Recognizing the importance of school leaders and using research evidence that has identified specific leadership practices conducive to improved teaching and learning, many countries and organizations have established professional standards for school principals. These standards are used to encourage the achievement of various objectives, such as promoting professional development, ensuring accreditation, facilitating certification and improving accountability (Day et al., 2014).

FIGURE 2.4:
Higher-performing education systems tend to grant greater autonomy over human and financial resources decisions to principals
Percentage of principals having the main responsibility for specific decisions, by country mathematics performance quartile rank, 20 upper-middle- and high-income countries, 2022



GEM StatLink: https://bit.ly/GEM2024_fig2_4
Source: OECD (2023a).

Analysis of 211 education systems for this report for the PEER website shows that 79% have embedded standards for school principals in laws or policies. The analysis also shows that 49% of countries have adopted stand-alone national professional standards or competency frameworks, independent of laws or policies, which outline the competencies principals are required to demonstrate. In total, 95% of countries have adopted standards either through laws and policies or in stand-alone documents. In countries with standards, 63% were defined by education ministries, 33% by other government departments, and 4% by trade unions and professional organizations.

> 49% of countries have adopted stand-alone national professional standards or competency frameworks for principals

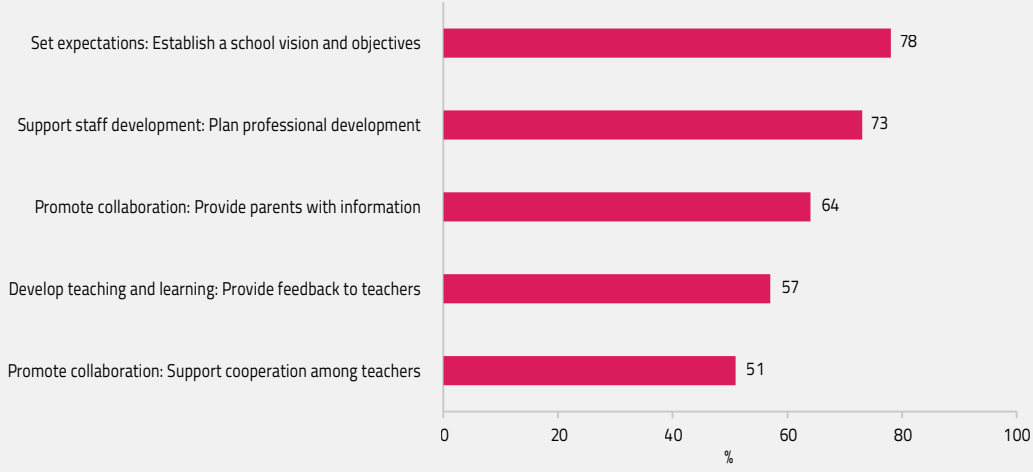
Some countries have used standards for over a decade to guide educational improvement and shape school leaders' training. In Australia, the Professional Standards for Principals, developed by the Australian Institute for Teaching and School Leadership in 2014, are used nationwide to certify principals and outline their roles around five focus areas: leading teaching and learning; developing oneself and others; leading improvement and change; managing the school; and working with the community (Australian Institute for Teaching and School Leadership, 2014). In Chile, the introduction of the Good School Leadership Framework in 2005, followed by a comprehensive update in 2014, reflects a commitment to improving educational outcomes by enhancing school leadership practices to meet the evolving needs of students, educators and communities (Chile Ministry of Education, 2015).

Malaysia's 2020 National Competency Standards for Malaysian School Leaders, known as KOMPAS 2.0, cover 5 domains and 18 competencies, addressing curriculum, human resource development and financial management (Malaysia Ministry of Education, 2020). In Rwanda, the 2020 Professional Standards for Effective School Leadership outline key roles and competencies for school leaders, including strategic direction, leading learning and teaching, managing the school, and engaging with the community (Rwanda Education Board, 2020).

In the United States, the Professional Standards for Educational Leaders are the foundation of educational leadership in 45 of its 50 states. They are structured around 10 domains: mission, vision and core values; ethics and professional norms; equity and cultural responsiveness; curriculum, instruction and assessment; community of care and support for students; professional capacity of school personnel; professional community for teachers and staff; meaningful engagement of families and community; operations and management; and school improvement. Informed by extensive consultations and empirical evidence, they emphasize how effective leadership can enhance students' academic success and well-being and they guide principals' preparation (National Policy Board for Educational Administration, 2015).

Analysis for this report suggests that common dimensions of leadership are adopted to different degrees in professional leadership standards, frameworks and regulations. Only half of countries have standards for school principals that explicitly address support for teacher cooperation. But some 64% of countries have standards that require principals to provide parents with relevant information or teachers with feedback and 78% have standards for establishing a school vision and related

FIGURE 2.5:
Not all leadership dimensions are equally embedded in national professional standards
Percentage of countries with national professional standards frameworks, by leadership dimensions and practices, 211 education systems



GEM StatLink: https://bit.ly/GEM2024_fig2_5
Source: GEM Report team analysis based on the PEER country profiles.

objectives (**Figure 2.5**). The extent to which vision setting is mentioned in national standards ranges from 64% in Central and Southern Asia to 88% in Latin America and the Caribbean.

Regional or continental professional standards have influenced national standards by providing benchmarks, enabling pilot testing, and ensuring consistency in education quality and practice. The Pan-Commonwealth Framework for Teachers and School Leaders aims to guide principals to become instructional leaders, emphasizing staff commitment, self-evaluation and collaboration to improve performance and learner outcomes through innovative teaching methods (Gallie and Keevy, 2014). The Southeast Asian Ministers of Education Organization (SEAMEO) Regional Center for Educational Innovation and Technology developed the Competency Framework for School Heads in 2003, revised in 2014, which defines essential leadership competencies including managerial leadership, instructional leadership, personal excellence and stakeholder engagement. It serves as a benchmark for education officials and school leaders, complementing existing national standards (SEAMEO INNOTECH, 2014). Malaysia's KOMPAS is aligned with both the Commonwealth and SEAMEO frameworks.

Standards for school principals have been criticized for overlooking contextual differences, particularly an overreliance on Western models (Bush, 2018; VVOB, 2022). This criticism highlights the difficulty of balancing national and cultural differences when trying to achieve cohesion and standardization (Huber, 2010). Some countries have adapted standards to better suit the specific educational contexts. In South Africa, the 2015 Policy on the Standard for Principalship emphasizes collaborative vision-building aligned with national educational values, traditions and the Constitution (South Africa Department of Basic Education, 2015). Ubuntu leadership is a notable trend in African school leadership and national guidelines. This approach emphasizes competencies such as meeting others' needs, supporting interconnectedness and ensuring collective well-being (Elonga Mboyo, 2019; Lopez et al., 2024; VVOB, 2022).

But leadership standards are often not applied in practice. Analysis of school leadership in Ghana, Kenya and Zambia has identified common challenges to the application and achievement of leadership standards, including financial and human resource constraints (Lopez et al., 2024). Principals in many countries struggle to align their practices with professional standards, often because they are not prepared to do so; the problem may lie in implementation rather than the standards themselves (Bush, 2011; Sepuru and Mohlakwana, 2020; Taole, 2022).

CONCLUSION

This chapter has examined the roles, practices and professional standards for school principals, with an emphasis on four key dimensions: setting expectations, enhancing teaching and learning, fostering collaboration, and supporting staff. Different contexts, including the level of autonomy enjoyed, influence how principals' efforts shape student outcomes and school environments.

As greater expectations are placed on school principals, it is important not to lose sight of the need to support principals so that they can place instructional leadership at the top of their priorities. By focusing on leading and inspiring teachers, principals can cultivate a positive school culture and implement innovative practices that significantly enhance student learning and achievement. However, this requirement is challenging due to the administrative workload and external pressures.

Policymakers should acknowledge these distinctions and help school principals acquire the necessary skills for essential duties while granting them autonomy. This transformation requires investment in comprehensive leadership training and development (**Chapter 3**) and an approach to leadership in which principals share responsibilities with various stakeholders in the school community (**Chapter 4**).

On 13 June 2023, school principal of Nimbokrang I Primary School, Mugiyanto, drops by second grade class where Mrs Ludia Pasulu teaches her students using Big Book and Phonemes provide by UNICEF to increase their literacy and numeracy skills.

Credit: © UNICEF/UNI430796/Al Asad*

CHAPTER

3

School leadership: Selection, training and conditions

KEY MESSAGES

Fair, competitive and transparent selection processes are needed for the professionalization of principals.

- With the complex nature of the role, principalship should be professionalized, with clear, transparent and merit-based rules for recruitment. Ineffective systems have vague selection criteria leading to inconsistent standards that may be influenced by politics.
- Globally, 63% of countries use open selection competitive recruitment for principals in primary and secondary education. In the Republic of Korea, the proportion of 'open' appointments increased from 2% in 2012 to 10% in 2022, reducing the share of 'internal' appointments (through promotion) and appointments 'by invitation'.

Principals' education and experience vary.

- In upper-middle- and high-income countries covered by the 2018 Teaching and Learning International Survey (TALIS), 60% of lower secondary school principals had a post-graduate degree, ranging from 4% in Brazil and Viet Nam to all principals in Czechia and Slovakia. School principals in Australia, Singapore and South Africa had twice the length of prior experience in school management (10 years) as in other countries (5 years).

Diversity in school leadership remains a challenge.

- There are significant imbalances in the share of women in school leadership positions globally, ranging from 7% in Türkiye to 84% in Latvia.
- Fair and open selection processes, as well as affirmative action can improve equitable recruitment. Yet globally, only 11% of countries have measures addressing the underrepresentation of women in school leadership positions.

School leaders require pre-service and ongoing training.

- Almost half of principals in upper-middle- and high-income countries do not receive training before their appointment. Globally, only 31% of all countries have regulations for the induction of new principals.
- Ongoing professional development is often hindered by workload and resource constraints. Over half of lower secondary school principals in the 2018 TALIS reported conflicts between professional development and work, while one third lower reported that cost and lack of incentives prevented their participation.

Certification and appraisal systems can hold school leaders to certain standards

- Countries, including Chile, China, Finland and Jamaica require principals to complete certificates before leading schools.
- Effective appraisal systems can improve school leadership accountability. Globally, 78% of countries have appraisal systems for principals; 39% use them to sanction principals.

Principals' well-being is a concern.

- An accurate assessment of trends on principals' turnover requires distinguishing between retirement, moves within or across schools, and exits from the profession and education altogether. While data suggest very high levels of job satisfaction, there are also growing concerns. In Ireland, over 50% of principals experienced burnout due to workload, teacher shortages and the need to implement challenging government initiatives.
- Factors such as job insecurity and unattractive working conditions impact teacher retention. Globally, 37% of countries expect principals to have permanent contracts.

Improving selection processes is needed to professionalize principals' careers.....47
Countries need to do more to prepare and train school leaders.....57
Countries try to make principalship an attractive career path.....67
Conclusion 74

School leaders are charged with a range of responsibilities that encompass planning, human resource management and administration, on top of which they are increasingly expected to be catalysts for change through the four dimensions discussed so far: setting goals, leading instruction, fostering collaboration and developing staff. Such exigencies make their roles ever more complex and call for principalship to develop into a profession, with clear, transparent and merit-based rules for recruitment and selection; appropriate training and development opportunities, including support in the early stages; and appealing working conditions to raise job satisfaction and prestige.

> "Teaching qualifications and experience, although essential, are not the only requirements for school leadership"

Professionalizing school leadership involves building a workforce of experienced, competent and skilled educators who engage in ethical practices. Teaching qualifications and experience, although essential, are not the only requirements for school leadership. Well-designed and implemented pathways can help recruit a qualified and diverse workforce of principals. However, hiring and training processes are often managed separately, potentially causing mismatches between desired skills, professional development and career opportunities. This chapter explores the dimensions of principalship, highlighting the importance of professionalization for school leaders.

IMPROVING SELECTION PROCESSES IS NEEDED TO PROFESSIONALIZE PRINCIPALS' CAREERS

Recruitment and selection are the key stages for aspiring principals to enter leadership roles (Bush, 2022; Lee and Mao, 2023). Ideally, systems for selecting principals should match candidates to schools' needs and objectives. In practice, recruitment and selection processes depend on the degree of autonomy granted to schools (**Box 3.1**) and the emphasis given to professionalization (Fraser et al., 2024) and managerial trajectories (OECD, 2016).

Regardless of the context, what is needed are objective, fair, inclusive, transparent and clearly defined criteria (Grissom et al., 2015; Palmer and Mullooly, 2015). The criteria enhance the credibility and legitimacy of the principal's role, helping build trust and respect within the school community. While some countries prioritize teaching experience or, less frequently, leadership qualifications, others have inconsistent and vague selection standards (Adli, 2023; Bush, 2022; Medford and Brown, 2022), and can fail to select the best leaders (Aravena, 2020; ETUCE, 2012; Pereda et al., 2019).

Professional standards, where they exist, outline expectations for school leaders, aspiring to guide recruitment as well as training and appraisal (**Chapter 2**). However, finding the right balance is difficult: excessively strict criteria might constrain the candidate pool and favour standardization over differentiation of needs and overly lenient standards could dilute leadership quality. A balanced approach that values formal qualifications and practical experience is essential for effective school leadership (Palmer and Mullooly, 2015). This section describes selection processes and criteria – and their influence on the characteristics of selected principals.

BOX 3.1:

The degree of decentralization influences recruitment and selection

Some countries centralize recruitment and selection while others empower schools to take these decisions. An analysis of PEER country profiles for this report found that 42% of the countries organize selection at the central level, 23% at the local government level, 13% at the school level, with the remaining 22% at various levels. There is also an appointment validation process, which tends to be more concentrated at the central and local government levels.

Australia has a mix of centralized and decentralized elements in school principal selection. In the state of Victoria, school councils – or, in their absence, community committees – recommend candidates to the Secretary of the Department of Education (Victoria Parliamentary Counsel, 2006). In Denmark, school boards select and hire principals (Denmark Ministry of Children and Education, 2021). In Egypt, the procedure for school principal selection is centralized and outlined in a 2019 amendment to the education law and in a 2022 Council of Ministers' Decision. A selection committee chaired by the director of the local Education Directorate, including experts, teacher union representatives and local authorities, oversees the process (Egypt Presidency of the Republic, 2021; Egypt Prime Minister Office, 2022). In Eswatini, only deputy principals who have served for at least four years can be considered for principalship. The Teaching Service Commission is responsible for selection, appointment and dismissals (Eswatini Daily News, 2024; Eswatini Ministry of Education, 1983).

In Hong Kong, China, selecting a principal is a responsibility of school management committees. The Codes of Aid specify how selection takes place at different education levels. The Permanent Secretary for Education appoints principals (Hong Kong Education Bureau, 2023). In Slovenia, school councils have the power to hire and fire principals. They must consult various groups, including the teaching assemblies, parent associations and student representatives in upper secondary schools. In areas with ethnic minorities, the council must consult their representatives. Councils also need to consult the Minister of Education before appointing principals, although this opinion is not binding (European Commission, 2024). In South Africa, school governing bodies are responsible for advertising the principal position, shortlisting candidates, conducting interviews and making recommendations to the Provincial Department of Education, but they have varied capacity, which can hamper the process (Mampane, 2015; South Africa Department of Basic Education, 2022). In England, United Kingdom, school boards appoint the principal and other staff for schools maintained by local authorities. They form a selection panel, which will select candidates, conduct interviews and recommend appointments to the board (Department for Education, 2017).

WHETHER INTERNAL OR OPEN, PRINCIPAL SELECTION PROCESSES ARE BECOMING COMPETITIVE

Principal selection policies reflect countries' cultural, social and economic characteristics. Both internal and open recruitment processes can use competition to evaluate candidates' credentials, training, qualifications, experience and seniority. In Romania, competitive principal selection has led to improved student outcomes (Borcan and Merewood, 2022). In the United States, competitive principal selection led to improved student achievement and principal retention as a result of strategic initiatives and responsiveness to challenges (Gates et al., 2019). Analysis of PEER profiles for this report from 211 education systems' legislation and policies on principal selection shows that 63% apply open competitive recruitment in primary and secondary education while 8% apply open competitive recruitment only in primary and 3% only in secondary education.

Internal promotion of employees, such as vice principals or senior teachers, emphasizes knowledge and understanding of a school's culture, operations and challenges (Palmer and Mullooly, 2015; Pendola and Fuller, 2020). Internal promotion can prioritize professional growth and succession planning through targeted training and mentorship (Cieminski, 2018). This process can increase the chances of having qualified candidates for the expected vacancies (Bush, 2022). Succession planning also considers the training and development needs of potential candidates. In the United States, some teachers are preselected by their principals for pre-service leadership preparation (Myung et al., 2011). Such processes can reduce costs and increase effectiveness in principal retention (Pendola and Fuller, 2020) but can also limit the candidate pool and be subject to influence and biases (Bush, 2011; Palmer and Mullooly, 2015). Internally promoted principals can also face significant challenges in their relations with colleagues (Maguire, 2021).

> “63% of countries apply open competitive recruitment for principals in primary and secondary education”

Reviews of academic research show that succession planning has barely been analysed (Aravena, 2022; Hallinger and Kovačević, 2019).

Open recruitment can attract skilled external candidates with fresh perspectives for school growth through a more transparent and objective selection process (Muñoz and Prem, 2024). Merit-based systems can enhance the principal selection process and increase its legitimacy (Adli, 2023). Competitive examinations and interviews aim to comprehensively assess candidates' abilities and their preparedness for school leadership challenges. Such systems need to balance transparency and fairness, ensuring equitable evaluation of all candidates to foster diversity (Grissom et al., 2017; Vassallo, 2024). However, these processes can be time-consuming and expensive. In wealthier countries, they may involve advertising, agency fees and extensive background checks. External candidates may struggle to adapt to a school's culture and policies, causing conflicts with staff (Leithwood and Riehl, 2003).

Becoming a principal sometimes involves specialized pathways to ensure candidates have relevant experience, qualifications and training in leadership or administration. In several countries of the Organisation for Economic Co-operation and Development (OECD), including Austria, Poland and Spain, individuals applying for principal positions must undergo specialized leadership training while working as teachers. In the Australian state of Victoria, principal selection is merit-based and aligns with national standards. Eligible candidates must complete a rigorous four-year training programme (Victoria Department of Education, 2020; Victoria Department of Education and Training, 2023). In Finland and Singapore, aspiring principals undergo a systematic and competency-driven competitive selection process (Keo, 2016; Lahtero et al., 2019; Singapore Ministry of Education, 2023).

In the Republic of Korea, three types of recruitment processes have coexisted: 'by invitation' for regular schools, 'internal' (through promotion) for autonomous schools and 'open' for other specialized schools (Lee, 2023). Teacher protests over selection systems, especially promotions, have been ongoing since the mid-1990s. In 2007, open recruitment was piloted in autonomous schools and implemented in 2012 with the revision of the Educational Officials Act (GSPA, 2023). Unlike the promotion method, which prioritizes seniority and experience among holders of a principal certificate, open recruitment allows candidates who are not on this list or have a lower ranking to apply. In 2012, 68% of appointments were by invitation, 30% were internal and 2% were open (GSPA, 2023). As of 2022, 10% of appointments were open, with Jeju and Gyeonggi having the highest percentage (17%) among the country's 17 cities and provinces. Perception of the recruitment system was positive (Lee, 2023). In the meantime, the Education Act has applied the National Public Officials Act to all education workers, which requires appointments to be based on qualifications, continuous professional development, work record and other skills (Republic of Korea Ministry of Education, 2023).

PRINCIPAL SELECTION CRITERIA ARE BECOMING MORE DEMANDING

In terms of selection criteria, at least 86% of the countries set minimum academic qualifications or certification requirements for becoming a principal. In practice, there are often departures from requirements as older principals were employed before stricter requirements were imposed. The 2018 Teaching and Learning International Survey (TALIS) found that only 6% of principals have a master's degree in Kazakhstan, even though it is required.

> 86% of countries set minimum academic qualifications or certification requirements for becoming a principal

Analysis of the PEER country profiles for this report shows that 46% of education systems require only teaching experience from principal candidates, 34% require teaching and management experience, 11% ask for any relevant experience in education, 2% ask for experience in any other administrative or leadership position, and 7% make no specific requirements on experience. Assigning a priority to teaching experience aims to ensure that principals understand the educational process and teachers' challenges. While teaching experience tends to be the favourite selection criterion, assessments of skills, competences and other types of experience are being considered more often (Weinstein et al., 2014; Weinstein and Hernandez, 2015).

In addition to other requirements, France and Italy use competitive examinations and eligibility tests (France Ministry of National Education and Youth, 2024; Italy Ministry of Education and Merit, 2023). In the Indian state of West Bengal, primary school principals (head teachers) are selected from a pool of teachers in government-aided or sponsored schools with at least five years of seniority. But candidates are also assessed by a panel and selected based on merit factors

BOX 3.2:

African countries are strengthening their selection systems for principals, but challenges remain

Several African countries are paying more attention to school principal appointments. In Kenya, the Teachers Service Commission has developed career progression guidelines for teachers and a policy of merit-based selection for school principals which prioritize qualifications, experience and training (Kenya Teachers Service Commission, 2018, 2020). For example, candidates for primary school positions must have three years of deputy head teacher experience, a bachelor's degree in education, good performance ratings and a teaching certificate. Senior and chief principal positions in secondary schools are accessible through promotions. Candidates undergo interviews and evaluations focused on their track records in school management, instructional leadership and student learning improvement. They must also demonstrate involvement in teacher development. The Teachers Service Commission has also created an interview score sheet for standardized candidate assessment (Education News Hub, 2024a, 2024b).

Since 2008, Rwanda has prioritized the merit-based selection of school principals (Gaparayi et al., 2008). A 2020 Presidential Order specified that head teachers must be recruited from the teacher body by a committee of education experts and local government representatives. Candidates must have at least nine years of teaching experience, demonstrate professional ethics and integrity, and have outstanding performance records (Rwanda Presidency, 2020). These measures aim to ensure principals can adapt to new challenges and be innovative, as described in the school leadership professional standards (Rwanda Ministry of Education et al., 2020). Yet there remain issues of consistency in policy implementation, particularly in rural areas, such as finding and retaining qualified candidates, and providing equal access to professional development for all principals (Lauterbach et al., 2024).

In Ghana, school principals are traditionally being selected among those at the level of 'superintendent principal' (senior teachers) in the Ghana Education Service administrative hierarchy, through interviews and participation in a short leadership training. While certificates have been receiving greater consideration in selection processes, there is no policy or legislation for selection and appointment (Dampson, 2019) and criteria listed in vacancies remain vague.

(West Bengal Staff Selection Commission, 2023). In Qatar, selection involves competitive examinations, interviews and an evaluation of leadership competencies (Qatar Ministry of Education and Higher Education, 2020). In the United Arab Emirates, the selection of public school principals combines adherence to professional standards with competitive examinations (Rai and Beresford-Dey, 2023). Many African countries are also extending their selection criteria (**Box 3.2**).

Principalship requirements often differ by education level or school type (**Box 3.3**). In China, candidates to upper secondary school positions are required to have held at least senior teaching positions in primary or lower secondary schools (or two years in a deputy principal position or three years in middle management positions). Primary and lower secondary school principals require five years of teaching experience, teacher certification and service in a school at the level above (Chen et al. 2024). In Colombia, principals are selected based on experience and academic qualifications. In preschools and rural primary schools, they need a teacher training college certificate, a bachelor's degree in education or equivalent, and four years of teaching experience. Other primary and secondary schools require principals to have at least six years of teaching experience (Aravena, 2020; Colombia Ministry of Education, 2022).

In France, according to procedures outlined in a 2021 law and a 2023 decree on school principals, pre-primary and primary school principals are selected from a list of candidates. They have functional autonomy (France Parliament, 2021) but lack legal and financial autonomy. Secondary school principals have their own budget and are attached to a local authority (France Government, 2024; France Parliament, 2015; Jarroud, 2023). Primary school principals are teachers; they are not considered superior to their colleagues. But depending on class size, they may be fully or partially exempt from teaching (France Ministry of National Education and Youth, 2021).

PRINCIPAL RECRUITMENT AND SELECTION CAN BE POLITICAL

Patronage is a common feature of public sector appointments in many countries (Colonnelli et al., 2020; Xu, 2018). Yet limiting political discretion in appointing school principals can improve school outcomes (Estrada, 2019).

BOX 3.3:

Some countries regulate private school principals' selection

Principal appointment rules for private schools may be the same as or different from those for public schools. In the Dominican Republic, private primary school principals must have specific academic credentials, degrees in education administration and supervision, and a minimum number of years of experience. In Spain, private subsidized school directors are appointed by the owner, from among the teaching staff with a tenure of at least one year in the same school or three years in another school of the same owner, based on review and a majority favourable opinion by the school council (Spain Government, 1985). In England, United Kingdom, unlike schools maintained by local governments, academies have the autonomy to make their own arrangements for hiring principals (Department for Education, 2017; Wilkinson and Long, 2019).

In Oman, a 2022 guidance by the General Directorate of Private Schools states that private or international school principals need the Directorate's approval to start working (Oman Ministry of Education, 2022). In Abu Dhabi, United Arab Emirates, non-binding criteria for selecting private school principals include school administration experience and proficiency in English for English-medium schools (Abu Dhabi Education Council, 2014). In Macao, China, principal appointment criteria are outlined in the Constitution for Private Non-Higher Education Institutions (Chen et al., 2024).

Religious schools may have specific principal appointment requirements. Catholic schools were traditionally run by religious orders overseen by the parish priest (Brinig and Garnett, 2014) but lay staff gradually became the majority. In the United States, religious staff made up 74% of full-time faculty and administration in 1960, 29% in 1980 and fewer than 3% in 2020 (McDonald and Schultz, 2020; NCEA, 2018). The increase in lay staff led to changes in governance, with authority shifting to advisory or limited jurisdiction boards. In Australia, Catholic school leaders must be qualified Catholic teachers with a background, knowledge and commitment linked to the school's mission (Catholic Schools Office Diocese of Lismore, 2018). In Ghana, district directors are supposed to but rarely consult regional managers when appointing lay candidates as Catholic school principals (Domfeh-Boateng, 2022). In Ireland, religious authorities have established school trustee boards with policies that align with their ethos. Boards manage schools while principals and deputy principals handle the daily administration and policy implementation (European Commission, 2023). In South Africa, the Catholic Institute of Education has published an induction guide for novice principals, which highlights the need to be familiar with Catholic education and commit to their schools' ethos (McCormick and Faller, 2012).

In Brazil, political appointment is a recognized process (**Box 3.4**). In Chile, the selection process for senior public managers has enhanced principals' effectiveness (Cabrera, 2022) and education outcomes (Muñoz and Prem, 2024). But there have been significant regional variations in its implementation. In 2016, only 12% of principals in the Arica and Parinacota region but 69% in the Magallanes region were selected through this process (Aravena, 2020; Chile Agency of Quality Education, 2016). According to the process, a commission of teacher representatives with the support of an external human resource company preselects candidates, but the mayor has the final word. If the mayor voids the selection process, a new competition has to take place (Chile National Congress, 2011) with cost implications, especially for small municipalities. A study of school principals leaving office after less than two years found that politics had played a key role in their decision (Diaz et al., 2019).

In Georgia, potential political influence on principal recruitment has been a focus of student protests. In 2023, more than one third of schools had no principal appointed, a fact that has been linked to politics (Publika, 2023). In 2020/21, the Ministry of Education did not reappoint 112 public school principals. Research highlighted that, in the vast majority of these cases, the opinion of the state security services was decisive (Transparency International, 2022; 2023). In Israel, a committee screens and interviews aspiring principals. However, political factors can affect recruitment (Arar, 2018; Arar and Abu-Asbah, 2013).

> "Limiting political discretion in appointing school principals can improve school outcomes"

BOX 3.4:

In Brazil, political appointment is a formal method for principal selection

In Brazil, political appointment, election and open selection are the three main selection processes (Pereda et al., 2019). Under the first process, local politicians may choose principals based on factors other than merit or qualifications. Principal selection processes differ by state and municipality (Ferreira, 2023). Among the 27 Brazilian federative units, only São Paulo exclusively uses public competition to select school directors (Todos pela Educação and Itaú Social, 2022).

Multiple forms of principal selection may exist in each state. In 2022, the most common selection modalities in decreasing order were election (56%), political appointment (48%), and selection based on the submission of a proposal ('management plan') (33%) or on qualifications and certificates (30%). In the case of election, students, parents, teachers, permanent school staff and, in some cases, community leaders take part – with a quarter of states assigning more weight to teacher and school staff votes. In three quarters of appointment cases, education secretaries were responsible, although education department directors, governors, mayors and political allies were also involved in the choice. Political appointment was less common (35%) in state capitals (Simielli et al., 2023).

Data from the 2019 Basic Education Evaluation System, known as Saeb, and the 2020 School Census, along with surveys by state audit courts, show that over half of public school directors are politically appointed (55%), with a quarter being elected by the school community with or without a selection or certification process. Political appointments are prevalent in the North and Northeast Regions and in municipal schools across Brazil. It is the only form of selection in five states and six state capitals. Over 80% of school principal appointments in Amapá, Amazonas, Maranhão, Paraíba and Roraima are political (Simielli et al., 2023). However, only 5% of school principals believe that recommendations from the Department of Education, without a formal selection process, are an appropriate method for choosing professionals for their roles (Todos pela Educação and Itaú Social, 2022).

Some change is underway. Target 19 of the National Education Plan aims to select principals based on merit and performance rather than through political appointments, and involve public consultation with the school community (Pena et al., 2021). The 2023 Law on Education Financing mandates that a portion of government funds for education should be tied to education quality indices, one of which is a merit-based system for selecting school principals (Brazil Federal Ministry of Education, 2023). In response, some states are adopting merit-based systems. The state of Paraíba aims to improve governance and enhance teaching and learning in public schools, including through merit-based procedures for selecting school principals (Silva, 2023).

Principals chosen by public examinations or by public examinations and elections have been found to have better managerial characteristics than those appointed by technical staff or politicians (Pereda et al., 2019). Political changes in municipalities have been shown to increase the replacement rate of staff in schools controlled by the municipal government and even a decline in test scores in the order of 0.05 to 0.08 of a standard deviation, which remain statistically significant, even three to five years after an election (Akhtari et al., 2022).

STANDARDS, PROCESSES AND BIASES INFLUENCE PRINCIPAL SELECTION

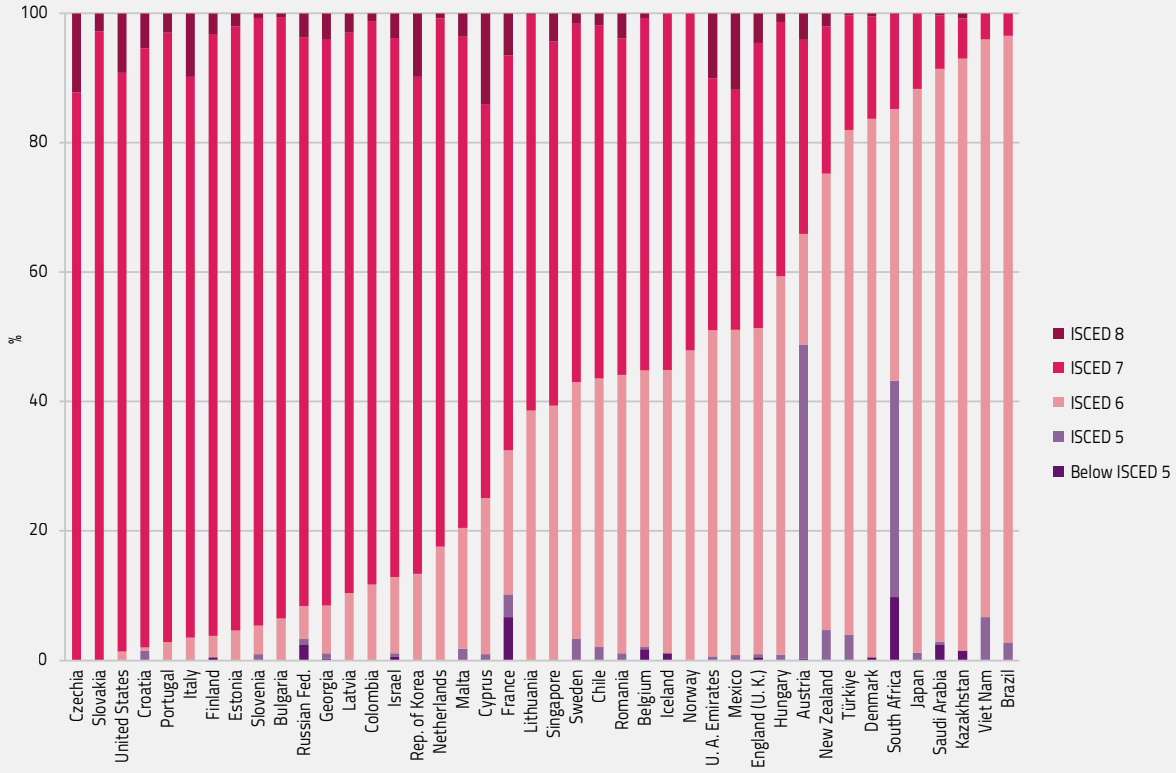
There are differences in principals' professional, demographic and social characteristics, between and within countries. Education, experience, age, gender and ethnicity can, in turn, affect their work, motivation, relations with the school community and, ultimately, their impact on education outcomes.

Principals' education and experience vary

Principals' academic background varies by country, reflecting education attainment levels and recruitment policies. In 47 education systems covered by the 2018 TALIS, mostly from upper-middle- and high-income countries, 4% of lower secondary school principals did not have a bachelor's degree, 36% had a bachelor's degree, and 60% had a master's or a doctorate degree. In Czechia and Slovakia, all principals had a postgraduate qualification; in Brazil and Viet Nam, only 4% did (**Figure 3.1**).

These results are broadly consistent with those from 39 education systems, including a few from lower-middle-income countries including Egypt, Lebanon and Morocco, that took part in the 2019 Trends in International Mathematics and Science Study (TIMSS). Among lower secondary school (grade 8) students, 2% had a principal without a bachelor's degree, 43% had a principal with a bachelor's degree and 55% had a principal with a postgraduate degree. In the same survey, among primary school (grade 4) students, slightly more (5%) had a principal without a bachelor's degree (Mullis et al., 2020).

FIGURE 3.1:
Principals' academic qualifications vary across countries
Lower secondary school principals by academic qualification, selected education systems in middle- and high-income countries, 2018



Notes: ISCED = International Standard Classification of Education. The four featured levels are short-cycle tertiary (5), bachelor's (6); master's (7) and doctorate (8).
GEM StatLink: https://bit.ly/GEM2024_fig3_1
Source: OECD (2019).

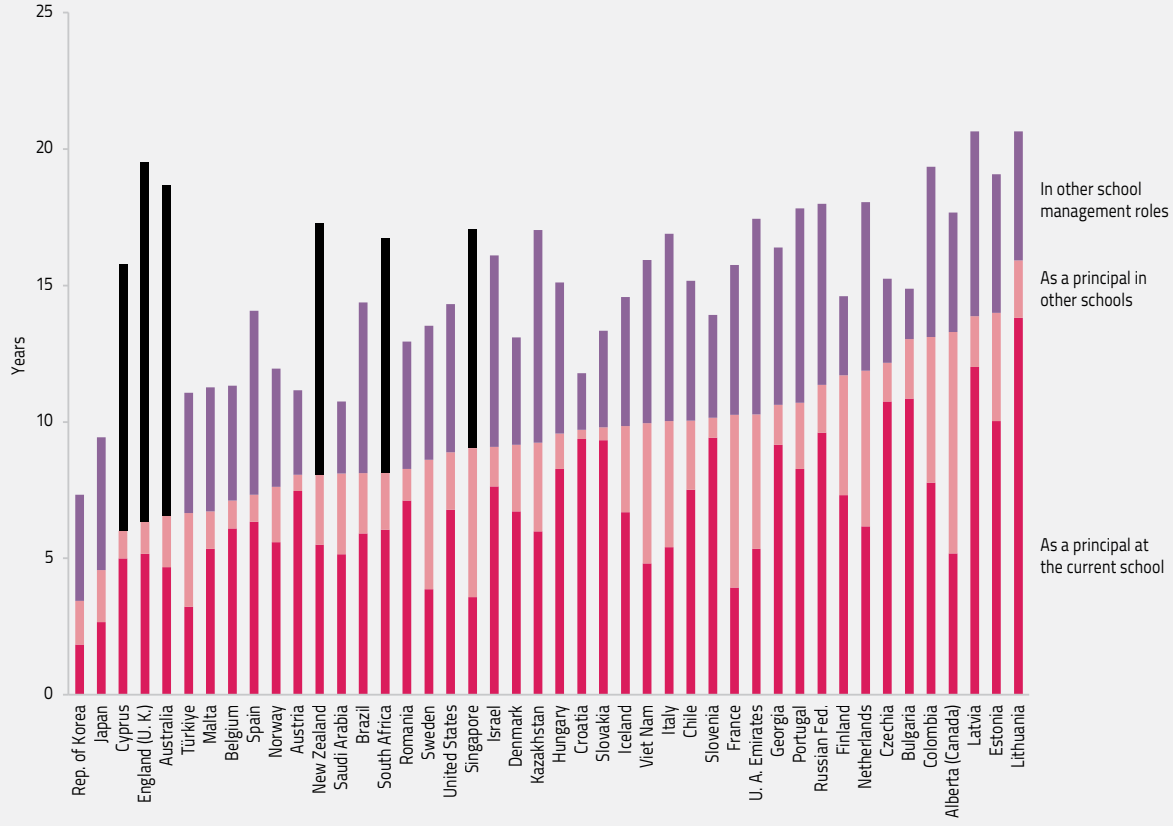
Differences in principals' experience by country reflect demographic factors and recruitment policies related to seniority or mobility in management positions. The 2018 TALIS showed that lower secondary school principals had, on average, 20 years of teaching experience, ranging from 11 years in Saudi Arabia to 30 years in Cyprus. The average tenure was 10 years, of which 7 were in the current school. In Japan and the Republic of Korea, the average tenure is less than 5 years, while in Colombia and the Baltic countries it is 13 to 16 years. Principals in Eastern European countries, including Bulgaria, Czechia and the Russian Federation, have the longest tenure in their current school (10 years or more) (**Figure 3.2**). School principals in Commonwealth countries such as Australia, Cyprus, New Zealand, Singapore, South Africa and England (United Kingdom) have twice the length of prior experience in other school management jobs (10 years) as in the other education systems (5 years), reflecting the different paths to principalship.

Principals' experience may also vary by school type and location. In the United States, the average principal's experience is seven years in public schools and nine years in private schools (Taie et al., 2022). Principal positions in rural and disadvantaged areas are used often as stepping stones, resulting in high turnover and instability (Heffernan, 2021; Snodgrass Rangel, 2018).

There are fewer women principals than women teachers

Despite being the majority of the teacher workforce, women are underrepresented as principals, facing widespread career barriers (Asadullah, 2024). Common deterrents include sociocultural expectations, gender stereotypes and biases (Qin et al., 2019), lack of networks and mentorship, difficulties in balancing work and family (Lee and Mao, 2020), lack of confidence, and low self-efficacy (Adamu, 2023; Martínez et al., 2021). Discrimination and unclear recruitment practices have prevented women from

FIGURE 3.2:
In wealthier countries, average principal tenure varies by a factor of three
Lower secondary school principals by management experience and tenure, selected education systems in middle- and high-income countries, 2018



Note: In countries highlighted with a black segment of the bar, principals have spent at least 10 years in other school management roles.
GEM StatLink: https://bit.ly/GEM2024_fig3_2
Source: OECD (2019).

attaining leadership positions in many countries (Tintoré et al., 2020). Job postings may be tailored to appeal to male candidates and thus perpetuate inequality (Seawell, 2015). This is a loss to the education system, as female principals can bring different perspectives to decision-making processes and foster more inclusive school environments (Alban Conto et al., 2023).

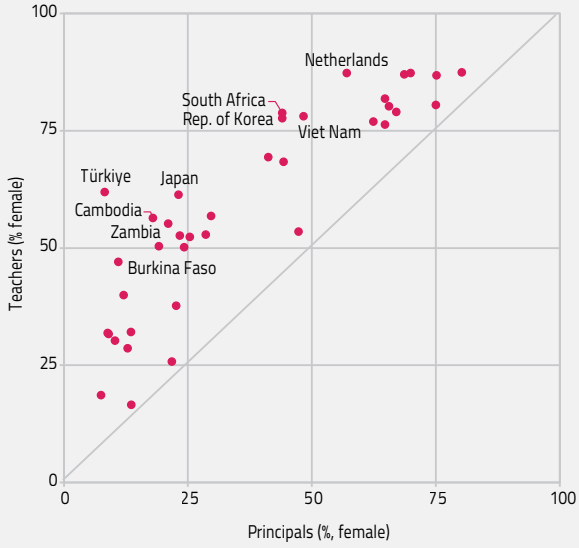
> “Female principals can bring different perspectives to decision-making processes and foster more inclusive school environments”

Among about 40 countries with observations in primary and secondary education, the share of female principals was at least 20 percentage points lower than the share of female teachers on average. In both primary and lower secondary education, the gap was at least 30 percentage points in Japan, the Republic of Korea, South Africa, Türkiye and Viet Nam. The 2018 TALIS shows that the share of female principals was about equal or exceeded the share of female teachers only in Brazil, Jordan, Latvia, Saudi Arabia and Sweden (**Figure 3.3**). The proportion of female principals is slowly growing in many countries, as in the United States (Taie et al., 2022).

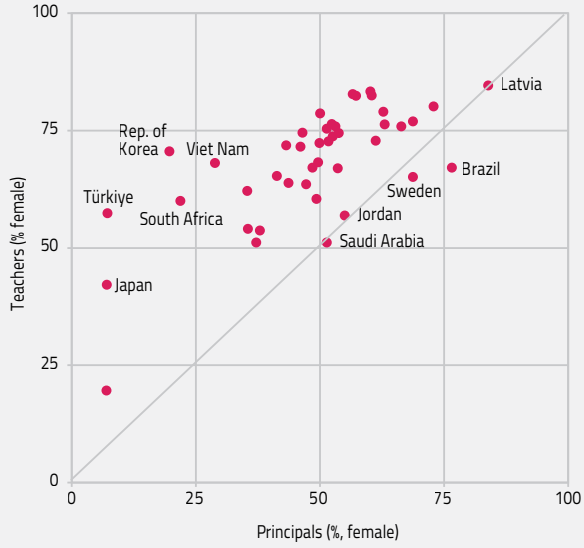
Although many countries declare that gender equality in education is a priority, women face obstacles in becoming principals (Asadullah, 2024). In Chile, it is claimed that the

FIGURE 3.3:
Women are much less likely to be principals than teachers
Share of female principals and teachers, by education level, selected countries

a. Primary, 2015–2023



b. Lower secondary, 2018–2019



GEM StatLink: https://bit.ly/GEM2024_fig3_3
Source: 2018 TALIS, 2019 Programme d'analyse des systèmes éducatifs de la CONFEMEN, 2019 Southeast Asia Primary Learning Metrics, and national data.

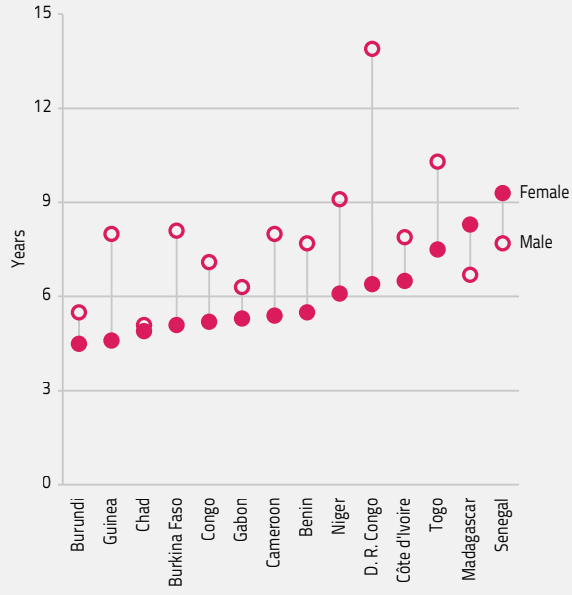
influence of mayors in final decisions negatively affects female applicants in the selection process, while school leadership training programmes have not adequately addressed gender equity (Arroyo and Bush, 2021). In China, personal barriers such as family and caring duties, along with gender stereotypes and societal influence on identity, roles and leadership, stand in the way of improving the gender balance despite national policies and laws to address the issue (Wang and Gao, 2022).

In Indonesia, principals tend to be appointed based on personal connections to district officers rather than competencies or qualifications, which is believed to disadvantage women (Gaol, 2021). In South Africa, women make up 70% of teachers but only 39% of principals in public primary and secondary schools, with little change since 2011, even where female teachers are more qualified than their male counterparts (Zuze, 2023). Women are better represented in middle management, with the proportion of female department heads increasing from 61% in 2012 to 66% in 2021 (Wills and Böhmer, 2023). Challenges arise from lack of leadership mentoring, lack of qualifications and inadequate training for leadership roles (Khoza, 2019). Newly appointed female principals in Gauteng, Limpopo and Mpumalanga provinces reported discrimination, insubordination, disrespect and sabotage (Nel and Govender, 2023). In Türkiye, the gender balance among principals has not changed despite regulations aimed at supporting more women principals in single-sex and co-educational schools (Bayır and Dönmez, 2020).

There are significant gender imbalances in anglophone sub-Saharan African countries. In Zimbabwe, women make up 29% of principals and 65% of teachers in primary schools and 16% of principals and 48% of teachers in secondary schools (Moyo et al., 2020). In Eritrea, only 6.5% of primary school principals were women and even fewer were women in secondary schools (Eritrea Ministry of Education and GPE, 2019). In Ethiopia, only 12% of primary school leaders and 7% of secondary school leaders were women in 2021, while only 2 women were principals in the Somali region in 2019 (Education Development Trust, 2022). In Rwanda, despite a high share of women in decision-making roles (e.g. 61% in parliament) (Tindimwebwa et al., 2023), less than 30% of school leaders are female (Hakizimana, 2022).

In francophone Africa, according to the 2019 PASEC learning achievement survey, the issue is less about a disparity between women in teaching and principal positions and more about low shares overall. In the median country, just 16% of primary school principals are women.

FIGURE 3.4:
In francophone Africa, female principals have less school management experience than men
Number of years of school management experience, francophone African countries, 2019



GEM StatLink: https://bit.ly/GEM2024_fig3_4
Source: Alban Conto et al. (2023).

Low shares are found in Guinea (10%) and Burkina Faso (11%), while Madagascar stands out from this group, as 48% of principals are women. In the median country, women have 2.4 years less management experience than men (**Figure 3.4**). Primary schools led by women tend to be in urban areas and have better infrastructure (Alban Conto et al., 2023). Recent analysis based on administrative data shows that as few as 5% of principals are women in Chad, ranging from 3% in rural areas to 11% in urban areas. Yet community schools led by women achieve a 5.3 percentage point lower dropout rate than schools led by men (Gouëdard et al., 2023).

> In francophone Africa, just 16% of primary school principals are women

Women's lower experience in management positions means that they are less likely to meet the eligibility and promotion criteria for advancement. In the US state of Texas, male certified teachers had a 20% higher chance than females of becoming principals (Davis et al., 2017). Women are more likely to become assistant or deputy principals but not principals (Goldring et al., 2021).

> 11% of countries try to promote gender diversity in selecting school leaders with specific measures

Gender biases in recruitment can be reduced through gender-blind procedures, standardized protocols for evaluating applications and gender training (Gaol, 2021; Martınez et al., 2021). The PEER profiles show that 11% of the countries try to promote gender diversity in selecting school leaders with specific measures. In Ethiopia, the government has introduced affirmative action measures to ensure that 30% of all government-funded positions are held by women, including school leaders (Melka and Warkineh, 2022). The government also has a Strategic Plan for Female School Leaders (Ethiopia Ministry of Education, 2023). Administrative instructions for the principal selection process in the city of Addis Ababa envisage that priority be granted to female candidates if they tie with male candidates (Addis Ababa Administration Public Service and Human Resource Development Bureau, 2012; Ethiopia Ministry of Education, 2014). In South Africa, during the school principal appointment process, the interview committee must adhere to equity, redress and representation principles from the 2022 Personnel Administrative Measures (South Africa Department of Basic Education, 2022). The Department of Basic Education has established support networks to promote women in education management (Mestry, 2022; Moorosi et al., 2020; South Africa Department of Basic Education, 2021). Togo, as part of its 2020–2030 Education Sector Plan, seeks to take steps to promote more female directors (Education Development Trust, 2022; Togo Government, 2020).

Some countries strive for diversity in principal selection

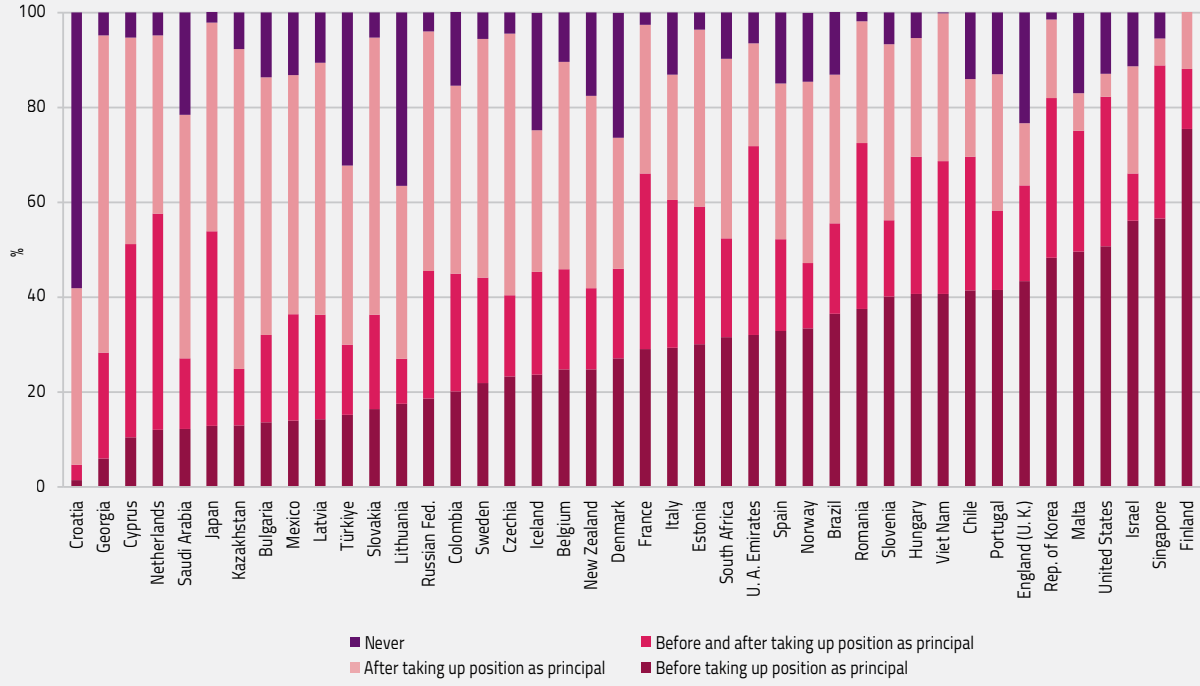
School leaders need to represent the demographic makeup of the population so that they can be responsive to cultural inclusion, a prerequisite for meeting the needs of a heterogeneous student body. Yet in many countries, increased school population diversity has not been matched by education leadership diversity (Grissom et al., 2017; Lee and Mao, 2020; Mongeau, 2017).

In Europe, education systems struggle with representation in a context of a growing number of immigrant students (Donlevy et al., 2015), as educators tend to be from the

FIGURE 3.5:

Relatively few principals begin their tenure having done a course in school administration

Percentage of lower secondary school principals who have done a programme or course in school administration or principal training, by timing, selected middle- and high-income countries, 2018



GEM StatLink: https://bit.ly/GEM2024_fig3_5
Source: OECD (2019).

majority population, monolingual and middle class (Brown et al., 2022; Brunold et al., 2017). In England, United Kingdom, Black, Asian and minority ethnic students make up 32% and 29% of primary and secondary school enrolments, respectively, but only 2% of principals were from these groups in 2020 (Miller, 2020; 2021). In Hungary, preference is given to ethnic minority candidates for schools with dual-language instruction or where most students belong to a minority (European Commission, 2024). In minority language schools in Romania, one director must be a qualified minority teacher who knows the minority language (Romania Parliament, 2011).

In the United States, 77% of public school principals but only 45% of students were white in 2020/21, while 9% of principals and 28% of students were Hispanic (Taie et al., 2022). In the state of Texas, Hispanic teachers had a 14% lower chance of becoming school principals than white teachers (Crawford and Fuller, 2017). Informal recruitment, challenging working conditions and the lack of support, role models and mentors discourage some from applying for leadership roles (Lee and Mao, 2020). The 2015 Every Student Succeeds Act calls on states to support efforts 'recruiting and retaining … principals, or other school leaders who are effective in improving student academic achievement, including effective teachers from underrepresented minority groups'.

In South Africa, which is still dealing with the legacy of apartheid, school leader appointment processes have been criticized for a lack of transparency in shortlisting criteria, leading to favouritism in recommending candidates (Mampane, 2021). In historically privileged schools, governing bodies tend to appoint mostly white principals (Jansen and Kriger, 2023). Black principals that get appointed in privileged schools face excessive scrutiny by parents and doubts about their competence (Davids, 2023).

COUNTRIES NEED TO DO MORE TO PREPARE AND TRAIN SCHOOL LEADERS

As leadership and management skills are crucial for improving education outcomes, school leaders who have only been trained to be good teachers are insufficiently prepared for their role. Yet the provision of sufficient, timely, structured, relevant and effective training is a

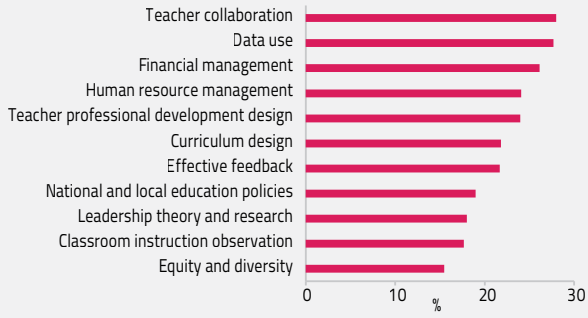
challenge (Bush, 2018; Sampat et al., 2020). The majority of lower secondary school principals in the mostly wealthy 47 education systems covered in the 2018 TALIS, had at some point in their career completed a programme or course that included teacher training (92%), school administration or principal training (88%), or instructional leadership (84%) as one of the elements. In the case of school administration or principal training, 30% of principals had completed a programme or course before they took on their job, 24% did so before and after they took on their duties, and 34% did so only after they started.

There is an interesting variation between countries. At the one extreme, in Croatia, 58% of principals had never done a programme or course in school administration or principal training; at the opposite end, 75% of principals in Finland had been trained before they took up their post – and there was no principal who was not fully qualified. The leadership course for principals covers public law and administration while university classes focus on educational leadership and management (Lahtero et al., 2019). Other education systems where at least one in five principals had never done a programme or course in school administration were Denmark, Iceland, Lithuania, Saudi Arabia, Türkiye and England (United Kingdom). Bulgaria, Cyprus, Georgia, Japan, Kazakhstan, Mexico, the Netherlands and Slovakia were among the countries where fewer than one in five principals had followed a programme or course in school administration before taking up the position (**Figure 3.5**).

The focus on preparation and professional development has been shifting from school management, including finance and budgeting, to instructional leadership (Hackmann, 2016; Hallinger et al., 2020), as standards are added and expectations begin to change. In Morocco, a 12-month compulsory training programme was introduced for new principals in 2015, covering instructional leadership and evaluation (Maghnouj et al., 2018).

Preparation and professional development needs are also likely to vary by the principal's background, experience and institutional context. A review of the professional development needs of lower secondary school principals in 47 education systems as part of the 2018 TALIS showed 15% needed training on equity and diversity, 28% on data use, and 28% on teacher collaboration. Principals in wealthier OECD countries expressed a slightly lower need by three percentage points on average. The lowest needs were identified in England (United Kingdom) (3%) and Denmark (6%) compared to principals in education systems from Eastern and South-eastern Asia with much higher needs, an average demand of 43% in Japan; 64% in Viet Nam; and 71% in Shanghai, China (**Figure 3.6**). Higher needs were also shown in rural schools including in Belgium, Croatia and Portugal; in public schools; and in schools with a higher concentration of disadvantaged students (OECD, 2019).

FIGURE 3.6:
A quarter of principals report a need for professional development
Percentage of principals reporting a high level of need for professional development, by technical area and country group, selected middle- and high-income countries, 2018



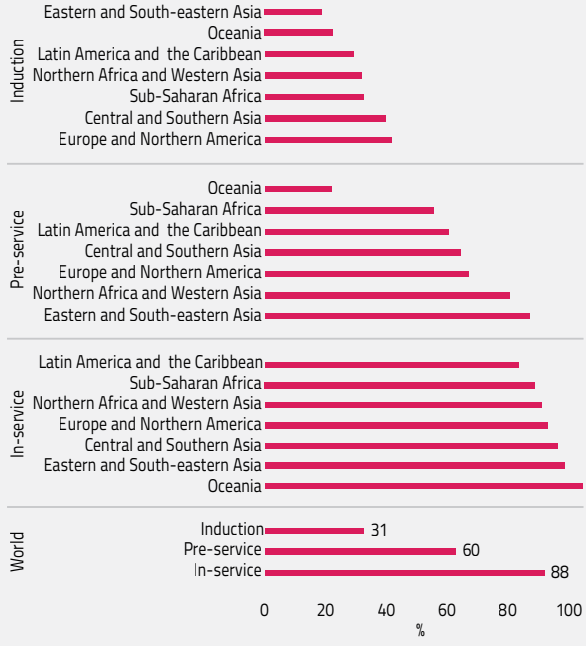
GEM StatLink: https://bit.ly/GEM2024_fig3_6
Source: OECD (2019).

As per the School Leadership Standards outlined in the African Continental Framework of Standards and Competencies for the Teaching Profession, school principals in Africa call for support in leading professional knowledge, practice and conduct; generating financial resources; and promoting school improvement, innovation and change (Anand et al., 2023). In Sierra Leone, half of the school leaders interviewed reported that pre-service teacher training did not adequately expose them to the essential professional knowledge needed for school leadership (Nwokeocha et al., 2023). In Ethiopia, 53% of school leaders lacked prior management experience before being appointed (Mamo, 2023), while incumbent principals often do not complete the required postgraduate degree in school leadership before their tenure begins (Gurmu and Fetene, 2023). Rural multigrade school principals face unique challenges, for instance in South Africa, and need specialized training and support (Taole, 2022).

MANY COUNTRIES OVERLOOK PRE-SERVICE LEADERSHIP PREPARATION

Leadership preparation and professional development programmes and requirements differ between countries (Brauckmann et al., 2023). There are pre-service training programmes for aspiring principals, induction

FIGURE 3.7:
Pre-service and induction training are insufficiently emphasized
Percentage of countries with school leader induction, pre-service and in-service training legislation and policies, by region, 2024



GEM StatLink: https://bit.ly/GEM2024_fig3_7
Source: PEER country profiles.

and initial programmes for novice principals (**Box 3.5**), and continued professional development programmes for those who are already in the position (Pont et al., 2008a; Pont et al., 2008b; Slater et al., 2018), including those based on hands-on practical experience (**Box 3.6**). There are leadership training, management courses and practical opportunities to gain or confirm experience in administrative roles. Despite growing calls to prepare principals before they enter their positions, countries continue to prioritize in-service over pre-service or induction training. Globally, 88% of the countries describe in-service, continuous professional development for principals in their laws or policies but only 60% mention pre-service training and 31% induction training for school principals (**Figure 3.7**).

> “Less than a third of countries provide induction training for school principals”

BOX 3.5:

Induction processes involving coaches and mentors are essential for novice principals

Novice principals often face steep learning curves. They are confronted with professional isolation and loneliness (Bauer et al., 2019; Lavretsky, 2014; Slater et al., 2018), the legacy of their predecessors (Slater et al., 2018), difficult working conditions (Lee-Piggott, 2016), staff and resource management challenges, community engagement, and education policy implementation (Makhanya, 2013; Tahir et al., 2021). All these pressures can feed stress, mental health problems and burnout (DeMatthews et al., 2023).

Induction activities can consist of mentoring activities with experienced principals, online discussions, coaching and networking in professional learning communities. Programmes involving internships or mentorship components have been shown to allow novice principals to gain hands-on experience under the guidance of experienced leaders (Bush, 2018). Yet newly appointed principals receive little induction training. A one- or two-day induction programme at the beginning of the school year and some short onboarding is often considered sufficient. The share of the countries offering an induction programme ranges from 18% in Eastern and South-eastern Asia to 40% in Europe and Northern America. By comparison, the 2018 TALIS suggested that half of principals had received formal peer or self-observation and coaching (at some point and not necessarily at the moment of induction) and fewer than one in four had in Brazil, Georgia, Malta and Norway.

Mentoring and coaching can enhance leadership effectiveness, develop self-awareness, and drive personal and professional growth (Weinstein and Hernandez, 2015). They can improve personal management skills and self-control, and make interpersonal relationships more productive (Athanasopoulou and Dopson, 2018).

Mentoring is an informal, often unstructured, relationship, generally between peers. In Singapore, mentoring is vital for aspiring principals' initial training. The Leaders in Education Programme includes mentoring, with all new principals receiving the Mentoring Scheme induction programme during their first year of service (Academy of Principals (Singapore), 2008; Jensen et al., 2017). In Slovenia, the Mentoring for Newly Appointed Head Teachers programme offers systematic support and assistance to novice principals, facilitating their collaboration with experienced mentors, providing practical guidance and fostering effective engagement in leadership processes. The programme includes five one-day meetings,

Continued on next page...

BOX 3.5 CONTINUED:

intermediate activities, and ongoing individual collaboration between mentors and novice principals (Erčulj, 2007; National School for Leadership in Education, 2024).

In the United States, many states, including California, require a mentoring component in credential programmes and many districts assign informal mentors to novice principals.

Coaching is a formal structured relationship built on standards and accountability. While mentors are typically volunteers, coaches are usually external service providers compensated for their role. In the United States, where federal policy allows states the flexibility to invest in their leaders, districts can choose to support their principals and assistant principals with coaching depending on their priorities. Well-prepared coaches can improve principals' knowledge and skills to supervise, evaluate and give feedback to teachers using the state evaluation system (NASSP, 2019).

A survey of coaches to 1,700 school leaders in 8 countries identified key themes: finding courage to have difficult conversations; giving feedback and holding others to account; empowering others, not fixing their problems; delegating and letting go; engaging others; getting buy-in; influencing others to change their practice or mindset to be less judgemental; managing time and taking time to think strategically; and creating a shared purpose and team vision for more collaboration. These themes have led to a school leadership model focused on making meaning, connecting the emotional, sensing the future, seizing momentum and being present (Gallagher and Connor, 2024).

In France, successful examination candidates are appointed as trainees and assigned to a regional academy. Pre-tenure training spans one year and aims to enable candidates to take on responsibility immediately. It alternates between practice, combining mentoring and internship, and knowledge of relevant content to exercise the functions. There is a minimum of 154 hours of training sessions. The internship normally takes place in a school with the mentor being the school principal (France Ministry of National Education and Youth, 2023, 2024). Ireland places great emphasis on inducting new principals. To compensate for the lack of mandatory programmes, the induction phase lasts three years depending on preparation and learning opportunities before the appointment and the principals' familiarity with the context, school culture and legacy of the previous leaders (Centre for School Leadership, 2021).

In Malaysia, a mentoring programme enhanced professional values, confidence levels and practical knowledge in school leadership among new principals. However, it also highlighted time constraints that affected the programme's effective implementation (Tahir et al., 2016). In Western Australia, new principals must complete Eligibility for Principals Modules within six months of their appointment (Government of Western Australia, 2019). In Queensland, Australia, newly appointed principals have to attend a two-year Beginning Principals programme, which includes workshops, masterclasses, principal peer mentoring and network learning opportunities (Queensland Government, 2024).

In China, new principals should attend and complete a 300-hour training programme, while every in-service principal must complete a minimum of 360 hours of training every 5 years in authorized training institutions. If they cannot meet the training requirement before appointment, they must complete it within one year of appointment; otherwise, they may be penalized, for example, receiving administrative sanctions or even seeing their positions revoked according to the school principal training regulations (China Ministry of Education, 2013). To ensure that principals attend training, a link between training, appointment, assessment and promotion of principals is established. Yet in rural, remote and poor areas and ethnic minority regions, outstanding teachers can be directly appointed as school leaders with some relaxation in qualification requirements (Chen et al., 2024).

In Chile, teachers wishing to take part in a competition for school principal positions need to have specialized training in executive management (Chile Ministry of Education, 2024; Muñoz et al., 2019). In France, formal appointment happens only after training has been successfully completed. Italy and Spain have made pre-service preparation for school principals compulsory, specifying the competencies which principals must acquire (Álvarez, 2020; Italy Ministry of Education, 2022), including the ability to manage complex organizations (Minieri, 2022).

In many countries, the government or state agencies play a crucial role in setting standards, accrediting programmes and sometimes directly providing the training, as in the case of the Advanced Certificate in Education: School Leadership and Management in South Africa (Bush et al., 2009) and the Aspiring Principals' Programme in Jamaica,

BOX 3.6:

Practice in realistic situations is essential for developing leadership skills

Training programmes should include internships and practical opportunities for future leaders to learn beyond theory. Experience-based learning in schools is a prerequisite for effective principal preparation and the development of skills to lead in complex learning environments (Darling-Hammond et al., 2007; Drake, 2022). Pedagogical strategies to obtain such skills include case studies, problem-based learning, coaching and mentoring. Active, concrete experiential methods can enhance social and emotional dispositions, which relate to job satisfaction, improved management skills, teamwork and conflict management ability, along with positive attitudes towards work (Leithwood, 2023; Little et al., 2016).

As part of the International Study of Principal Preparation (ISSP) and the International School Leadership Development Network, researchers mapped preparation programmes in various countries including the modality of delivery, pedagogy, type of providers, length, target groups, certifications and developed case studies on system details and challenges. ISSP research has emphasized practical, experience-based learning, which will help principals develop a strong professional identity, address social justice issues, and understand the broader political and economic forces affecting education (Slater et al., 2018).

In China, training pedagogy shifted in 2017 with a change in focus from theory- to practice-oriented approaches and a stronger emphasis on practical contexts (Chen et al, 2024). In Italy, aspiring principals must complete a four-month training and a four-month internship. However, recruitment is validated only after a probationary period of one academic year has been completed, which includes six months of effective work. During this period, novice principals are mentored by experienced school principals and follow specific training courses (Italy Ministry of Education and Merit, 2023).

In the United States, at least 39 of the 50 states and the District of Columbia require practical experience, such as internships, residency or job experience, as part of their principal preparation programmes (Pechota et al., 2023), although only 14 required at least 300 hours in the mid-2010s (Davis, 2016). The state of North Carolina requires a full-time one-year internship (Drake and Bastian, 2024). The state of Washington recently introduced a state-funded school leadership internship programme where participants could be released from their work for 45 days. Since its inception, the programme has funded some 3,400 interns but the funding was only enough to cover 10 to 15 days instead of the originally intended 45 days (Washington Office of Superintendent of Public Instruction, 2022). Only 18% of principal preparation programmes offer full-time, job-embedded residencies (Dexter et al., 2022).

which is a pre-service programme delivered jointly with the University of West Indies (National College for Education Leadership, 2024). However, not all public programmes are aligned to standards or needs. In Brazil, where, as elsewhere, most principals take office without proper preparation (Oliveira and Carvalho, 2018), the diploma on school management funded by the Ministry of Education and offered in all public universities is not focused on the competences required to lead for school improvement (Mariano, 2021).

Professional development programmes are essential, especially in the absence of robust pre-service programmes. In Cambodia, as a result of a collaboration between the education ministry and the World Bank, the Royal University of Phnom Penh co-designed the curriculum of a leadership strengthening programme, which includes professional development workshops, practice-based courses and school improvement projects, aligned with the school principal standards published in 2017 (Sok et al., 2020).

“Professional development programmes are essential, especially in the absence of robust pre-service programmes”

In Bangladesh, the National Academy for Educational Management provides training to education leaders on education management, research and planning. The Bangladesh Education Sector Plan 2020/21–2024/25 envisages five days of training over five years for school governance and management, classroom observation, and leadership capacity building. In India, there was no principals' leadership training in 14 states and union territories in 2016–17 (Crawfurd et al., 2022). The 2020 National Education Policy requires school principals to engage in modular workshops and online resources to enhance their leadership and management competencies (India Government, 2020). Leaders must complete at least 50 hours of continuous professional

development annually, covering leadership, management, content and pedagogy. An integrated training programme of the National Initiative for School Heads' and Teachers' Holistic Advancement supports this effort by providing training on learning outcomes, school-based assessment and learner-centred pedagogy (NCERT, 2020).

In Ghana, the Leadership for Learning Programme (Jull et al., 2014), a partnership of the government and the Institute for Educational Planning and Administration at the University of Cape Coast, was not mandatory but had trained 3,000 principals and its content was included in the principals' handbook (Dampson, 2019). The Teaching Council of Zambia mandates in-service training for all registered teachers, including head teachers, in line with the 2019 Standards of Practice for the Teaching Profession, which state that school heads must engage in professional learning to develop their practice and knowledge. In Zimbabwe, the Ministry of Education surveyed 10% of schools in 2018 to assess training needs; management training was implemented in 2022. Handbooks were distributed to support principals and school committees on teaching, curricula, administration and finance (Global Partnership for Education, 2024).

Even when professional development programmes exist, aspiring or incumbent principals may be unable to benefit from them. In the 2018 TALIS, 46% of lower secondary school principals reported a conflict between professional development and work – but the share was 65% to 70% in Belgium, France, Iceland, Italy and the Republic of Korea, and as much as 82% in Japan. In contrast, only about 20% reported such a conflict in Estonia, Latvia and Lithuania. About 36% cited a lack of incentives – ranging from as few as 4% in Singapore and 10% in Kazakhstan and the Russian Federation to as many as 68% in Portugal, 72% in Spain and 84% in Saudi Arabia. The cost of training was the third most important barrier, with 32% of principals listing it as a concern – from 9% in Israel and 11% in Austria to 60% in Chile and 68% in Colombia.

Who pays for the training and how principals are supported to benefit from it are critical factors that determine uptake. In the Gambia, since 2021, principals of primary and lower secondary schools need to undergo a one-year professional training in school leadership, which is delivered full-time over two semesters during which time school leaders are fully relieved of their duties (Nwokeocha et al., 2023). One way to reduce costs and enhance development opportunities, especially for experienced leaders, is collaboration through peer learning networks and professional learning communities (Sahlin, 2023). In the Australian state of Victoria, network leaders have been appointed to promote collaboration between schools and facilitate partnerships (Victorian Academy of Teaching and Leadership, 2022).

MANY PROGRAMMES OVERLOOK THE CORE DIMENSIONS OF LEADERSHIP

Information on 142 principal preparation and training programmes from 92 countries was extracted from the PEER profiles to assess their content. In particular, the analysis focused on the four core dimensions of leadership emphasized in this report: setting a vision, focusing on learning, developing people and fostering collaboration. Transformational (42%) and instructional (47%) leadership were the two most common areas covered, followed by staff development (31%) and fostering collaboration (29%). Only 18% of all programmes covered all four dimensions (**Figure 3.8a**). Although in-service, continuous professional development programmes are shorter, they are more likely to be narrowly defined and clearly focused than pre-service programmes, while their content is more likely to be well documented. The analysis suggests that at least half of those programmes focus on transformational and instructional leadership, while shared leadership remains relatively underemphasized (**Figure 3.8b**).

WELL-DESIGNED LEADERSHIP PROGRAMMES IMPROVE EDUCATION OUTCOMES

The characteristics and impact of leadership training programmes on principals' subsequent performance have not been well researched (Weinstein et al., 2018). Studies of the impact of training for school principals on education outcomes are lacking at the global level (Darling-Hammond et al., 2023). The studies that do exist, overwhelmingly from the United States (**Box 3.7**), indicate that programmes which have adopted good practices, such as proactive recruitment of candidates, curricular coherence aligned with professional standards, emphasis on instructional leadership, field experience, and mentoring and coaching, have helped develop principals' leadership knowledge and skills and enhanced education outcomes for teachers and students (Cosner, 2019; Darling-Hammond et al., 2007, 2017).

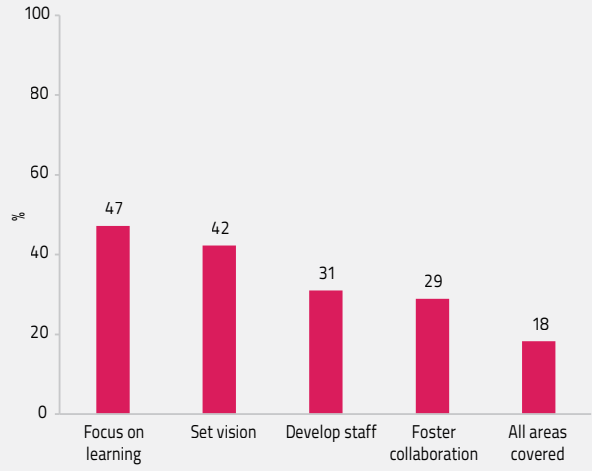
Evidence from other parts of the world, including Latin America, can also be positive. In Argentina, primary school principals who received diagnostic-based feedback and understood how to use it helped their schools outperform control schools by 0.33 of a standard deviation in mathematics scores and 0.36 of a standard deviation in reading scores (Hoyos de et al., 2021). In Guatemala, a training programme for school principals helped reduce student dropout by 4% at the modest cost of USD 3 per student (Haimovich et al., 2021).

FIGURE 3.8:

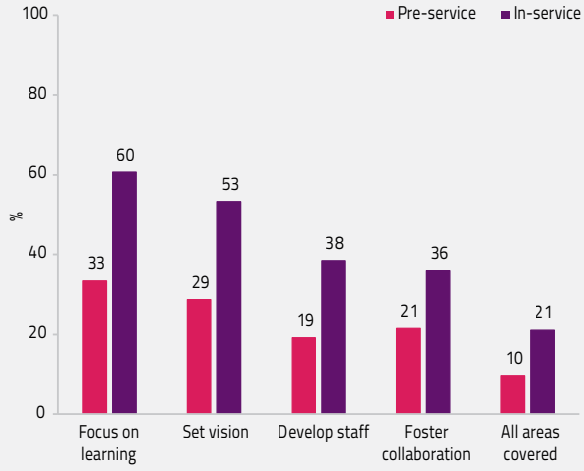
Only one fifth of principal preparation and training programmes cover all four dimensions of leadership

Percentage of school principal preparation and training programmes, by area of focus, selected countries, 2024

a. Total



b. By type



Note: The analysis is based on information from 132 programmes in 92 countries.
GEM StatLink: https://bit.ly/GEM2024_fig3_8
Source: GEM Report team analysis based on the PEER country profiles.

BOX 3.7:

In the United States, research has helped improve training content

In the United States, preparation for school leaders has undergone numerous revisions to reflect lessons from research on programme quality and effectiveness – from pre-service education delivered by universities to in-service training from professional organizations or partnerships between colleges and school districts (Young, 2019). Methods, content and ways of delivery received intense scrutiny, as most programmes delivered in the mid-2000s were judged 'inadequate to appalling' (Levine, 2005). A subsequent review also argued that the effectiveness of many programmes still needed to be proved (Goldring et al., 2012).

The University Council for Educational Administration and the Learning and Teaching in Educational Leadership special interest group of the American Educational Research Association has supported much of the research since then. Analysis of 97 principal preparation programmes found that they tended to follow the National Educational Leadership Preparation Standards and Professional Standards for Educational Leaders (Anderson et al., 2018).

Analysis of a programme aimed to prepare principals for low-income, urban schools found that, over 11 years, 72% of primary and 60% of secondary schools led by programme graduates had achieved above-average student growth gains, lower dropout and higher graduation rates (Cosner et al., 2015; 2019). Principals enrolled in the New Leaders Aspiring Principals Preparation programme drove higher achievement gains among their students than other principals (Gates et al. 2014). The Principal Pipelines Initiative in six large US school districts, based on 'rigorous job standards, high-quality pre-service training, selective hiring and placement, and apt on-the-job evaluation and support', resulted in target schools improving reading scores by six percentile points and mathematics scores by three percentile points over other schools after three years. In this period, principals placed under the initiative were eight percentage points more likely than other principals to still be in their position (Gates et al., 2019).

Programmes based on one-to-one training are expensive. Providing induction coaching to every newly hired principal was estimated to cost between USD 153,000 and USD 845,000 per year, representing a cost of between USD 4 and USD 12 per pupil (Lochmiller, 2014a). Yet even more expensive interventions, such as the Principal Pipeline Initiative, whose per pupil cost was estimated at USD 42, were justified given the student achievement benefits, when compared with other academic interventions (Gates et al 2019).

Continued on next page...

BOX 3.7 CONTINUED:

Another study of principals during the first 5 years of their career – covering 462 schools, 14,000 teachers and 314,000 students – found that good-quality pre-service preparation and in-service training enhanced principals' skills and were associated with better education outcomes (Campoli and Darling-Hammond, 2022). In Pennsylvania, a mandatory induction programme led to more effective novice principals and higher achievement gains in mathematics, especially in the most disadvantaged schools (Steinberg and Yang, 2022). Better preparation programmes for leadership in Kentucky may have contributed to the reduction in principal turnover by 70% between 2005 and 2010 (New Teacher Center, 2018). More recently, the Quality Measures Center has developed a toolkit grounded in evidence that synthesizes current research about how best to prepare school leaders (Education Development Center, 2024).

Yet cross-country analyses are somewhat less upbeat. Data from the Third Regional Comparative and Explanatory Study in seven Latin American countries found that the effect of education or training on leadership practices was marginal. Weaknesses in principals' initial selection was emphasized as a constraint. While some 20% of school principals have specialized postgraduate studies, the programme quality is unequal and on average is low (Weinstein et al., 2018). A decade ago, a review had found that development programmes did not prepare principals to bring change, especially through instructional leadership, and were not informed by research (UNESCO, 2014). More recent analysis of management training in nine Latin American countries shows that 60% of programmes have been initiated after 2015. Although 85% of the programmes carried out post-training evaluation, programme design was rarely based on a formal diagnostic tool and therefore programmes did not necessarily align to need. Almost all programmes were designed and implemented with the help of non-governmental organizations (Adelman and Lemos, 2021). Programmes tend to be primarily academic, with little focus on experiential learning and without distinguishing the needs arising in different stages of the career (Weinstein et al., 2018).

In South Africa, principals who participated in the Advanced Certificate in Education programme improved their students' school leaving scores twice as fast as principals who had not participated (Bush and Glover, 2012). Positive effects also emerged in relation to mentoring (Moorosi, 2012), networking (Kiggundu and Moorosi, 2012) and assessment (Chikoko et al., 2011).

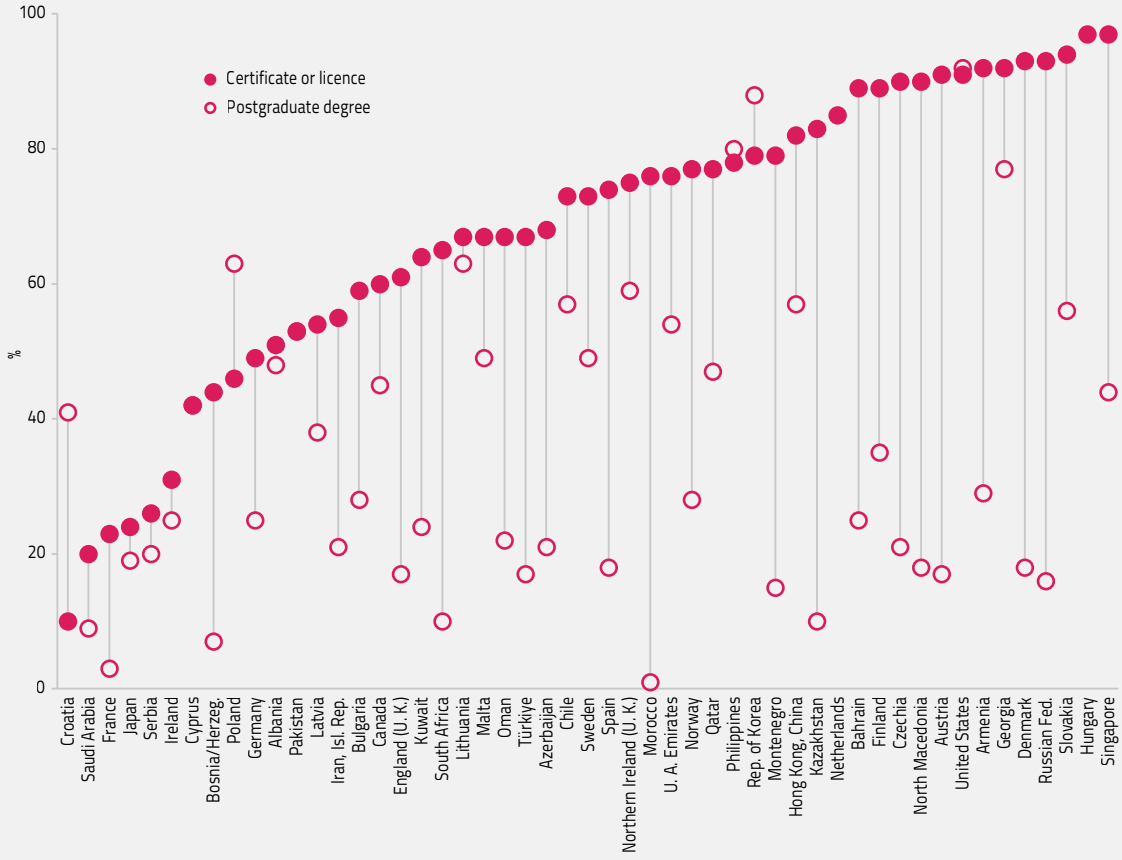
In Sweden, where training for principals has undergone changes over time reflecting concerns over its effectiveness on schools' practices (Norberg, 2017), the new National School Leadership Training Programme was established in 2008 and became mandatory for principals appointed after March 2010 – and after July 2019 in preschools (Sigurðardóttir et al., 2023). Principals must complete the three-year programme within four years of appointment – and within five years in the case of preschools. Participants need to devote some 20% of their working time to the training. An evaluation of the programme suggested it was essential for inexperienced school leaders (Forssten Seiser and Söderström, 2022).

The Rwanda Basic Education Board developed five professional standards that should be reflected in principals' behaviours and practices and used to inform the 2014–2016 School Leadership Diploma Programme, which was expanded to all school leaders in 17 of the 30 districts in 2021. Leadership training has enhanced leaders' abilities, confidence and dedication to their roles and tasks. Positive behaviours and practices were promoted through coaching and mentoring (Uworwabayeho et al., 2020). The Leading through Assessment and Data programme has led to better examination results (Haelermans et al., 2022). Professional learning networks, promoted as part of the training, have also helped increase motivation and build positive relationships with others, within and outside the school (Dusabe, 2022; VVOB, 2023). The quality of trainers is a critical factor in Africa, where training often relies on existing school leaders and is delivered in a cascade modality, which dilutes information and pedagogical content. Such training can easily become bureaucratic, missing the focus on instructional leadership skills (Bush and Glover, 2016).

PRINCIPALS' CERTIFICATION VARIES SIGNIFICANTLY BETWEEN COUNTRIES

Certification is a formal procedure through which principals' knowledge and skills are assessed, verified and recognized, an important step for professionalization. The 2019 TIMMS showed that 68% of grade 4 and 71% of grade 8 students attended schools where principals had a school leader certificate or licence. Taking the example of grade 4, the share of students whose principal had a

FIGURE 3.9:
The extent to which countries focus on principal certification varies by country
Share of grade 4 students whose principals had an educational leadership qualification or credential, by type, selected middle- and high-income countries, 2019



GEM StatLink: https://bit.ly/GEM2024_fig3_9
Source: Mullis et al. (2020).

certificate or licence was 10% in Croatia and 26% in Serbia but 79% in Montenegro and 90% in North Macedonia. It was 92% in Armenia and Georgia, 94% in Slovakia, and 97% in Hungary (**Figure 3.9**). The only country with a large difference in certification between the two education levels was Ireland, where the prevalence of certificates or licences was twice as high in grade 8 (60%) as in grade 4 (31%). Meanwhile, 36% of grade 4 and 39% of grade 8 students had a principal with a postgraduate qualification in leadership. The share was below 10% in Egypt, Morocco and Saudi Arabia, as well as in Bosnia and Herzegovina and France (Mullis et al., 2020).

Some countries have created qualification pathways to certify leadership abilities. In China, within five years of their appointment, principals must obtain a Certificate of Advanced Training as a prerequisite to continue their tenure (Chen et al. 2024). In Hong Kong, China, since 2020, training for principalship has been aligned with the professional ladder, developing competencies for aspiring leaders. The preparation includes a two-year Certification for Principalship university programme, focusing on six core areas, emphasizing adaptive, responsive and innovative leadership, and including needs analysis and a portfolio (Education Bureau, 2024).

> “Certification is a formal procedure through which principals’ knowledge and skills are assessed, verified and recognized”

In Indonesia, a 2009 regulation established an agency for school principal development which acts as a national certification institution. Starting with a pilot in 25 cities in 2013, aspiring principals who complete training receive a certificate and a principal registration number, which is used by the education ministry to track candidates for filling vacancies (Faizuddin et al., 2022). The approach is applied nationwide. Training content follows national standards for principals, which focus on management skills over pedagogical leadership (Andriani, 2021). In 2009, Malaysia replaced its National Professional Qualification for Headship with a National Professional Qualification for School Leadership, which became mandatory for all aspiring principals in 2014 (Singh, 2019). In the Philippines, aspiring and assistant principals must pass the National Qualifying Exam for School Heads (Philippines Department of Education, 2024). In Singapore, principals need a pre-service qualification before being assigned to schools. The country first mandated a one-year, full-time Diploma in Educational Administration in 1984. The Leaders in Education programme, introduced in 2001 and run by the National Institute of Education, targets vice principals based on their potential and performance appraisal. Participants in this full-time, seven-month programme receive a salary (Jayapragas, 2016).

States and territories in Australia have their own certification requirements. In New South Wales, aspiring principals are required to obtain the NSW Public School Leadership and Management Credential from the School Leadership Institute. The principal certification programme in the Northern Territory requires 240 hours and 2 practicum projects according to the Principal Certification Regulations. Queensland has a six-month Aspiring Principals programme. In Victoria, aspiring principals apply to the Victorian Aspiring Principal Assessment to determine readiness and professional development needs. Applicants must demonstrate proficiency in five practice areas or undergo targeted professional development.

In the Islamic Republic of Iran, according to the 2021 Regulations for Selecting and Appointing School Administrators, the Ministry of Education issues certifications based on competency assessments at approved centres. These certificates are valid for five years and demonstrate an individual's capability to hold a managerial position in schools. Non-certified candidates must complete educational management courses at approved universities.

Bahrain's Higher Diploma in School Leadership is a one-year programme for aspiring principals which meets the Bahrain Quality Authority and international educational leadership standards. Graduates are expected to use evidence-based strategies and practices to improve student academic outcomes. In Abu Dhabi, the education ministry has introduced a school leadership licensing process for principals and vice principals to improve their competencies. Principals must meet professional standards in five areas of leadership: strategy, teaching and learning, organization, people, and the community (Rai and Beresford-Dey, 2023).

In sub-Saharan Africa, professional qualification pathways are still uncommon. In Eswatini, the 2022–34 Education Sector Strategic Plan and the 2022/23–2024/25 Multi-Year Action Plan outline that all newly appointed principals and deputy principals should be trained. The plans further commit to monitoring and evaluating the impact of the training with the view to provide incentives to those who perform well through certification. Liberia launched an intensive in-service leadership training programme for public school principals in 5 of its 16 counties. Principals must complete in-service training and a short course to renew their licences every three years (Liberia Ministry of Education, 2019). In South Africa, the Department of Education accredited the Advanced Certificate in Education in 2005, which became the National Qualification for School Leadership, a compulsory professional qualification. The programme was developed in partnership with 14 universities, unions, the South African Principal Association and various non-governmental organizations (Mampane, 2021).

In Finland, aspiring principals must have certified knowledge in educational administration through programmes approved by the National Board of Education (Lahtero et al., 2019; Lahtero and Kuusilehto-Awale, 2015). Slovenia's one-year Headship licence programme aligns with the tasks of preschool and school principals as mandated by law. It is open to new principals who must complete it within a year of their appointment. All states in the United States have a certification and licensing system for school leaders (Pechota et al., 2023).

Canadian provinces have varying certification requirements (Canada Government, 2024). New Brunswick requires a Principal's Certificate with an extended practicum and five years of teaching experience (New Brunswick Office of Teacher Certification, 2023). Nova Scotia does not mention specific principal certification requirements, but has a three-year Instructional Leadership Academy programme, which leads to a diploma that demonstrates competency (Nova Scotia Government, 2018; Office of Teacher Certification, 2016). In Ontario, qualified teachers can apply to a one-month Principals' Qualification programme, which covers the five domains of the Ontario Leadership Framework and Personal Leadership Resource.

A 50-hour, practice-oriented, school-based part must also be completed within 3 years, under the mentorship of a principal or vice principal (Ontario Principals' Council, 2024).

A review of nine Latin American countries showed that 54% of training programmes offered certification but only one country used the certificates for promotions and none to determine salaries (Adelman and Lemos, 2021).

COUNTRIES TRY TO MAKE PRINCIPALSHIP AN ATTRACTIVE CAREER PATH

As education systems place more responsibilities on principals and their role becomes more challenging, there are concerns that the job is becoming stressful with a negative impact on retention, satisfaction, and physical and mental health (Aravena and Felipe, 2021). Burnout, unstable work arrangements, and lack of appraisal mechanisms and recognition can make principalship unattractive (Grissom and Bartanen, 2019). In turn, principal turnover can cause disruption, lower teacher morale and reduce student performance. Frequent leadership changes can then harm efforts towards school improvement (Henry and Harbatkin, 2019; Kearney et al., 2012; Miller, 2013).

Long working hours are a concern. In the United States, principals worked nearly 60 hours a week and even longer hours in schools in poor areas (Sparks, 2016). Principals engage in many extracurricular activities that extend and intensify their workdays (Reid and Creed, 2021; Wang et al., 2022). But the distribution of working time also indicates that most of the time is spent on tasks unrelated to instructional leadership.

The 2018 TALIS showed that lower secondary school principals in 48 education systems spent 17.5% of their working time on curriculum- and teaching-related tasks, which include classroom observations, student evaluation, and teacher mentoring and professional development. There is wide variation in time allocation to these tasks, with some distinct regional differences (**Figure 3.10**). In the Nordic countries – Denmark, Finland, Iceland, Norway and Sweden – principals spent less than 14% of their time on these tasks, and in the Netherlands, just 10.5%. But in Eastern and South-eastern Asian countries, such as Japan, the Republic of Korea and Viet Nam, they spent more than 21.5% of their time while in Shanghai, China, the share was 27%.

Administrative (28%) and leadership (21%) tasks and meetings take up half of principals' working time. Principals in Czechia and the Russian Federation spent twice as much time on administrative tasks (almost 40%) as their peers in Georgia and Kazakhstan (just over 20%). Interactions with students, teachers and the community took up 26% of principals' working time on average. Principals in Brazil spent almost twice as long on these interactions (41%) as their peers in the Netherlands (22%), while the gap between the two countries was three times as wide (19% vs 6%) in the specific case of interactions with students outside structured learning.

> Administrative (28%) and leadership (21%) tasks and meetings take up half of principals' working time

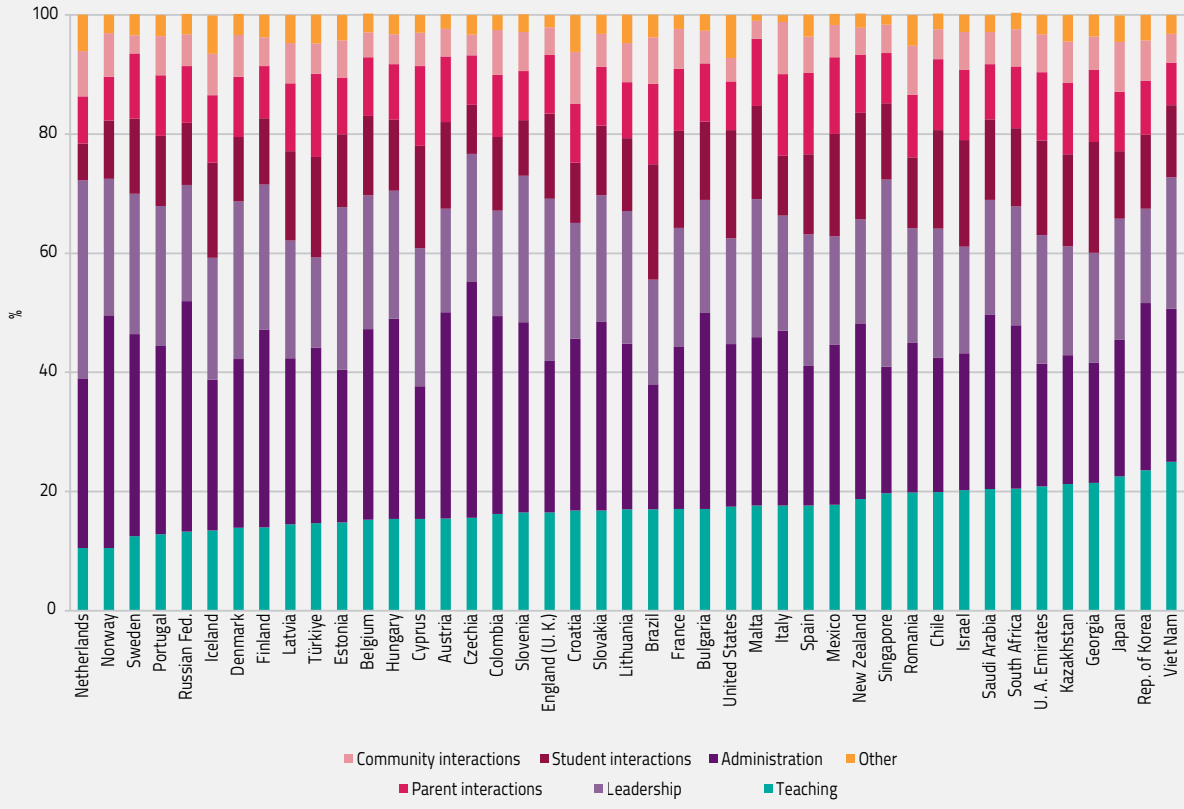
A review of 55 time-use studies showed that principals work long hours in non-instructional daily activities (Hochbein et al., 2021). In Greece, primary school principals complain about excessive workloads that include an array of distracting administrative tasks: hiring substitute teachers and managing their salaries, looking after injured students when nurses are not available, liaising with technicians when plumbing is not working, getting parental consent and notifying traffic police about school buses when organizing school trips, responding to emails, checking cleaners' schedules, collecting purchase invoices to send them to municipalities, and entering school data into management information systems (Lakasas, 2023).

JOB SATISFACTION LEVELS ARE HIGHER THAN COMMONLY ASSUMED

The media frequently voices concerns that school principals may be getting disenchanted with their job under the pressure of a growing range of responsibilities. However, the 2018 TALIS showed very high levels of satisfaction among principals, even in countries where burnout rates are reportedly high. In the 48 education systems covered by the survey, 95% of lower secondary school principals reported they were satisfied with their job. There had been no change relative to satisfaction levels reported in the previous survey round in 2013. This rate fell below 90% in only two countries: South Africa (87%) and Türkiye (83%).

Other indicators related to job satisfaction showed relatively high scores. For instance, 79% of lower secondary school principals agreed or strongly agreed that the advantages of their profession clearly outweighed the disadvantages, and 86% with the statement that, if they could decide again, they would still choose this job/position. Out of 10 principals, only 6 or fewer of those

FIGURE 3.10:
Principals in some countries spend at least twice as much time in teaching-related tasks than in other countries
Lower secondary school principals' distribution of working time, by task group, selected middle- and high-income countries, 2018



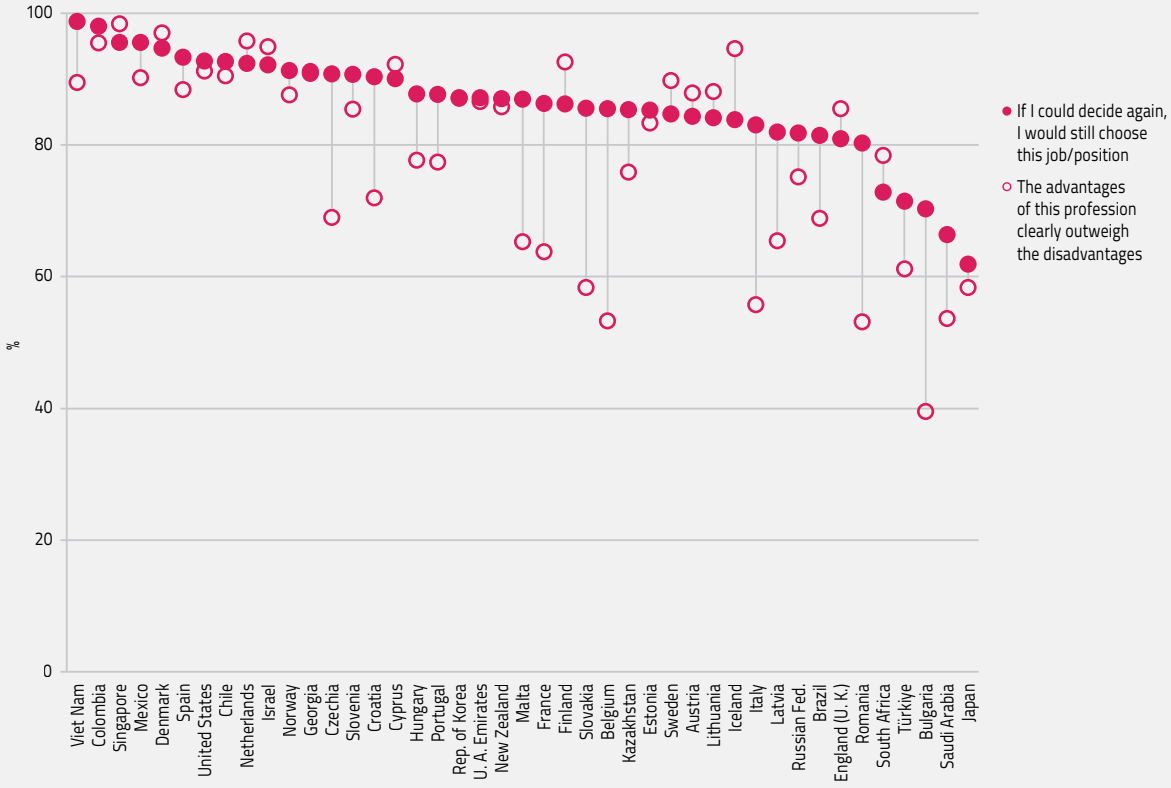
GEM StatLink: https://bit.ly/GEM2024_fig3_10
Source: OECD (2019).

in Belgium, Italy, Romania and Slovakia reported that advantages outweighed the disadvantages of the job. Out of 10 principals, only 7 or fewer of those in Bulgaria, Japan and Saudi Arabia reported they would choose their job again (**Figure 3.11**). Overall, only 7% had regretted choosing to become a principal and 21% had wondered whether it would have been better to choose another profession. In Pacific Island states, principals are satisfied with their work despite the stress that it brings (**Box 3.8**).

School principals in Australia have been reporting higher levels of stress, burnout and depression in recent years, with the two top causes being the 'sheer quantity of work' and a 'lack of time to focus on teaching and learning' (Dicke et al., 2024). Women, primary school and early career leaders are more likely to experience stress or burnout (Arnold et al., 2023; Henebery, 2024). Women school leaders, who tend to work longer hours, report higher job demands and more work–life balance issues (Henebery, 2023). As part of the Principal Occupational Health, Safety and Wellbeing Survey, which has covered more than half of all principals in Australia since 2011 (Riley, 2017), participant responses may set off a 'red flag' that their mental health may be at risk, in which case they receive an immediate email warning the school leader about their stress levels, encouraging them to seek support (Marsh et al., 2023). In 2022, 48% of all school leaders triggered a red flag email (Dicke et al., 2023). Five of the eight states and territories have frameworks and strategies focused on the health and well-being of school principals – and those jurisdictions have had a positive impact (Dicke et al., 2024).

In Ireland, a survey of 1,000 principals in 2015, 2022 and 2023 found that over 50% experienced burnout due to workload, teacher shortages and the need to implement challenging government initiatives, such as those related to inclusive education (Tobin, 2023). In England, United Kingdom, a survey of school leaders found that school inspections impacted school leaders' well-being,

FIGURE 3.11:
Principals appear to enjoy high levels of job satisfaction
Lower secondary school principals who agreed or strongly agreed with two statements related to job satisfaction, selected middle- and high-income countries, 2018



GEM StatLink: https://bit.ly/GEM2024_fig3_11
Source: OECD (2020).

with 38% of those surveyed seeking mental health support in the previous year and 84% reporting sleep disturbances (Ahmed, 2023).

The COVID-19 pandemic placed much more pressure on principals. They had to apply new policy measures, adjust schoolwork and schedules to national requirements, ensure education continuity, guide teachers through remote or hybrid modalities, and implement hygiene measures for a safe environment (Leksy et al., 2023). School closing and reopening and the enforcement of social distancing rules in schools exacerbated the burnout experienced by school leaders (Karakose et al., 2022). Among principals, 9 out of 10 in Hong Kong, China (Lau et al., 2022) and 8 out of 10 in the United States reported high stress levels (Woo and Steiner, 2022).

One potential explanation of the apparent inconsistency between statistics on job satisfaction and stress is that job satisfaction is driven by long-term and intrinsic factors whereas stress is affected by short-term factors, a fact that is partially reflected in the relatively large share of principals (15%) who expressed a desire to change schools in the 2018 TALIS. For instance, 96% of Colombian principals would choose their job again and yet 22% wanted to change schools; in Mexico, 98% would choose their job again but 30% would change schools if they could. While sample sizes are not large enough to suggest robust relationships, Colombian principals working in rural schools were 10 percentage points more likely to want to change schools than peers in urban schools. The gap in Mexico exceeded 30 percentage points.

> “The COVID-19 pandemic placed much more pressure on principals”

BOX 3.8:

School leaders in the Pacific express job satisfaction despite stress and pressure

As part of the 2021 Pacific Islands Literacy and Numeracy Assessment (PILNA), which covered 15 countries and territories, primary school principals reported high job satisfaction and a strong sense of purpose. Almost all grade 6 students had school leaders who 'often' or 'sometimes' felt content with their profession (94%), found meaning and purpose in their role (95%), were enthusiastic and inspired by their job (94%), and were proud of their work (97%). A sense of purpose appeared to be a crucial sustaining factor for these leaders.

At the same time, somewhat paradoxically, 84% of students attended schools whose leaders 'often' or 'sometimes' experienced stress due to their roles and 70% attended schools whose leaders frequently felt overwhelmed by their job. About two in three students attended schools whose leaders reported sleeping problems and lack of personal time; one in two attended schools whose leaders reported a resource shortage that hindered their capacity to deliver; and one in three attended schools whose leaders were concerned about qualified teacher shortage and teacher absenteeism. About 40% of students were in schools where leaders reported that their job negatively affected their mental and physical health.

Stress alongside job satisfaction need not be inconsistent. It suggests that having a positive impact on students' lives and on communities is rewarding. It helps school leaders maintain high levels of engagement and mitigates any negative aspects of the job. One area where job satisfaction is notably lower is in salaries. Only about three in four students attend schools whose leaders were satisfied with their pay, which indicates that many school leaders feel undervalued.

Source: Pacific Community (2022).

Staff shortages and negative school climates have been found to affect job satisfaction (Chen et al., 2023; Collie et al., 2020). Accordingly. better resource allocation and improving the school environment, as well as professional development opportunities, are essential for improving job satisfaction (Chen et al., 2023; Toyama et al., 2023). Leadership practices that foster a collaborative environment and support teachers' professional growth are likewise linked to higher job satisfaction (Liu and Bellibas, 2018).

TURNOVER OF PRINCIPALS CAN BE A CHALLENGE OR AN OPPORTUNITY FOR SCHOOLS

There is a concern that principal turnover is increasing and filling vacancies has become a bigger challenge for education systems (Snodgrass Rangel, 2018). But collecting good data and accurately assessing trends on turnover for principals, just as for teachers, is notoriously difficult. Reliable evidence is thus very limited on turnover levels and trends, let alone on the reasons: principals leave their jobs because they retire, move to other jobs in the school, move to other schools, or exit the profession and education altogether. The policy implications differ considerably depending on which of these reasons appears to gain in severity.

The United States has the best documented data on principal turnover. These do not seem to suggest increasing turnover rates. In 2021–22, it was estimated that 80% of public school principals had stayed in the school, 6% had moved to a different school and 11% had left the profession, a rate that was essentially unchanged from previous data collection efforts in 2012–13 and 2016–17. It was not possible to establish the status of the remaining 3% of principals. Older, low-paid principals in schools with high percentages of Black and Hispanic students or poor students (i.e. entitled to a free school lunch) were more likely to have left (NCES, 2023). In the state of North Carolina, more than one in three among the lowest performing schools lost their principals compared to one in five among all schools (Henry and Harbatkin, 2019).

In Sweden, analysis of administrative data between 1980 and 2017 from the total population of more than 18,000 public primary and lower secondary school principals suggested that on average they had worked almost 7 years in their municipality and had made less than one school change in their career. Mobility appeared to have slightly increased over time, but this trend was not necessarily attributable to worsening working conditions. Rather, privatization of the education system and the shift from a nationwide collective agreement to individual salary setting in the mid-1990s may have been the causes (Thelin, 2020).

Ageing is one reason for departure in wealthier countries. The 2018 TALIS shows that the average age of lower secondary school principals was 51 in the 47 participating education systems – and as high as 55 in Austria, 56 in Italy, 58 in Japan and 59 in the Republic of Korea (OECD, 2020). In 2019, 70% of 10,000 school principals in Australia were expected to retire within 5 years (Henebery, 2019). In contrast, the average principal was 43 years old in Saudi Arabia and Türkiye and 46 years old in Brazil and Romania (OECD, 2020).

> The 2018 TALIS shows that the average age of lower secondary school principals was 51 years

Work stress is also associated with problematic interactions with parents (Tikkanen et al., 2017). Principals have been facing more and more levels of abuse and threatening behaviour. Results from the Australia Principal Occupational Health, Safety and Wellbeing surveys indicated a high prevalence of offensive behaviour towards school principals (Arnold et al., 2021). In 2023, 48% of principals reported being physically attacked (Dicke and Marsh, 2023; Henebery, 2024).

Other characteristics that have helped predict principal turnover are lack of autonomy, low trust, low job satisfaction, the changing nature of the job (Snodgrass Rangel, 2018), poor working conditions (Mitani, 2018; Sibuda et al., 2020), and loneliness and isolation (Hauseman and Hauseman, 2023). In the Islamic Republic of Iran, school principals' psychological well-being significantly predicts burnout at work (Malekitabar et al., 2016). In Peru, the Good Manager Performance Framework acknowledges that principals feel stress and uncertainty when their job responsibilities are undefined (Peru Ministry of Education, 2014).

> Government school principals have permanent contracts in 37% of countries

Solutions to prevent turnover include training to help principals recognize symptoms of burnout, redistribute or reduce workload, improve support networks, and ensure access to mental health services (DeMatthews et al., 2021). The Education Bureau in Hong Kong, China offers training on stress, emotional management, and physical and mental healthcare. The induction course for new principals guides trainees on using various strategies to alleviate work pressure, such as through streamlining unnecessary administrative procedures or recruiting school executive officers to reduce the principals' administrative workload (Yeung and Hong Kong Government, 2019). In England, United Kingdom, a workload reduction toolkit helps identify and address workload issues and evaluate workload measures (Department for Education, 2024).

In the Australian state of Victoria, an audit of the Principal Health and Wellbeing Strategy found that its numerous strategies and initiatives had not been effective (Victorian Auditor-General's Office, 2023) and did not change principals' working hours. Workload appeared as the most significant cause of poor principal health and well-being as Victorian principals reported working an average of 55 hours per week (Greaves, 2023). In South Australia, the Department for Education implemented psychological wellness checks for those at 'high risk' and enhanced post-incident support, specialist psychology consultations for school leaders, and the implementation of a staff well-being toolkit (Henebery, 2019). In 2020, the Australian Institute for Teaching and School Leadership prepared the National Strategy to Address the Abuse of Teachers, School Leaders and Other School Staff (AITSL, 2020).

INCENTIVES CAN MAKE LEADERSHIP JOBS MORE ATTRACTIVE

Governments deploy a range of mechanisms to ensure the job of a principal remains attractive despite its complexities. This section covers three issues: contractual modalities, progression opportunities and appraisal mechanisms. A major element of incentives is pay and allowances, which are covered in the finance chapter of this report (**Chapter 18**).

There is a variety of contractual arrangements for principals

Contract type significantly influences school leader experiences. Analysis of the PEER country profiles shows that in 37% of countries, government school principals have permanent contracts. For instance, in Cyprus, public school leaders are civil servants and trade unions play an active role in negotiations regarding working conditions, remuneration and evaluation (OECD, 2019). While a permanent position may foster a stable learning environment, it requires robust oversight mechanisms and continued professional development to ensure principals' continued motivation. Civil servant status does not ensure permanent employment everywhere. In Bahrain, school principals are civil servants and governed under civil service employment law, but are

employed on a contract basis, with their contracts renewed annually for a maximum of three years. School principals in Samoa are employed under a civil servant agreement through the Public Service Commission, yet are considered contracted employees.

In 10% of the countries, principals are hired with a temporary contract without a limit on the number of renewals, while in 17% of the countries there is a limit on how many times the contract can be renewed. Both modalities are flexible, although the lack of job security associated with such contracts may make them less desirable. Principals on fixed-term contracts have different statutory rights than permanent employees, such as fewer benefits and rights, and lower entitlement to pension and leave (OECD, 2019). In Armenia, Georgia and Ukraine, principals have temporary contracts of five or six years. The possibility of non-renewal can compel principals to focus heavily on short-term goals at the expense of long-term educational strategies. In the other 36% of the countries, principals are hired on a permanent basis or on temporary contracts.

Uncertainty about employment can be a significant source of stress for principals, while a return to teaching may be undesirable. In Bosnia and Herzegovina, a director is allowed to be reappointed for up to two consecutive terms in the same school. In North Macedonia, the Republic of Moldova and Spain, school directors have a four- or five-year term, after which they may return to their previous positions. In Portugal, school principals can only serve two four-year terms in the same position, after which they must move to a different school or return to the classroom (OECD, 2019; 2020). In Poland, while teachers are employed on indefinite contracts, school principal positions are for a fixed term of between one and five school years, as defined by law. In Kyrgyzstan, regulations state that principals are appointed for 5 years, with a maximum tenure of 10 years in the same school.

In China and the Philippines, principals rotate between schools every few years. This system is meant to protect principals from prolonged exposure to high-stress environments and to foster diverse experiences that can enhance a principal's skill set. However, frequent moves can disrupt personal life and community ties, which can adversely affect a principal's job satisfaction and overall well-being.

In the United States, principals on tenure were 68% less likely to leave and those with collective bargaining contracts were 56% less likely to change to non-principal positions than those without these benefits (Yan, 2019).

In Sweden, principals with low job security are more likely to seek support for anxiety, depression and sleep problems (Persson et al., 2024).

Overall, no single contractual approach maximizes effectiveness and minimizes stress. Instead, a balanced approach that combines stability with accountability appears most beneficial. Countries should consider flexible yet stable contract arrangements that provide security to principals while also holding them accountable through periodic reviews focused on short-term achievements and long-term strategic goals. Understanding how contracts impact principals is crucial for policymakers seeking to improve educational leadership in diverse systems. Aligning contract terms with educational goals can improve school leadership and well-being, creating a stronger and more resilient education system (Day et al., 2020).

A few countries offer school principals opportunities for career progression

A few countries provide a separate career structure and salary scales for school principals, recognizing their unique responsibilities. In Bhutan, principals have the opportunity to advance levels from Principal III to Principal I. With each promotion, they receive a higher salary and performance-based incentives, with expectations to perform at a higher level with additional roles. For example, school principals with Principal I ranking may be asked to lead larger schools. In Japan, there are 15 different stages within the school principal career structure, with salary grades based on performance and experience. In Singapore, teachers can enter a separate leadership track that includes a succession of roles, ranging from subject and department heads to principalship (OECD, 2019). Principals rotate schools every five to seven years to gain experience in different contexts and cultures. They can also have the opportunity to work inside the ministry to gain broader policy perspectives. The career path then extends beyond principalship, providing motivated and highly effective candidates with the opportunity to advance to system leadership roles, as cluster superintendents, deputy directors and directors.

Some countries have formal middle leadership roles (**Chapter 4**) with opportunities to advance to school principal positions. In Sierra Leone, teachers can advance through the administrative career path, with incentives and promotions to subject head, deputy head and school head roles. The government has created categories (new, proficient, highly accomplished and distinguished) to help teachers and school leaders advance in their career with better pay.

Other countries lack a separate career path for school principals, treating the role as a continuation of teaching or an extension of teaching duties. Limited promotion in school leadership roles can decrease attraction for candidates and their long-term motivation. In Portugal, the professional status of school principals is not clearly distinguished by a separate career structure or salary scales. The law recognizes that the principal's role is important (Carvalho et al., 2021), but a professional career for principals and adequate preparation and incentives are lacking (Espuny et al., 2020). In Zambia, fixed-term principals face limited development opportunities and bureaucratic constraints, hindering their growth and ability to focus on instructional improvement (Zhong and Muyunda, 2023).

Appraisal systems can enhance school principals' effectiveness

Performance assessment can help identify areas of strength and improvement and inform professional development programmes. Appraisal systems can focus on leadership skills, student achievement and school climate. Important attributes for successful evaluation systems include aligning with leadership standards, measuring effectiveness and accounting for context diversity.

Principals highly value some key components of evaluation systems such as constructive feedback and goal setting (Donaldson et al., 2021). Positive feedback about one's leadership can improve ambition, organizational commitment and performance as a leader (Steffens et al., 2018). In China, school principals understood being subject to a summative assessment as serving two purposes: not only accountability but also improvement of teaching and learning (Cheng et al., 2023).

Analysis of PEER profiles for this report suggests that laws and policies mandate the assessment of school principals in 78% of countries. A positive assessment can lead to career advancement in 25% of the countries and salary adjustments or bonuses in 38% of the countries. In some of the latter countries, comprehensive qualification pathways have been developed, as in Australia, Canada and Singapore. In Australia, the Principal Performance Improvement Tool was developed by principals, the Australian Council for Educational Research and the Western Australia Department of Education. It outlines six domains: leading the moral purpose, building productive relationships, creating enabling conditions, promoting improved teaching, driving data-informed practice and leading strategic change. For each, it identifies four levels of effective practice (low, medium, high and outstanding) with formative and developmental aims (ACER, 2018).

In France, a 2023 decree introduced a specific assessment of primary school principals that takes place three years after entry into the position and then every five years (France Government, 2023). The evaluation of secondary schools' principals has been taking place every year since 2021 (France Government, 2021). In Italy, the system was modified in 2024 to base appraisal on defined and measurable objectives to which remuneration would also be linked (Italy Parliament, 2024). Training programmes for newly hired school principals, including mentoring, are being evaluated (Italy Ministry of Education, 2023).

> Laws and policies mandate the assessment of school principals in 78% of countries

In 39% of the countries, assessment is associated to sanctions and penalties, and in 34% of the countries it has other implications. For example in Timor-Leste, failure to meet the required standards during performance reviews may result in ineligibility for promotion or progression, indirectly affecting career advancement. In the Republic of Moldova, the director's contract may be terminated in case of repeated unsatisfactory rating from external evaluations.

In Latin America, specialized and autonomous institutional frameworks and appraisal standards have been established in Chile and Mexico, while regular school principal performance appraisal processes exist in Argentina, Chile and Colombia (Weinstein et al., 2014). However, evaluation systems may not fully support principals' development. In Argentina, positive results may contribute to promotion (Fraser et al., 2024). In Chile, the appraisal system does not offer clear opportunities for professional growth (Weinstein and Hernandez, 2015). Principals sign a five-year performance-based contract and are responsible for achieving specific results related to enrolment, attendance and achievement. Performance agreements are directly tied to sanctions, including early termination of the contract if the municipality considers the principal's performance unsatisfactory. This may result in intensified control over principals' practice and makes their role significantly more demanding, with reports of significant stress and principals leaving their posts before the end of their appointment period due to the multiple pressures and political conflicts with district authorities (Aravena and Felipe, 2021; Montecinos et al., 2015).

The use of performance-based contracts for school leaders is rising. While such contracts allow for constant evaluation, their uncertainty can cause stress and make leadership roles less appealing (McKay and Wilkinson, 2022; OECD, 2019). In Uganda, the permanence of a principal's position is contingent upon job performance. In Zambia, principals have temporary contracts whose renewal depends on performance assessment. In Solomon Islands, while qualified teachers have permanent appointments, principals' contracts are renewed based on appraisal and performance evaluation.

In the United States, under performance-oriented federal policies, such as Race to the Top (2009–14) and the Elementary and Secondary Education Act, to enhance accountability, principals' activities were tied to student learning improvement (Donaldson et al., 2021). Principal evaluation is mandated, but states vary significantly in the level of guidance they provide on how these evaluations should be conducted (Nielsen and Lavigne, 2020). Between 2009 and 2018, nearly all states revised their principal evaluation policies, with 84% giving school districts power to create their own system to evaluate principals and 61% evaluating principals annually. There were differences in evaluation components, processes and consequences. In 90% of states, districts are required to include a student outcome component, although few specified how much this should count for in the appraisal. In 55% of states, it was recommended and in 27%, it was required to have principal performance surveys from teachers, parents and students. Ratings may lead to remedial action, intensive intervention or dismissal for continued poor performance: in 59% of states, consequences are recommended when principal ratings are low but only 12% entail recommendations when ratings are high (Donaldson et al., 2021).

CONCLUSION

School principals play a role that extends beyond administrative duties to encompass leadership, management and instructional responsibilities. Supporting the role of principals as professionals is therefore essential. Achieving that objective involves transparent selection and recruitment processes, robust training, ongoing professional development opportunities, and attractive working conditions. These elements are crucial for ensuring job satisfaction, maintaining the prestige of the position and making it more appealing to qualified candidates.

Effective principal selection systems must balance rigorous yet attainable standards, valuing formal qualifications and practical experience. Teaching experience remains the key criterion in principal selection, but attempts are being made to introduce broader merit-based approaches to enhance the quality of applicants. Many countries face challenges identifying selection criteria that are objective, clear and inclusive.

Pre-service leadership preparation and ongoing professional development programmes are vital for school principals to adapt to the evolving demands of their roles. But implementation varies due to regional capacities and resources. Areas such as data use, financial management, and promotion of equity and diversity require more emphasis, as reported by principals in many countries.

While concerns have been expressed that an increasing workload, and in a few contexts demands to be more accountable for results, are leading to stress and burnout, job satisfaction measures are still strong. While turnover rates are notoriously difficult to estimate, the little reliable evidence that exists does not seem to verify these wider concerns. Intrinsic motivation to be a principal continues to be strong, although evidence of more pressure, even aggression, from parents is a trend which needs close monitoring. Investment in effective support systems, mentorship and coaching, and clear career pathways can help improve working conditions and retain effective leaders.

The School Principal has a meeting with Project personnel at the school, Girhinda, Sheikhpura, Bihar, India.

Credit: © UNICEF/UN0825759/Das*

CHAPTER

4

Shared school leadership

KEY MESSAGES

Shared leadership drives school improvement.

- As schools' objectives become ever more complex, distributing leadership responsibilities among assistant principals, teachers, support staff, students, parents and the community can make a big difference, fostering innovation, diversity and inclusion.

Assistant principals and teacher leaders link high-level decisions with classroom reality.

- Principals can empower assistant principals by providing clear authority and guidance to gain staff acceptance. Structured mentoring, emotional support, ongoing training in real-world challenges and forums for sharing experiences are potential types of support.
- Teacher leaders have specialized curriculum expertise and when given additional formal leadership roles and responsibilities can manage subjects and help shape strategies that impact student learning and school performance.
- A review of 19 countries showed that middle leaders do influence teacher quality, teacher attitudes and student outcomes. A study of 300 secondary schools in England (United Kingdom) found that those with the most significant advancements in teaching and learning were those that embraced strategies focused on collaboration and creativity in which teachers with leadership roles played a major role.
- According to the 2018 Teaching and Learning International Survey (TALIS), 67% of lower secondary school teachers reported playing an active role in deciding on learning materials, 44% on course content, 37% on assessment and 37% on discipline.
- Professional development for vice-principals and teacher leaders is rare. Only a handful of high-income countries integrate leadership into pre-service teacher training. Only one quarter of lower secondary school teachers in the 2018 TALIS received leadership training.
- Hierarchical school systems can demotivate teacher leaders. Even in high-income countries, teacher leaders do not always receive recognition in the form of salary step upgrades or bonuses.

Engaging students, parents and communities can steer schools towards their goals.

- Students can be leaders too. The involvement of students can foster responsibility for learning. Globally, 57% of countries mandate student councils in their regulations, with high-income countries almost twice as likely as low-income countries to have this requirement.
- Engaging parents and communities can promote culturally responsive schools and improve student outcomes. Globally, 83% of countries mandate parental involvement and 62% require community representation on school management committees. Yet parents and communities face barriers to participation, including a lack of support and clear roles.
- Unbalanced representation of parents by gender, class, ethnicity and ability can affect participation and empowerment. Globally, 16% of countries have regulations to ensure the balanced representation of parents and communities in school governance.

School personnel can lead if given opportunities and support.....79
Students can exercise leadership through formal channels and informally.....87
Engaged parents and community members can steer schools towards their goals.....90
Conclusion.....94

As school objectives become ever more complex, distributing leadership responsibilities among assistant principals, teachers, support staff, students, parents and the community can make a big difference. Under certain conditions, this can foster innovation, diversity and inclusion. Assistant principals can help with daily school operations. Teachers and support staff can exercise leadership when they participate in decision making and in designing approaches to teaching and learning. Student involvement in leadership can be empowering and promote critical thinking and responsibility for learning. Parents and community members can promote culturally responsive practices and strengthen the school's connection with the community.

As part of the 2018 Teaching and Learning International Survey (TALIS), in which 48 education systems participated, 89% of lower secondary schools had a school management team. On average, among schools with a management team, 8 in 10 had an assistant principal, 6 in 10 had teachers (department heads or other teachers), 5 in 10 had school governing board members, 4 in 10 had financial managers, and 3 in 10 had parent or student representatives (**Figure 4.1**). While there is considerable difference between education systems, it is clear that almost all of them, depending on school size and other contextual factors, offer opportunities for participating in school decision making and the exercise of leadership and initiative.

Despite this potential, school leadership often remains hierarchical and limits stakeholders' engagement. Teachers need leadership training and autonomy. Student involvement is more established in high-income countries. Parents and communities face barriers to their participation. This chapter examines how principals share leadership with these actors, highlighting the importance of creating collaborative learning environments and achieving positive outcomes for students.

SCHOOL PERSONNEL CAN LEAD IF GIVEN OPPORTUNITIES AND SUPPORT

Assistant principals play an essential role in schools' success by supporting school operations (Oleszewski et al., 2012). Teachers in leadership positions can promote teaching of high quality (Berg and Zoellick, 2019). Other school staff also take on leadership roles, contributing to decision making and school operations (Ansley et al., 2019). All these roles can be performed in an organized structure or through individual initiatives.

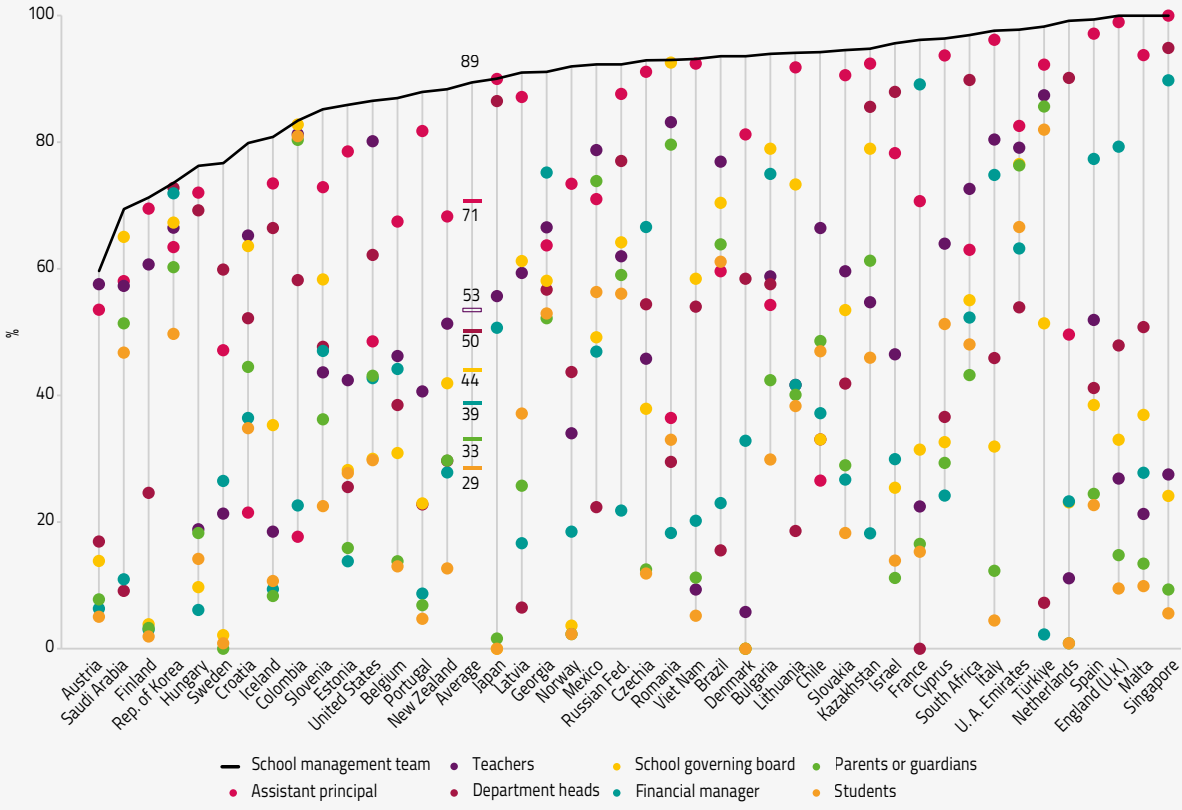
ASSISTANT PRINCIPALS AND TEACHER LEADERS SUPPORT PRINCIPALS

Various leadership roles exist to help the principal shape the school's vision, develop teaching strategies, ensure smooth operations and form a collaborative leadership team. **Deputy, vice, assistant or co-principals**, usually seen as subordinate, mirror the principal's role (Matthews and Crow, 2003). Their roles are shaped largely by principals' discretion (Arar, 2014; Guihen, 2019) and involve managerial and leadership responsibilities, especially when schools are granted autonomy (Wong, 2009).

> "Deputy, vice, assistant or co-principals' roles are shaped largely by principals' discretion"

Principals can first empower assistant principals by providing clear authority and guidance, as lack of support can hinder their ability to establish authority and gain staff acceptance. Structured mentoring, emotional support, ongoing training in real-world challenges and forums for sharing experiences are potential types of support (Cohen and Schechter, 2019). Two case studies from Hong Kong, China, indicate effective preparation of

FIGURE 4.1:
A variety of stakeholders are represented in school management teams
Percentage of principals who report that their school has a school management team and individuals who are represented in it, selected middle- and high-income countries, 2018



GEM StatLink: https://bit.ly/GEM2024_fig4_1
Source: OECD (2020).

assistant principals for future leadership. Principals who mentored their assistants by delegating key responsibilities, such as strategy development, resource management and curriculum design; guiding them through management tasks; involving them in long-term planning; evaluating school priorities; and engaging them in decision making significantly improved their leadership readiness and satisfaction. Clear job specifications, regular discussions to develop a shared vision and rotating administrative duties also ultimately strengthened their leadership potential (Kwan, 2009; Wong, 2009).

In Indonesia, a case study of an Islamic lower secondary school emphasized how the principal empowered the assistant and other senior managers by involving them in analysing problems, developing solutions and implementing decisions. Such involvement makes managers feel appreciated and strengthens their decision-making skills, fostering a sense of shared responsibility and boosting creativity (Devi Yana and Asmendri, 2021). In Singapore, when principals foster collaboration and give clear guidance, assistant principals are given some autonomy to exercise leadership under the principal's oversight and make decisions within the set limits (Ho et al., 2023).

The 2018 TALIS found an uneven representation of vice, deputy or assistant principals on school management teams. Their lowest representation is in Colombia (21%), Croatia (27%) and Chile (28%), while 100% of lower secondary schools in Japan and Singapore had such a position (OECD, 2020).

Assistant principals' roles are not thoroughly studied (Armstrong, 2009; Beycioglu et al., 2012). Their responsibilities and involvement levels vary widely,

influenced by factors such as school size, educational priorities, leadership styles, district policies and personal expertise (Pont et al., 2008). In Singapore, assistant principals find their roles ambiguous due to unclear expectations from principals, undermining their leadership and causing stress as they navigate undefined boundaries and varying autonomy (Ho et al., 2023).

Assistant principals face similar leadership challenges as principals but also encounter unique ones, such as conflicting tasks (Marshall and Hooley, 2006). In Malaysia, deputy heads reported tension between aligning with a principal's vision and asserting their own leadership (Tahir et al., 2019). In the United Kingdom, a review by the National College for School Leadership found that deputy and assistant heads often experience tension due to overlapping responsibilities with principals (Harris et al., 2003).

Assistant principals also face the challenge of time allocation. In Hong Kong, China, 300 vice-principals reported significant discrepancies between the time they allocated and their perceived importance in different areas. They dedicated more time to staff management than they believed necessary, while feeling that leader and teacher growth and development deserved more attention (Lee et al., 2009). In Israel, they manage administrative duties and teaching responsibilities without reducing their teaching hours (OECD, 2022). In New Zealand, assistant principals also experience multiple demands, often called upon to respond to emerging needs than implement planned activities (Shore and Walshaw, 2018).

Assistant principals, due to their evolving roles and typically less leadership experience than principals, require additional support to enhance their leadership capabilities (Pont et al., 2008). A study in the Canadian province of Ontario involving almost 900 vice-principals revealed that over two thirds had less than five years of experience. They highlighted emotional intelligence, communication and mental health resilience skills as critical areas for their development. Among them, 62% took part in professional learning communities to support their growth (Pollock et al., 2017).

Teachers often take on various formal roles in **middle leadership** related to teaching and learning, such as subject coordinators, curriculum leaders, department heads and technology focal points. They may lead professional learning teams and serve as welfare coordinators or pastoral leads (De Nobile, 2018; Gurr, 2023). Middle leaders can manage student behaviour by enforcing school policies, collaborating with teachers and conducting training sessions to promote a supportive learning environment for all (Robbins, 2021). In the Canadian province of Alberta, some schools have formal positions, such as curriculum leaders and grade team leaders (Webber, 2023a; Webber et al., 2024b). In Singapore, they include heads of departments who manage curricula and work closely with principals (Heng et al., 2017). South Africa has department heads, grade leaders and school management team members (Webber et al., 2024a).

“Teachers often take on various formal roles in middle leadership related to teaching and learning”

These teachers have specialized curriculum expertise and are given additional formal leadership roles and responsibilities to bridge the gap between senior leaders and teachers. They manage subjects, helping shape strategies that impact student learning and school performance (Gurr, 2023; Lipscombe et al., 2023). A review of over 250 academic sources from 19 countries showed that middle leaders do influence teacher quality, teacher attitudes and student outcomes (De Nobile, 2018). Another review of 35 articles from 14 countries highlighted their role in influencing teaching and school improvement mainly through communication, collaboration and professional development, although evidence of direct influence on teacher practice or student learning is limited and mostly based on perceptions (Lipscombe et al., 2023). A meta-analysis of 21 studies found that all 7 dimensions of teacher leadership, as defined in 2011 by the Teacher Leadership Exploratory Consortium, a group of education organizations, state education agencies, education leaders and higher education institutions, were positively related to student achievement, with the strongest links observed in facilitating curriculum improvements, instruction and assessment (Shen et al., 2020).

Middle leaders typically play five roles: fostering internal collaboration, connecting with external partners, supporting professional growth, guiding teaching and learning decisions, and participating in school management (Chen, 2022).

Middle leaders **foster internal collaboration**, balancing daily teaching with strategic oversight. They create a collaborative environment, especially when changes are being introduced. They leverage their longer tenure and low hierarchical position (Gurr, 2023) to gradually build trust between teachers and senior management or between subjects (Edwards-Groves et al., 2016). With trust established, they act as a bridge between

administrators and educators, addressing real issues teachers face. In Delhi, India, teachers were initially hesitant about supervision but eventually trusted mentors and coordinators, recognizing the support role of middle leaders. By facilitating open communication, mentors acted as a bridge between educators and administrators, addressing the real challenges teachers faced (Education Development Trust and IIEP, 2023). In England, United Kingdom, a study of more than 300 secondary schools found that teachers in leadership roles used inspection reports to engage teachers. Schools with the most significant advancements in teaching and learning were those that embraced strategies focused on collaboration and creativity in which teachers with leadership roles played a major role (Gu et al., 2018). Teachers in leadership roles must collaborate with teachers, rather than simply act as intermediaries or supervisors, to impact teaching and learning (Lipscombe et al., 2023).

Teachers in leadership roles **collaborate with partners outside the school**. In the Australian state of New South Wales, middle leaders communicate with external experts to bring fresh ideas to schools (Day and Grice, 2019). In Hong Kong, China, they engage with the government to revise examination regulations and collaborate with inspectors to promote effective resource use for inclusive education (Bryant, 2019). In Sweden, following a 2013 reform, around 15,000 educators assumed middle leadership roles, leading school development projects and, in some cases, translating improvement strategies from research into practice through collaboration with researchers to meet school needs (Hirsh and Bergmo-Prvulovic, 2019; Nehez et al., 2022). Teachers in leadership roles also connect schools with families and students. In New Zealand, they support students whose home language is not English by building relationships with their families and organizing events that boost students' self-esteem and pride in their language and culture (Aljazmaty, 2022). In Singapore, middle leaders build networks and leverage resources to bring expertise into schools and involve parents and volunteers in school programmes (Koh, 2018).

Teachers in leadership roles are in a good position to understand other teachers' needs and **support professional development**. In the Australian state of Queensland, where the government has funded mentorship training since 2014, over 3,000 teachers, some with formal leadership roles, completed a two-day programme during which they mentored beginning teachers to help create personalized mentoring programmes for their mentees (Willis et al., 2019). In Delhi, India, mentor teachers were introduced in 2012, while each school began selecting teachers in 2017 to serve as development coordinators to be models for other teachers, increasing feedback, motivation and participation. While they do not evaluate teachers, these coordinators have contributed to an overall improvement in student exam scores through enhanced academic support, focusing on experimentation and fostering collegial relationships (Education Development Trust and IIEP, 2023). Teachers in leadership roles in other countries frequently contribute to teacher appraisal. The 2018 TALIS found that 60% of teachers had been formally appraised at least once a year by members of the school management team other than the principal, 40% by a mentor and 37% by other teachers (OECD, 2020) (**Figure 4.2**).

> "Teachers in leadership roles are in a good position to understand other teachers' needs and support professional development"

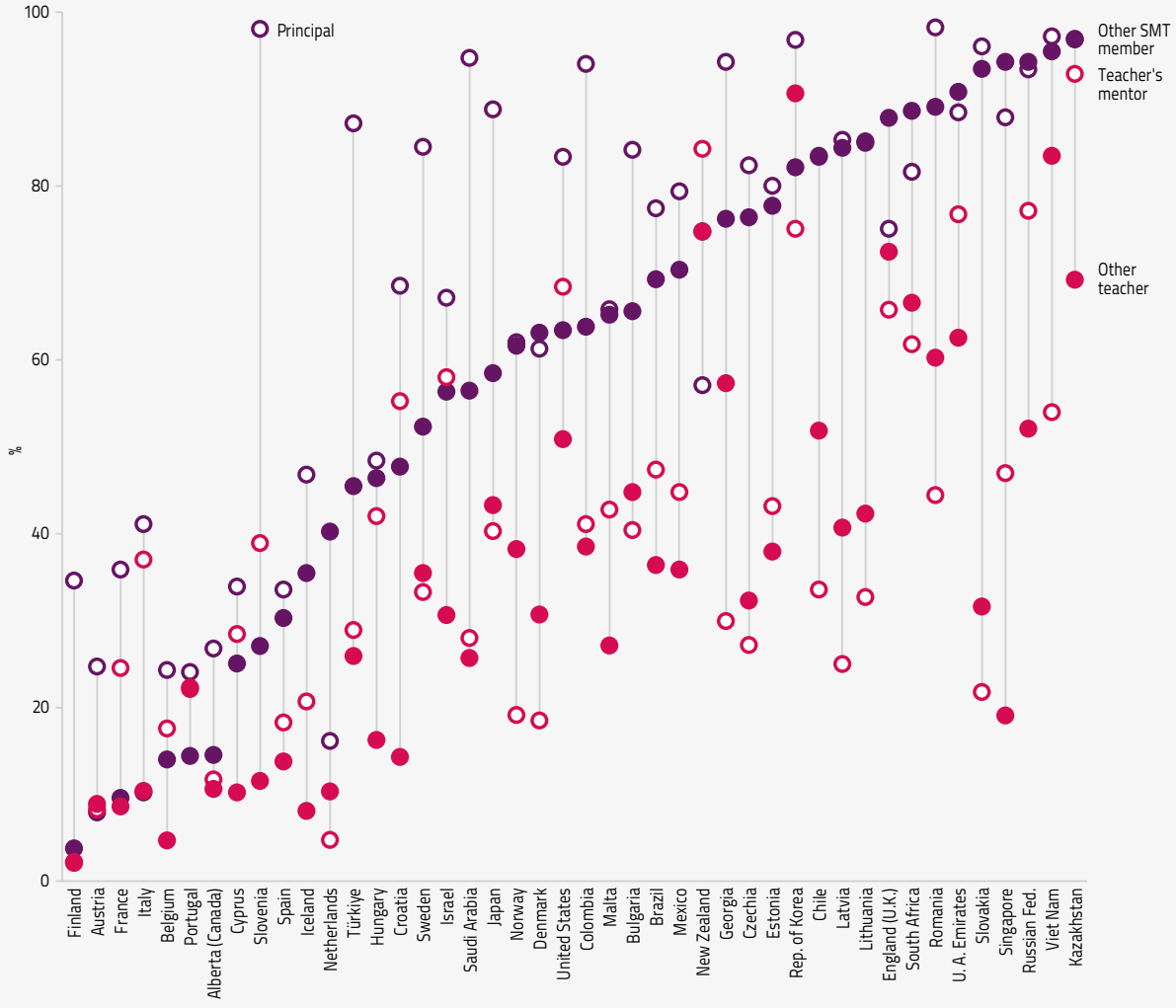
Middle leaders can help **guide teaching and learning decisions** through observation and data. In the Canadian province of Ontario, a three-year project aimed to develop middle leaders' and teachers' data literacy to support evidence-based practices in mathematics instruction. By analysing student data, the project facilitated targeted interventions and improvements in teaching practices (LaPointe-McEwan et al., 2017). In Singapore, a study of more than 100 middle leaders showed that they were dedicated to assessments of good quality, aligned with the national syllabus and focused on improving student test performance. Their decisions were informed by data. For example, they adjusted the teaching of algebra based on assessment results, giving students more time for comprehension (Tay et al., 2020). In England, United Kingdom, teachers in leadership roles who analysed data and external research significantly improved teacher practices and student learning (Stoll et al., 2017). In five countries, cohesive departmental efforts led by middle leaders were shown to improve student outcomes, more than relying solely on principal leadership (Leithwood, 2016).

> "Teachers in leadership positions connect high-level decisions with the reality of the classroom to enhance management"

FIGURE 4.2:

Most teachers in middle leadership positions are involved in teacher appraisal

Percentage of lower secondary teachers whose school principals reported that their teachers were formally appraised, by actor, selected middle- and high-income countries, 2018



Note: SMT is the school management team.
GEM StatLink: https://bit.ly/GEM2024_fig4_2
Source: OECD (2020).

Last but not least, teachers in leadership positions, as **members of school management teams**, connect high-level decisions with the reality of the classroom to enhance management. They promote teamwork, translate big goals into practical plans, and ensure the school's smooth operation and improvement. They also ensure that front-line educators' voices are not just heard but contribute to decisions related to curriculum development, teaching methods and student needs. Among education systems analysed in the 2018 TALIS, in Israel, Japan, Kazakhstan, the Netherlands, Singapore and South Africa, at least 85% of school management teams engaged a department head. At the opposite end, in Brazil, Latvia, Saudi Arabia and Türkiye, fewer than 20% of school management teams engaged a department head.

Teachers in leadership roles need support to reach their full potential

Teachers need development programmes to succeed in their leadership roles (Smylie and Eckert, 2018; Webber and Nickel, 2022), notably teaching and learning

management skills, including in areas such as crisis and resource management (Lipscombe et al., 2023). In China, teachers in leadership roles have sought support to bridge formal leadership and teacher roles and improve their interpersonal communication skills (Lee and Ip, 2023). A variety of training options are available in high-income countries. In the Australian state of Queensland, the Pivotal People initiative focused on professional development for teachers in leadership roles, facilitating connections with leaders from other sectors and institutions (Benson, 2020; Grootenboer et al., 2021). Teachers and professional staff who participated in such leadership programmes in Australia have reported considerable improvement in the perception of their leadership roles and in their confidence to communicate and build working relationships (Brewer et al., 2019).

> Just a handful of high-income countries integrate leadership into pre-service teacher training

Just a handful of high-income countries integrate leadership into pre-service teacher training, using simulations and teamwork (Acquaro and Gurr, 2022; Webber, 2023b). This has led the International Study of Teacher Leadership to advocate for integrating leadership dimensions into initial training for teachers to understand the connection between teacher leadership, school culture and teaching (Webber, 2023b). However, challenges persist in defining and integrating leadership into curricula, especially given concerns about overloaded programmes (King et al., 2019). In Spain, teacher training tends to prioritize technical skills over leadership development and often overlooks mentor teachers' leadership roles. Since 2018, the University of Granada has led a project to train future teachers on leadership, increasing their capacities, which has helped align their education with school leadership concepts (Moral-Santaella and Sánchez-Lamolda, 2023).

Teacher leadership training usually occurs during in-service education, although still only a minority of teachers receive explicit training in leadership, even in high-income countries. In the 2018 TALIS, 26% of lower secondary school teachers received professional development in school management and administration in the 48 participating education systems (OECD, 2019). In the Canadian province of Ontario, the Teacher Learning and Leadership Program, established in 2007, has shown how teacher leadership can positively impact education practice (Harris and Jones, 2019). Extensive research consistently demonstrates its effectiveness in promoting self-directed professional learning, enhancing leadership skills and improving teaching methods. Despite its success, the programme faced funding cuts in 2018, yet its impact remains influential in the educational community (Campbell et al., 2018; Lieberman et al., 2016).

In England, United Kingdom, the HertsCam Network, a non-profit organization led by teachers, offers a Master of Education programme in Leading Teaching and Learning, in partnership with the University of Hertfordshire. The aim of the programme is to empower teachers to lead school development projects while earning a recognized postgraduate degree. Its Teacher Led Development Work Programme allows teachers to lead school projects, culminating in a portfolio submission (Frost, 2018). The HertsCam Network also has international activities. In Palestine, it helped develop a teacher leadership model to address hierarchical leadership issues. The approach aimed at transforming professional learning, shifting educators from traditional to problem-based teaching, to make teachers agents of change and develop their critical thinking skills (Ramahi, 2019).

Teachers in leadership roles also need to be supported and empowered by their principals. They benefit from a supportive organizational culture and opportunities to lead professional initiatives (Irvine and Brundrett, 2019). A study of 265 middle leaders in kindergartens in China during the COVID-19 pandemic revealed strong connections between school trust, emotional well-being, pride and job performance (Yu and Chen, 2023). Principals are the initial supporters of teachers in their formal leadership capacities. While some principals empower teachers in these roles, others may restrict their growth by micromanaging, offering limited support or failing to recognize their contributions (De Nobile, 2018; Webber et al., 2024). Another study in China rated leaders in terms of inter-school collaboration. It found that highly rated leaders trusted teachers by giving them control over projects and involving them in decisions, which teachers appreciated. Leaders who received a low rating limited teachers' freedom and required school approval for initiatives, indicating a preference for control and adherence to procedures (Fang et al., 2024).

Principals should clearly define the roles and responsibilities of teachers in leadership positions. In Sweden, the introduction of the 'first teacher' position in 2013 lacked clear criteria or standards, posing challenges for those newly appointed to this position (Alvehus et al., 2019). Initially met with scepticism from colleagues challenging their authority, many could only succeed in establishing

themselves as leaders through their persistence, skilful navigation and the further formalization of the roles (Hjalmarsson and Hultman, 2016).

> Principals should clearly define the roles and responsibilities of teachers in leadership positions

Principals should also help their middle leaders prioritize leadership over management by distributing the workload efficiently (Gurr, 2023; Teacher Leadership Exploratory Consortium, 2011). A study in Iceland and Ireland pointed out that leadership roles, primarily determined by principals, may disempower teacher leaders, who might feel more like managers with insufficient autonomy or involvement in decision-making processes (Lárusdóttir and O'Connor, 2017). In Malaysia, a study of heads of English, mathematics and science departments faced limitations in their mentoring practices due to heavy administrative workloads (Javadi et al., 2017). In Mexico, teachers with additional leadership responsibilities often found themselves burdened with tasks but lacked decision-making authority (Cisneros-Cohernour, 2021).

Teachers in leadership positions require supervision, evaluation, and social and emotional support from school principals. In Israel, teacher leaders initially faced uncertainty due to a lack of external guidelines and supervision when asked to implement the Oz Le'Temura reform, which introduced additional tutorial time for struggling students in 2011 (Shaked and Schechter, 2019). It was found that subject leaders in successful schools had been more frequently directed by principals through weekly meetings, ongoing observations and student outcome tracking (Farchi and Tubin, 2018). In Sweden, a study of mid-level schoolteachers showed that they initially valued clear roles, supervisor check-ins and peer group involvement. Over time, they sought more learning opportunities, autonomy and continued peer support. Eventually, some desired more challenging tasks to apply their new knowledge and the time to do it (Schad and Johnsson, 2019).

Even in high-income countries, not all teachers in leadership roles receive financial incentives for extra duties. In Greece and Portugal, teachers performing formal school management tasks do not get any additional compensation. In Bulgaria and Italy, they receive incidental or occasional additional payments. In most countries, they receive some recognition, i.e. in the form of a percentage of their statutory base salary (e.g. Chile), a step increment within the salary range (e.g. Lithuania) or some other regular additional payment (e.g. Japan) (OECD, 2023a).

Other measures can also encourage teacher leadership roles. In Australia, teachers can apply for certification as highly accomplished or senior teachers, a recognition which offers salaries comparable to those of administrative officers (Kahler-Viene et al., 2021). In Uzbekistan, mentor teachers' leadership roles are recognized through Xalq ta'limi fidoyisi (devotee of public education) badges. Awarded annually, these honour educators who have demonstrated outstanding commitment to public education and made significant contributions to innovative teaching (Uzbekistan Ministry of Preschool and School Education, 2018).

TEACHERS CAN LEAD EVEN WHEN NOT IN FORMAL LEADERSHIP POSITIONS

Teachers can lead effectively without formal roles by mentoring peers, sharing expertise and driving classroom innovations. By setting high standards and actively engaging in school initiatives, they inspire and motivate colleagues. Their informal leadership shapes school culture and drives improvements, proving that leadership is defined by impact and example, not just titles (Harris and Jones, 2019; Webber, 2023b).

Principals can support teachers by involving them in decision making, providing necessary training and resources, and fostering a collaborative environment. In South Africa, a survey of primary school teachers in Limpopo province showed that they were engaged in responsibility allocation and school discussions, with 71% of those surveyed reporting they had a say in decisions and viewed their principals as genuinely inclusive (Khumalo, 2020). Interpersonal skills are essential when involving teachers in decision making. In Istanbul, Türkiye, an authoritarian principal style with unilateral decision making lowered teacher trust and involvement (Cansoy et al., 2020). In the US state of California, teachers in secondary schools in poor areas reported frustration, as their role in instructional leadership teams was typically limited to receiving information about decisions already made. However, when meeting routines included collaborative agenda-setting, role rotation and open discussions, teachers could actively participate in decisions, share leadership and feel greater commitment to implementing decisions (Stosich, 2023).

Analysis of the PEER country profiles for this report found national regulations mandating teacher participation in school management boards in 81% of countries. In Denmark, section 42 of the 2021 Public Schools Act

outlines the composition of a school board, which must include at least two teaching staff representatives among other members (Denmark Government, 2021). Similarly, in Viet Nam, the 2019 Education Law requires school board members to include representatives of school professionals (Viet Nam Government, 2019). There is no differentiation in mandating teacher participation by country income group, although participation was mandated in fewer countries in Northern Africa and Western Asia (65%) and in Oceania (42%).

> 81% of countries mandate teacher participation in school management boards

Whether as part of school management teams or by delegated authority, teachers have significant responsibilities in some countries. For example, in the 48 education systems participating in the 2018 TALIS, most teachers (67%) had an active role in selecting learning materials. More than 95% of teachers in the Flemish Community of Belgium and in Iceland were free to select teaching materials, while notable at the other end of the spectrum were Japan (20%), Saudi Arabia (4%) and Viet Nam (14%). The second most significant teacher decision-making responsibility with an important influence on the quality of education was determining course content (44%). More than one in five teachers in Denmark, Estonia, Italy and the Netherlands had this decision-making power, compared to fewer than one in five in Shanghai (China), Japan, France, Georgia, Mexico, Portugal, Saudi Arabia, South Africa, Türkiye and Viet Nam. About one in three teachers had decision-making authority on course offerings (33%), student assessment (37%) and student discipline (37%). Principals noted that teachers assumed responsibility on curriculum and teaching in a large share of private schools but not in public schools in countries including Cyprus, Malta and the United Arab Emirates (OECD, 2020).

Through such authority but mainly through spontaneous initiatives and leading by example, teachers can exercise leadership by influencing student engagement and success (Beteille and Evans, 2021; Leithwood and Jantzi, 1998). Researchers, such as the Teacher Leader Model Standards in the United States (Teacher Leadership Exploratory Consortium, 2011) and governments have proposed leadership qualities, roles and standards for classroom teachers. In Wales, United Kingdom, the leadership aspect of the Professional Standards for Teaching and Leadership emphasizes teachers' role in advancing pedagogy in schools and beyond. Self-responsibility; corporate leadership; and guiding colleagues, projects and programmes are seen as part of that role (Wales Government, 2019). Indeed, teachers tend to lead by example – through collaboration and sharing of expertise (Killion et al., 2016).

Teacher communities facilitate collaboration, knowledge exchange and collective problem-solving. These are often self-initiated, such as professional learning communities in Morocco (Idelcadi et al., 2023). A study of more than 500 Moroccan secondary school English teachers found that three quarters of them engaged in professional learning communities, taking on extra leadership roles such as conducting research, facilitating knowledge-sharing and building a sense of community (Elmeski et al., 2023). In Hong Kong, China, a study of more than 600 teachers showed that professional learning communities encourage informal leadership among teachers, to the extent that their influence can surpass that even of instructional and middle leaders (Lee and Ip, 2023). In Masvingo, Zimbabwe, cluster resource teachers play a crucial role in fostering a culture of collaboration among schools and educators by supporting peer networks to promote best practices and share resources (Makaye, 2018).

SCHOOL SUPPORT STAFF CAN ALSO PLAY LEADERSHIP ROLES

Support staff can exercise leadership by identifying and addressing learning obstacles and then helping shape learning strategies, notably in inclusive education initiatives. Support staff are a resource primarily available in well-resourced contexts, which is why research evidence on their role comes from just a few countries.

Principals can involve support personnel in decision making, include them in administrative and technical matters, and foster a collaborative environment to help them realize their potential. A study in the US state of New Jersey showed how principals relied on collective inputs from school psychologists, instructional specialists and district administrators to make informed decisions on inclusive education (Sun and Xin, 2019).

Support staff also play a crucial role in guiding, counselling and offering emotional support to help students handle challenges, manage stress and build healthy relationships (Laitsch and McCall, 2022). School psychologists are critical leaders in socioemotional well-being and mental health programmes. In the United States, the Multi-Tiered System of Support model, used throughout the country, has expanded school psychologists' roles. They now contribute to leadership teams, focusing on school-wide

prevention and problem-solving measures, analysing data on disadvantaged student groups (Loftus-Rattan et al., 2021). Psychologists' training in consultations, interventions, assessment and data analysis makes them well-suited for leadership (National Association of School Psychologists, 2020). School social workers also exercise leadership by advocating for equity, planning support and connecting with community organizations (Rodriguez et al., 2020). A study of more than 100 US school social workers highlighted their involvement in advancing equity for African American urban youth through their varying levels of attendance at school board meetings (Ball and Skrzypek, 2020).

School nurses lead on student health by advocating for students' well-being; providing comprehensive healthcare services; promoting health education; and collaborating with students, families and healthcare professionals. Globally, they have emerged as key leaders in school-based vaccination campaigns. In the United Kingdom, school nurses focus on policy and programme development, mainly through their employment by the health service rather than schools. In the United States, school nurses leverage their knowledge of students and parents to educate families about the importance of vaccination, particularly in hard-to-reach communities (Perman et al., 2017). A review of 65 studies using the framework of the National Association of School Nurses found that school nurse actions resulted in healthier eating habits, improved asthma management, increased resilience, reduced bullying, decreased anxiety and improved concentration (Best et al., 2017).

STUDENTS CAN EXERCISE LEADERSHIP THROUGH FORMAL CHANNELS AND INFORMALLY

Students exercise leadership formally, through participation in school management committees and student councils, and informally. In both cases, they can influence classroom approaches; promote positive relationships with teachers; enhance self-confidence; improve peer relationships; and strengthen a range of skills such as communication, active listening, responsible citizenship and leadership itself (Mayes et al., 2019).

> School leaders can involve students in decision making by creating platforms such as advisory committees or focus groups

School leaders can involve students in decision making by creating platforms such as advisory committees or focus groups by creating platforms such as advisory committees or focus groups. This approach values student input on school policies, empowers them to shape their educational environment, and enhances their leadership skills and sense of ownership in the school community (Lyons and Brasof, 2020). In Gilgit Baltistan province and Chitral district, as part of the Aga Khan Education Service Pakistan programme, school principals organize weekly assemblies to recognize and reward student contributions, creating a culture of appreciation to motivate engagement. Principals also establish committees on events and environmental activities, empowering elected students to participate in decision making and organize initiatives that resonate with them. Roles such as class monitors and chief prefects enable students to represent their peers, gather feedback and assess teachers through anonymous surveys (Afzal Tajik and Wali, 2020).

In the 48 education systems that participated in the 2018 TALIS, 81% of school principals reported that the school gave students with opportunities to actively participate in school decisions, from a low of 31% in Italy and 33% in Japan to a high of 95% and above in Colombia, Georgia, Latvia, Lithuania, the Republic of Korea and England (United Kingdom) (OECD, 2020). However, these responses were unrelated to the percentage of lower secondary schools in which students were actually represented in **school management teams**, which ranged from practically zero in Japan, the Netherlands and Sweden to over 80% in Colombia and Türkiye. In Colombia, student representation on a public school's Board of Directors is mandated by the 1994 General Education Law. Students choose their representatives from grades 9 to 11, as well as an advocate from the highest grade available in the school to uphold their rights and responsibilities, making necessary requests to the school principal (Colombia Government, 1994). In the Netherlands, participation councils were mandated by the 2024 Participation in Schools Act. Councils meet with authorities to discuss educational goals and staff appointments. They aim to propose initiatives, ensure transparency, prevent discrimination, submit activity reports, and exercise consent and advisory powers in school governance, with student representatives among their elected members (Netherlands Government, 2024).

Analysis of PEER country profiles for this report shows that, globally, 57% of countries have regulations for including students on school boards. While there are no substantive differences by country income group, differences are clearer by region. Europe and Northern America (70%) and Latin America and the Caribbean (70%) lead in student integration into school management committees, while Oceania (31%) and Northern Africa and Western Asia (35%) lag behind. Participation in school management teams, committees or boards empowers students to cultivate leadership, responsibility and confidence. It also fosters diversity of ideas and encourages teamwork, ultimately enriching the educational environment (Reaching Higher NH, 2022).

> 57% of countries have regulations for including students on school boards

School student governments, such as councils, unions and associations, vary in structure and responsibilities but all provide avenues for students to participate in their school's decision making. Research indicates that these councils can enhance school climate, boost academic performance, and foster crucial leadership and citizenship skills in students (Griebler and Nowak, 2012; Łukasiewicz-Wieleba and Romaniuk, 2020). Analysis of the PEER country profiles shows that 53% of countries mandate student councils in their regulations, with high-income countries almost twice as likely (59%) as low-income countries (31%) to have this requirement.

In Japan, student council roles include fostering teamwork across different age groups and addressing various aspects to enhance school life. Students actively organize, plan and share responsibilities, engaging in discussions to resolve school-related issues. They also coordinate school events and participate in community volunteering (Japan Ministry of Education, Culture, Sports, Science and Technology, 2018). In North Macedonia, every student has the right to join student organizations at the class and school levels. Primary schools organize students into class communities and a student parliament, led by the presidents of these communities. The student parliament actively represents students, advocates for their rights, fosters activism and supports peers with special needs. Students in grades 7 to 9 elect a student ombudsman via a secret ballot to safeguard and advance their rights within the school (North Macedonia Government, 2007). In Rwanda, the 2021 Law on the Organization of Education accords additional duties to learners' councils, such as fighting drug use, immoral behaviour and violence. They are expected to play a role in combating genocide ideology, sectarianism, discrimination and favouritism. They are also tasked with promoting Rwandan values, sports, culture and leisure activities (Rwanda Government, 2021).

Some countries issue guidelines and support materials to assist student councils. In Ireland, the Department of Education and Science gives sample agendas, activity calendars, constitutions, meeting guides and assistance with fundraising (Ireland Department of Education and Science, 2002). Australia's Northern Territory offers templates on codes of conduct and meeting protocols to school councils (Northern Territory Government, 2017). In Yemen, prior to the civil war, the Academy for Educational Development had collaborated with the Ministry of Education on a Student Councils Project, producing a comprehensive guide covering election procedures, council activities, planning, fundraising, evaluation, leadership skills and transition (Academy for Educational Development and Middle East Partnership Initiative, 2010).

Many education systems try to include children in governance processes early on. In France, 6-year-olds learn to articulate their emotions through school councils. Teachers help bridge emotions with reason by promoting understanding through classroom consensus (Duval-Valachs, 2022). 9-year-old students participate in biweekly student councils aimed at developing citizenship skills, teaching roles and promoting self-management. Initially led by the teacher, responsibilities are gradually delegated to students. Some students express frustration when teachers veto decisions while others appreciate the values imparted by the teacher through their experience on council (Mieyaa and Huet-Gueye, 2021). In Namibia, the 2020 Basic Education Act mandates learner participation in school governance from early childhood, taking age and capability into account. Primary schools are expected to elect prefects (Namibia Government, 2020).

Unbalanced representation by gender, class, ethnicity and ability can affect participation and leadership opportunities (Bonnesen, 2019; Mayes et al., 2019). In the United States, Black students are under-represented in secondary school councils (Goddard, 2023). Students with disabilities face significant hurdles in accessing leadership opportunities such as complex membership processes, social isolation, negative perceptions, and a lack of guidance in planning and participation (Klisz, 2014).

Although a student council can be elected, it may have limited practical involvement in decision making, which ends up undermining student authority. A study of four school districts in Israel found that less than half of students believed that council members set the agenda,

BOX 4.1:

The Bamboo School in Thailand involves students in all its operations

In Thailand, the Mechai Pattana School, established in 2008 as a private boarding school, involves its 150 students in all aspects of its functioning through committees: procuring food, enforcing discipline, recruiting staff and managing finances. For instance, the purchasing committee regularly visits the market with supervision to buy food for all. Another group of students verifies these purchases, ensuring practical learning experiences. The recruitment committee involves six students and two teachers. They interview potential students and staff, and even assess candidate teachers. The business committee offers loans to students for entrepreneurial ventures such as selling eggs and limes or assembling solar panel kits to sell to local communities.

Students dedicate two hours a week to community service (Assadourian, 2017; BBC, 2024). Students from underprivileged backgrounds, including some stateless students, have their school fees covered by planting trees and completing 400 community service hours with their families. This initiative aims to cultivate leadership and philanthropic skills, fostering future change-makers (BBC, 2024).

In the classroom, teachers follow the national curriculum and prepare students for examinations. However, students choose their projects with guidance from teachers, promoting a learning environment that enhances their capabilities through diverse teaching methods (Rawat et al., 2015). Adults serve as models and facilitators at the school, where decisions, while influenced by teachers, are ultimately approved by student councils and the school administration, fostering a collaborative approach (BBC, 2024). This student-led management model aims to cultivate leadership and practical skills, preparing students for diverse careers and instilling a strong sense of social responsibility (Assadourian, 2017; BBC, 2024; Panyayong et al., 2022).

with many citing the influence of school administration and teachers (Halfon, 2022). In Kenya, recent reforms introduced democratically elected student councils and removed teacher-appointed prefects (Muthui et al., 2017) but student councils had limited involvement in decision making (Karani, 2019). Research in secondary schools found that some teachers supported former prefects over elected council leaders, undermining the latter's authority (Simiyu, 2023). In Poland, a study of 16 secondary school councils focused on the role of council supervisors and found that a considerable number of those imposed direction on students, stifling enthusiasm for active participation and decision making in school activities (Łukasiewicz-Wieleba and Romaniuk, 2020). Even in well-funded contexts that provide a supportive framework for student participation, as in Norway, there are concerns that student participation is limited to student council operations and does not actually contribute to school improvement (Jones and Bubb, 2021). More extensive forms of governance remain rare, small-scale and experimental (**Box 4.1**).

Student leadership can occur in **informal** ways. When teachers meet regularly with students to discuss progress, the process can empower them to take ownership of their learning and contribute their insights to influence teaching methods (Binu, 2020). In Australia, personal learning plans involve structured conversations between students and teachers to discuss learning goals, strengths and areas for improvement. Teachers use the feedback to tailor their teaching methods. In the state of Western Australia, the Follow the Dream: Partnerships for Success programme mandates individual learning plans for Aboriginal students, enhancing academic, behavioural and safety outcomes. Regular reviews engage students, address their well-being concerns and ensure their input shapes the process. These plans have had a positive impact on attendance, engagement and academic performance (Respect, Relationships and Reconciliation, 2023). In Baden-Württemberg and Bavaria, Germany, learning development conversations replace progress reports at certain points in the school year, while in Hamburg and Thuringia, they complement classroom learning. A study involving grade 2 students showed that teachers' whole-class formative assessment practices, evaluated during student-teacher conferences, gave valuable feedback on instruction. Teachers need professional development to manage student feedback that supports their teaching (Ertl et al., 2022).

Some governments establish open forums inviting students to express opinions on education. The New South Wales Department of Education in Australia operates Student Voices, a platform that asks students to contribute ideas and feedback on education policy. The Department also stresses the role of educators in listening to and acting on student input in ways that promote meaningful student participation (New South Wales Department of Education, 2023). In India, the CBSE Expression Series of the Central Board of Secondary Education encourages students to express their thoughts on education creatively through essays, drawings and poems. The theme in

2023/24 prompted students to reflect on education's role in nurturing skills. The initiative builds critical thinking and communication skills, engaging students in education discussions and offering insights to policymakers (India Central Board of Secondary Education, 2023). In South Africa, the National Youth Development Agency provides a platform for youth to voice opinions on education and other matters. Student groups collaborate with officials to offer input on policies and reforms, ensuring students' voices influence decision-making processes (NYDA, 2023). While consulting youth and inviting them to express their views is important, meaningful change also requires educators to genuinely engage and understand, challenging hierarchical education systems (Fletcher, 2020).

ENGAGED PARENTS AND COMMUNITY MEMBERS CAN STEER SCHOOLS TOWARDS THEIR GOALS

Parents and community members play diverse leadership roles in schools. In supportive environments, they engage in school governance, through membership in school management committees and parent-teacher associations, offering insights and resources to enhance children's educational outcomes (Avvisati et al., 2010). Clear roles and inclusive norms make their engagement more effective (Edwards, 2019).

School principals can foster parental involvement in decision making by establishing regular communication channels, such as newsletters and meetings to keep families informed and engaged. Analysis of the PEER country profiles for this report shows that 64% of countries have adopted standards requiring school principals to give parents and guardians with information on school and student performance. In Java, Indonesia, primary school principals engage parents by holding annual meetings to communicate school programmes, inviting them to cultural celebrations, encouraging teachers to maintain open communication through WhatsApp groups and greeting them at the school entrance to create a welcoming atmosphere (Yulianti et al., 2022).

> 64% of countries have adopted standards requiring school principals to give parents and guardians information on school and student performance

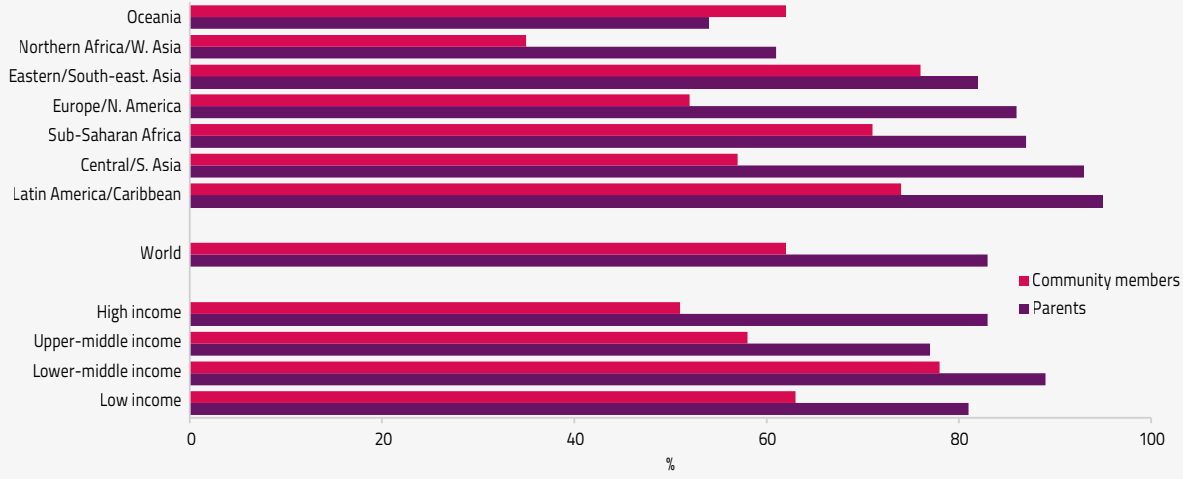
Principals can support parent organizations and engage communities by providing resources and involving them in key school decisions. In a struggling urban school in midwestern United States, where one third of students were of Mexican origin, the principal supported parents from that community to organize to have a platform to discuss their challenges. The principal allowed parent-led study circles and mustered community resources, such as immigration lawyers, to address specific issues affecting families. The principal also encouraged representatives from this community to participate in school governance discussions, acknowledging the value of their insights and cultural wealth (Fernández and Paredes Scribner, 2018).

PARENTS AND COMMUNITY MEMBERS FULFIL DIFFERENT ROLES

As school management committee representatives, parents and community members oversee the management of school operations, policies, budgets and resources. In Albania, schools are governed by boards of community representatives who influence decisions on plans, budgets, curriculum and personnel (Albania Government, 2012, 2018). In Ecuador, the Organic Law of Intercultural Education grants parents the right to participate in teachers' performance evaluations and educational management (Ecuador Ministry of Education, 2021). In India, at least three quarters of school management committee members are parents or guardians. Their responsibilities include overseeing school operations, proposing development plans, supervising fund use, monitoring teacher and student attendance, organizing parent-teacher meetings, and ensuring infrastructure standards (Guha, 2023; India Government, 2009). In Kenya, the new Basic Education Bill defines the composition of secondary school boards of management, which includes three parents, one being the chairperson of the Parents Teachers Association. The board is responsible for promoting the school's best interests; ensuring quality education; managing resources effectively; and recruiting, employing and paying non-teaching staff (Kenya Government, 2024).

Parent-teacher associations and parents in school management teams advocate for issues of student and community interest. In China, parent-school committees mediate in conflicts between schools and home to maintain a positive school environment (China Ministry of Education, 2012). In India, parents in government school management teams in Delhi raised awareness on girls' education, health and hygiene to foster inclusive practices and address bias and discrimination (Kumar, 2019). In South Sudan, school level inclusive education advisory committees address the needs of learners with

FIGURE 4.3:
Parents are more likely than community members to be mandated to participate in school management committees
Percentage of countries with regulations for parent and community involvement in school boards or management committees, by region, 2024



GEM StatLink: https://bit.ly/GEM2024_fig4_3
Source: PEER country profiles.

disabilities and those at risk of exclusion. They support teachers, mobilize community involvement, ensure safety and address infrastructure gaps (South Sudan Ministry of General Education and Instruction, 2020). In Viet Nam, the Parent Committee Charter outlines responsibilities such as supporting academically struggling and disadvantaged students, and encouraging students who have dropped out to return to school (Viet Nam Ministry of Education and Training, 2011).

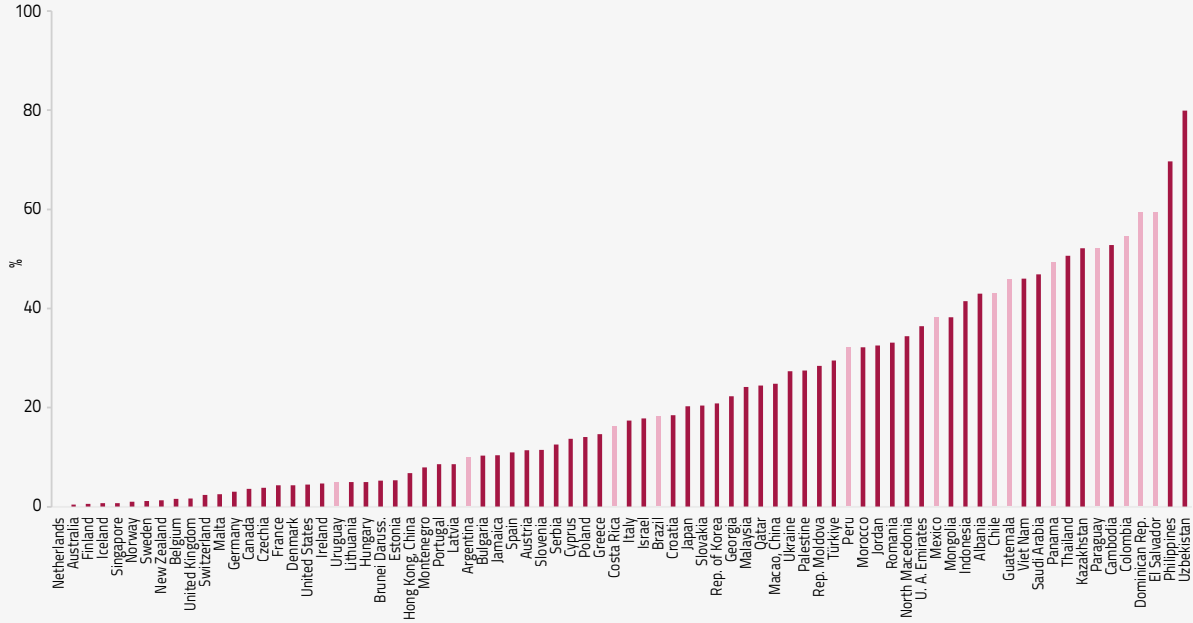
Such associations also engage in fundraising. In El Salvador, participants in the Education with Community Participation programme focused on school construction, fundraising, food preparation and cleaning (Edwards, 2019). In Nigeria, parent associations donate textbooks, give equipment, offer financial support for projects, and fund school construction and repairs (Onyeukwu, 2022). In Uzbekistan, under Article 51 of the 2020 Law on Education, parents develop infrastructure, provide charitable assistance and engage in educational management discussions (Uzbekistan Government, 2020).

Analysis of the PEER country profiles for this report shows that 83% of countries have policies or regulations for parents and guardians to be on school management committees and 62% for community members. In Northern Africa and Western Asia, about one third of the countries stipulate community member participation. Oceania is the only region where regulations are more likely to designate community members than parents to be on school management committees (**Figure 4.3**).

> 83% of countries have policies or regulations for parents and guardians to be on school management committees

The 2018 TALIS found that while 83% of lower secondary school principals acknowledged that parents had the opportunity to engage in school decisions, only 47% noted that parents actually engaged in school activities – and less than 30% noted this in Czechia, Finland, Iceland, Mexico, Slovakia and Sweden (OECD, 2020). In Kenya, a study of 75 board members showed that despite their role in budget monitoring, fewer than 5% were involved in budget preparation (Mitchell, 2022). A stricter measure of parental participation, based on the 2022 PISA results, indicated that just 11% of students attended schools in OECD countries where over half of parents had been engaged in school governance. Reported parental engagement levels were higher in Latin American countries,, such as Colombia (55%), the Dominican Republic (59%) and El Salvador (60%) (OECD, 2023b) (**Figure 4.4**).

FIGURE 4.4:
Parental engagement in school governance is high in Latin America
Percentage of students in schools whose principal reported that over 50% of parents were involved in school governance in selected middle- and high-income countries, 2022



Note: Lighter coloured bars indicate Latin American countries.
GEM StatLink: https://bit.ly/GEM2024_fig4_4
Source: OECD (2023b).

PARENTAL AND COMMUNITY PARTICIPATION NEEDS TO BE BALANCED

Diversity in community participation helps ensure varied perspectives are represented. Analysis of PEER country profiles for this report shows that 16% of countries adopted regulations to ensure balanced representation in school boards and committees. In Guyana, boards of governors in public secondary schools consist of at least seven members, representing different religious denominations, business organizations and community development groups (Guyana Government, 2014). In Kenya, under the 2024 Basic Education Bill (Kenya Government, 2024), government school boards of management should include persons with disabilities. However, such rules may only provide symbolic representation and not achieve meaningful inclusion, which often depends on the principal's approach to leadership (Barr and Saltmarsh, 2014).

> 16% of countries adopted regulations to ensure balanced representation in school boards and committees

In Sierra Leone, primary school management committees include community representatives, local council members, traditional rulers or village elders, and community educators (Sierra Leone Government, 2023; Sierra Leone Ministry of Basic and Senior Secondary Education, 2021). In Viet Nam, school board members are comprised of local government representatives, community residents, commune-level government representatives and capital contributors. They collaborate on decisions concerning construction and maintenance (Viet Nam Government, 2019).

Some countries have adopted concrete measures for diversity. In Bulgaria, as part of a project to mainstream 20,000 Roma children into local schools, Roma parents were encouraged to join school boards. A media campaign and collaboration with local authorities, school directors and non-Roma parents also enhanced Roma involvement (Nicoletti and Kunz, 2018; Ryder, 2015). In Rwanda,

the Parent-School Partnership for Education Toolkit and the School General Assembly Committees: Members' Handbook guide efforts towards inclusiveness in parental participation (Rwanda Education Board, 2019; USAID et al., 2018).

In practice, the selection of school management committee and board members is influenced by social dynamics, which can lead to exclusion. In Honduras, a study of community-managed schools found that patronage undermined transparency and accountability. Decisions often prioritize political considerations over educational merit, impacting the quality of education and community engagement (Altschuler, 2013). In the United States, socioeconomic conditions favour the participation of older, wealthier and predominantly white candidates (School Board Partners, 2022). In Los Angeles, a study found differences in parental engagement, with parents joining separate organizations based on reputation, demographics and informal culture, with working-class Latino parents being less influential (Muro, 2023). In Zambia, a study of volunteer teacher recruitment found that the process was influenced by parent committee chairpersons, teachers from established schools and district officials, contradicting the policy's goal of transparent selection through community consensus (Okitsu and Edwards, 2017).

Lack of transparency exacerbates tensions. Parents and the community may feel disempowered, playing a minor role in day-to-day management rather than helping with school governance. A study of Malawi found that school committees primarily served as vehicles for head teachers to solicit funds from the community, instead of discussing broader educational issues (Silberstein, 2023; Watkins and Ashforth, 2019).

Some countries try to bar individuals with potential conflict of interest from involvement in school governance. In Denmark, where two seats on school boards are allocated to local businesses, youth education institutions or associations, individuals connected to school property leases, or holding specific roles such as legal professionals or consultants within those entities, are prohibited from becoming board members. Board members may also be disqualified if they serve on another board of the same school type. They must publicly declare that they adhere to these rules on the school's website (Denmark Government, 2021a; 2021b). In Kazakhstan, members of secondary school boards of trustees, which include representatives of parents, experienced educators, local authorities, non-governmental organizations, philanthropists, media and students, are selected based on a range of criteria, one of which is integrity (Kazakhstan Ministry of Education and Science, 2017).

PARENTAL INVOLVEMENT HAS A POSITIVE IMPACT BUT NEEDS TO BE SUPPORTED

Parental involvement in school management committees and parent associations generally enhances community support for and communication with schools, yet outcomes vary based on local context and engagement levels. A study of eight countries has shown that outcomes are significantly influenced by the depth of parental engagement through meaningful interaction or participation, rather than by mere attendance (Sakamoto, 2021).

In the United States, a parent-teacher association in a primary school in Texas advocated for increased education funding, collaborated with non-profit organizations to educate parents about school finance, met with elected officials and advocacy groups, and influenced the passage of a bill providing budget relief for their district. Another such association campaigned for a change in school start times. Its members engaged in media outreach and worked with local leaders and legislators, resulting in a bill that made California the first state to mandate later start times for lower and upper secondary schools (National PTA, 2023).

Government training to parents and community members involved in school governance focuses on roles and responsibilities in school management committees. But this focus needs to broaden to include other skills, i.e. related to community engagement, education policies and governance, diversity, and conflict resolution (Guha, 2023). In Sabah, Malaysia, a study of 100 rural secondary students suggested that parent associations had an impact on the school community but members needed more training in leadership and organizational management (Swanto et al., 2020). In Spain, the government advises school councils to train members to improve their ability to critically analyse documents so that council decision-making processes also reflect their preferences and not just those of teaching staff and administrators (Bris and Sallán, 2007; Spain State School Council, 2017; Vicente et al., 2019).

However, there are few large-scale training initiatives in this area. In France, the Federation of Parents' Councils in Schools has been offering workshops to equip parents, especially those in school governance, with practical skills for interacting with school administration. Informal learning through interaction with seasoned activists, participation in political discussions and encouragement from local leaders further promotes leadership development (Barrault-Stella, 2014). In the US state of Alabama, the Middle School Parent Teacher Leadership Academy provides parents and teachers in rural lower secondary schools with skills to improve school and student outcomes. In its first year, it improved parent

and teacher leadership practices, self-efficacy, orientation for school change and parents' involvement in schools (Berryhill et al., 2020). In Uzbekistan, parental training programmes such as Families and Schools Together and Strong Families – Happy School emphasize parental leadership within family-school-community partnerships. These programmes aim to empower parents to take decisions and enhance family well-being (UNODC, 2016, 2023).

In wealthier counties, school governing bodies support participation and training expenses. In Denmark, local school boards can reimburse parent and student representatives for verified expenses related to their board roles (Denmark Government, 2021). In the United States, the Ohio School Boards Association allows board member compensation up to USD 125 per meeting, with annual limits, along with travel reimbursements based on distance. They can also receive up to USD 60 per day for shorter training sessions and up to USD 125 per day for longer programmes, with policies determined by each board (Ohio School Boards Association, 2023).

CONCLUSION

Shared school leadership and collaboration among empowered stakeholders strengthen decision making for school improvement. Assistant principals support principals in their leadership efforts. Teachers in formal and informal roles contribute to instructional leadership. Support personnel help shape student assistance services. Students can take leadership roles through participation in councils and consultations. Parents and community members make substantial contributions to school governance, primarily through school management committees and parent associations. However, these stakeholders face challenges, such as unclear roles, inadequate preparation and support, lack of representativity, and the need for empowerment initiatives.

Schools promote shared school leadership by enhancing collaboration and inclusivity among these actors. Establishing clear communication channels and transparent decision-making processes that involve all stakeholders is a prerequisite. Encouraging shared visions and goals, clarifying roles, and recognizing unique contributions also help create an environment where everyone feels valued and empowered to contribute. Regular feedback mechanisms and development opportunities further strengthen shared leadership, ensuring collective efforts lead to lasting improvements in educational outcomes and school cultures.

Assistant to the Deputy Director of Education, State Department of Early Learning and Basic Education Peter Gachathi supervising the tasks of some government officers at the Ministry of Education in Nairobi, Kenya.

Credit: GPE/Luis Tato*

CHAPTER

5

System leadership

KEY MESSAGES

Education officials at different levels can become system leaders

- System leaders in education are education officials, at the central and local levels, who help achieve system-wide education goals by setting directions, ensuring monitoring and supporting, developing and leading school actors.
- When given autonomy over financial and human resources, officials have more space to lead. In Colombia, it was found that municipalities granted with financial and administrative autonomy achieved better education outcomes.

System leaders maintain a focus on learning outcomes and school support.

- By ensuring alignment around education goals and helping implement policies, system leaders can drive improvements in educational quality. In Norway, local education officials contribute to inclusion through strengthening teachers' autonomy and competences.
- System leaders can help schools thrive by providing guidance and support. In the United States, the functions of educational officials have evolved from a focus on supervision to coaching and mentoring.
- School inspectors can advise and influence several school principals at once. A study in the United Republic of Tanzania showed that the number of school visits and the way visits were conducted were among the most important influences on improving learning.
- System leaders are effective when they work with other actors. The success of the education reform in the Mexican state of Puebla was the result of coordinated system-wide efforts.

System leadership can be limited by a lack of capacity, clear orientation and motivation.

- Clear understanding of their roles allows system leaders to focus on common goals. But a survey of education officials in Brazil, the Dominican Republic, Guatemala and Peru showed that they could not identify up to four of the five tasks they were expected to perform. The lack of understanding of their roles was negatively associated with school learning outcomes in their districts.
- System leaders may not be effectively prepared for their role. A study of 174 district education offices in Ghana showed that officials collected data but did not always review or use them.

Investment in system leaders is needed.

- Training, mentorship and professional growth can make up for a lack of definition and assessment of the competencies of education officials and inspectors. In New Zealand, education review officers are assessed through a behavioural interview and a psychometric and work-sample test.
- Improved selection processes for system leaders could improve their effectiveness. Only 12% of planning officers in Ethiopia and fewer than 10% in Guinea had an education background in planning and management.
- Political influence on staffing also challenges effective system leadership. In Pakistan, frequent and arbitrary transfers of officers hamper education planning and provision.

System leaders need to set expectations for quality and equity 99
System leaders should be instructional leaders 105
Civil servants are often not selected to serve as system leaders 108
Conclusion 112

This report defines system leaders as education officials at the central and local levels whose actions affect more than just one school and who ensure more than just compliance with the managerial processes and administrative procedures for which they have been recruited (Cheah, 2023; Ontario Institute for Education Leadership, 2013, p. 5). System leaders' roles can be formal – linked to the remit of their job and defined by national programmes and protocols – or informal (Asim et al., 2023; Connolly et al., 2019).

At the central level, system leaders work at federal, national or subnational ministries and at education implementation agencies. Through their role in the bureaucracy, they make decisions on planning, structure, programmes and policies. They should use strategic thinking to anticipate needs, find solutions, and initiate policies and reforms. At the local level, depending on the governance arrangements, system leaders can be district officers, supervisors or inspectors, who operate at the closest administrative level to schools (Chapman and Hadfield, 2010; Tournier et al., 2023). They make decisions on resource allocation, resource management and instructional support (OECD, 2018). They need to have effective communication and problem-solving skills and an ability to engage with school actors (Naylor et al., 2020; OECD, 2019).

Any education official is a potential system leader when they drive education improvements (Honig, 2022; Thessin, 2019). Like school principals, they set expectations, lead teaching and learning (by providing instructional support to schools), foster collaboration, and develop people (**Table 5.1**) (Crouch and DeStefano, 2017; Mundy et al., 2024).

This chapter focuses on central and local education officials in various roles and functions. It first looks at the conditions that support effective system leaders. It then explores selected system leadership functions, including initiating reforms, ensuring evidence-based planning, monitoring and supporting schools. Finally, the chapter examines selection and recruitment criteria and processes and professional development opportunities for education officials as potential system leaders.

SYSTEM LEADERS NEED TO SET EXPECTATIONS FOR QUALITY AND EQUITY

Central ministry officers' deep understanding of their organization (Bhanji, 2022) and their control over information and budgets (Peters, 2001) put them in a good position to set system-wide goals and orient all parts of the system towards achieving them.

Reforms in education are designed to respond to educational and social problems, leading to rethinking and realigning educational goals. But they are also based on certain beliefs about how to bring about system change in education (Bromley et al., 2023; Darling-Hammond, 2012). In Japan, senior officers work closely with ministers to formulate policies and reforms. They set directions drawing on an evidence-based governance culture (Berman, 2018). Their high level of technical capabilities, combined with a sense of purpose, drive this use of evidence in the preparation of education policy proposals (Crouch and Spindelman, 2023). In Thailand, education policies are the outcome of technocratic 'ready-to-deliver' packages rather than political negotiations. Senior civil servants, in collaboration with other actors, design reforms and policies among which political parties may choose based on their policy agenda and priorities (Yavaprabhas, 2018).

System leaders can contribute to improving system, school and student performance when they ensure organizational alignment around a clear goal and mission (Anderson, 2022; Leithwood et al., 2019). In recent years, a key driver of reforms has been a focus on improving quality, as symbolized in achieving learning outcome standards and measured by standardized assessments.

TABLE 5.1:
System leaders' roles, functions and practices

Function	Practices
Set expectations	
Set a shared vision and goals and initiate policies	▪ Develop and communicate a vision transparently and inclusively ▪ Articulate system goals, priorities and values
Ensure coherent policy implementation	▪ Embed directions in plans, regulations and procedures ▪ Align resource allocation with policy goals and needs
Make evidence-based decisions	▪ Commission, interpret and use data to inform decision making ▪ Encourage collaboration in interpretation and use of data
Focus on learning	
Promote alignment	▪ Ensure goals match curriculum, pedagogy, materials and assessment
Monitor and evaluate	▪ Set and monitor objectives in collaboration with local authorities and school leaders ▪ Inspect local authorities and schools, hold them accountable for their objectives, and provide support when results do not meet expectations
Foster collaboration	
Help information flow	▪ Encourage open, accessible and collaborative two-way communication with and among local authorities and schools
Develop people	
Develop capacity	▪ Provide professional opportunities for local authorities and school staff

Source: GEM Report team, based on Anderson and Young (2018), Crouch and DeStefano (2017), and Leithwood (2013).

> "System leaders can contribute to improving system, school and student performance when they ensure organizational alignment around a clear goal and mission"

The Canadian province of Ontario implemented a major education reform in the 2000s, which contributed to improved student learning outcomes (OECD, 2011). The Ontario Leadership Framework, developed in 2006 and revised in 2013, was used to professionalize district education officers. It outlines a set of practices district leaders are expected to adopt, from the use of multiple sources of evidence to the promotion of productive working relations with staff (Leithwood, 2012; Ontario Institute for Education Leadership, 2013). A study of more than 2,000 district and school leaders in 45 school districts showed that student learning was influenced by the exercise of system leadership, as evidenced by a vision, mission and goals; alignment of the instructional programme with these goals; coherent programme implementation; and use of data. None of these characteristics emerged as dominant. Rather, it was the purposeful deployment of resources and skills that contributed to better learning outcomes at scale. District leadership functions have an impact on education over and above the type and quality of school leadership in that area (Leithwood et al., 2019).

The Mexican state of Puebla adapted the Ontario model in 2011 as the Asistencia, Permanencia, Aprendizaje (Attendance, Retention, Learning) reform, which transformed the role and capacities of supervisors, school principals and teachers. Supervisors, whose tasks had been limited to compliance, received training at the Puebla Supervision Academy to strengthen their leadership skills. The State Commission for Planning and Programming of Upper Secondary Education's planning role has been enhanced, while teacher training was redefined (INEE, 2018; OECD, 2016b). A Unit to Promote the Right to Education was set up to coordinate system-wide efforts to enhance quality. International assessments found that the reform improved student learning (Crouch, 2020).

The United States introduced the Common Core State Standards, a package of learning achievement standards, assessments and data systems mandated by the federal Race to the Top initiative in 2009. The Standards bound local authorities to a competitive mechanism of funding allocation. In the US state of New York, an analysis of district officials found that those who had been proactive and adaptive in their leadership approaches and who had

close relationships with school actors had anticipated the Common Core State Standards even before they were defined, and planned a system reform which had a positive impact on learning outcome levels (Durand et al., 2016).

Effective system leaders do not target quality only in terms of student and school performance in learning outcome measures but also through equity and inclusion (Anderson and Young, 2018). In Norway, inclusion in education is mainly perceived through adapted practices and school support. Interviewed municipal education officials reported contributing to inclusion through strengthening teacher autonomy and pedagogical competences (Mausethagen et al., 2022).

System leaders at the **local** level can also play a leading role towards the achievement of goals when they are part of a shared vision for education improvement (Mundy et al., 2024). District education officers in Ghana who were able to build coalitions with other actors have been able to influence local policies and achieve student learning improvements in their area (Levy, 2022). The Education Directorate in one outstanding district found formal and informal solutions to address teacher absenteeism in collaboration with politicians, district assemblies and teacher unions. These solutions included deductions from salaries for absentee teachers (Ampratwum et al., 2019).

> “System leaders at the local level can also play a leading role towards the achievement of goals when they are part of a shared vision for education improvement”

Local leaders are more likely to contribute to improved education outcomes when they are involved in policy design and implementation (**Box 5.1**). In Brazil, the municipality of Sobral in the state of Ceará benefited from high autonomy in defining education policies and in managing and monitoring primary and lower secondary schools, including hiring and firing school principals and teachers, developing professional training programmes, and maintaining school infrastructure. Education officials

BOX 5.1:

Local officials with strong autonomy have more space to be leaders

In many contexts, local education officials represent just another level in the control exerted from the centre to the school level. Space for exercising leadership remains limited (Hargreaves and Shirley, 2020). In Ghana, as part of the National Education Reform Programme, the 2008 Education Act introduced a four-tier decentralization reform in education but it did not lead to a transfer of leadership functions and powers. The Ghana Education Service, which is the technical arm of the Ministry of Education, implements national policies through the district education directorates that can adapt them to local needs but lack power to influence their design (Ampratwum et al., 2019).

When civil servants have the ability and authority to design and implement policies based on a defined mandate conferred through formal regulations and processes (Levy, 2022), they are well placed to serve as system leaders (Bersch and Fukuyama, 2023). The idea that decentralization can improve efficiency and responsiveness in public service provision has been a key tenet of the New Public Management approach (Mundy et al., 2024). In Norway, decentralized authorities are highly involved in the design of policies tailored to their local context. Citizens also participate in policy formulation, as democratic governance is a precondition for policy adoption (Lim and Nursamsu, 2023).

Autonomy means control over financial and human resources (Asim et al., 2023). In Colombia, the 2001 decentralization reform gave municipalities with at least 100,000 inhabitants full management responsibilities over teacher hiring, training and placement; school infrastructure; materials; and school transportation. Municipal autonomy in resource allocation has been associated with a lower proportion of poorly performing students in Spanish and mathematics scores in grades 3, 5 and 9 compared to students in similar municipalities that did not benefit from full autonomy (Elacqua et al., 2021).

Autonomy needs to be combined with capacity. In Morocco, the 2011 decentralization reform that aimed to strengthen quality and leadership in education did not lead to the expected education improvements in its initial stages. As outlined in the National Charter of Education and Training, the 16 regional academies of education and training received large administrative and financial autonomy over adapting content to local needs, school infrastructure, resources and partnerships. Yet lack of adequate resources and expertise hampered their officials’ potential to act as system leaders. The central ministerial department level had deeply held values and long-established processes – and kept control over decision making (Amghar, 2019; Saoudi et al., 2020).

receive technical assistance and results-based fiscal incentives to pursue education goals. The governance system has led to a significant and steady improvement in learning outcomes since 2005 (Loureiro et al., 2020; McNaught, 2022). Autonomy combined with political support, professional development and incentives for educational officials has served as a model for other municipalities within the state (Mundy et al., 2024).

However, strong monitoring mechanisms are needed to prevent local government officials with autonomy from diverting public resources (Bashir and Hassan, 2019). As a large sector, education is particularly vulnerable to corruption (Transparency International, 2017), with officials at risk of bribery for granting accreditation to schools despite not meeting academic (Glendinning et al., 2019), infrastructure or staff standards (Kirya, 2021). In Indonesia, district education officials have been reportedly involved in rigged textbook tendering. Weak accountability mechanisms, retrospective budgeting and complicit school committees translated into inadequate oversight over districts (Rosser et al., 2022).

Career progression based on pre-defined and impartial criteria can limit corruption (Bertrand et al., 2019). In the absence of structured systems of career progression, promotion might also be influenced by personal networks (Veit, 2020). In Austria, promotion is influenced by personal mentors who informally support career progress of high-performing young colleagues. This might discourage other talented officials who cannot aspire for promotion without such support (Egger-Peitler et al., 2015; Veit, 2020). Lack of transparency in the recruitment of education officials is a cause and an effect of bribery (Kirya, 2019). In Ghana, almost 3 in 10 public employees recruited in 2019 had passed neither a written test nor an oral interview to secure their positions, while 4 in 10 admitted resorting to nepotism, bribery or both to obtain their post (UNODC, 2022).

ALIGNMENT BETWEEN POLICY DESIGN AND IMPLEMENTATION IS A SIGN OF LEADERSHIP

Ensuring coherence is key for successful reform implementation, notably alignment between goals and means (Stern et al., 2022). Officials who exercise system leadership need to think carefully how the proposed actions will help achieve the objectives (Mundy et al., 2024) and communicate the logic of the intervention to others in the education system so that it can be internalized and compliance can be maximized (IIEP, 2024). In the United Republic of Tanzania, ward education officers did not have access to information on policy priorities to be implemented at the school level. When informed, they were more likely to follow up on recommendations and promote consistent instructional leadership (Cilliers and Habyarimana, 2023).

Shared values can also ensure coherence and accountability in the system (Levy, 2022). Viet Nam's 63 provinces enjoy a high level of discretion in education resource allocation. Less than one third of provinces were found to follow meaningful coordination and communication practices. Decisions were rarely based on evidence of education and school performance. Yet Viet Nam achieves comparatively strong delivery mechanisms and high learning outcome levels. The success has been interpreted as a result of internalized norms and values promoting quality education for all, which have been dictated by the central government (London and Duong, 2023).

> “Shared values can ensure coherence and accountability in the system”

System leadership can be limited by a lack of clear orientation and motivation to act towards a shared goal, for example, officials focusing on compliance for its own sake (Levy, 2022). A study of Ecuador's education system argued that excessive process compliance prevailed over genuine intentions and motivation to improve teaching and learning. A system of rules is in place to increase control and avoid resource misallocation. However, the result is that education officials have mainly adopted a bureaucratic and administrative approach instead of exercising leadership functions to support teaching and learning. This focus on process compliance was reported as a major obstacle to improving quality (González et al., 2023).

Beyond individual competencies, organizational and institutional factors can challenge alignment within the system (IIEP, 2022). Ambiguity in the distribution of tasks between government levels is a barrier to effective implementation (Rasul et al., 2018). A survey of national and district education officials in Brazil, the Dominican Republic, Guatemala and Peru showed that they could not identify up to four of the five tasks they are expected to perform according to the law. They also claimed responsibility for up to one in three tasks assigned to other government levels. The lack of understanding of their roles was negatively associated with school learning outcomes in their districts (Adelman and Lemos, 2021).

BOX 5.2:

Responsibility for reforms is often withheld from those who are supposed to carry them out

Some countries make ambitious reform plans but their public administration may lack the capacity to ensure effective implementation (Haque, 2021). As a result, they transfer the responsibility to implement those reforms from the main administrative apparatus to other agencies or delivery units whose managers enjoy more autonomy in decision making (Egeberg and Trondal, 2009; Johnsøn et al., 2021), for example over staff selection (Lapuente and van de Walle, 2020). Such delivery units aim at 'getting institutional settings right' (Gulzar et al., 2023; Mundy et al., 2024, p. 5). A global mapping of 152 delivery units in 80 countries showed that 3 in 5 were multisectoral, of which about 2 in 3 covered education; and 1 in 3 delivery units in the study focused on a specific sector, of those, 2 in 5 focused on education (Mansoor et al., 2021).

One commonly identified weakness of education ministries is the lack of ability to collect and monitor data to inform decision making, In India, a delivery structure was created in the 1990s to bypass education administration with limited experience in undertaking evidence-based planning and ensure efficient resource allocation. Created as part of the District Primary Education Project, it consisted of external staff with limited links to the state administration. It was characterized by its emphasis on reviewing evidence (Singh, 2023). In Malaysia, the Performance Management and Delivery Unit promoted wide and regular consultation and close collaboration between central and local levels in policy prioritization, target setting and implementation monitoring (Williams et al., 2021).

About half of these delivery units have been staffed by civil servants; the remainder combines civil servants with external consultants or, in a few cases, relies exclusively on external consultants (Mansoor et al., 2021), which may create tensions (Hogan and Thompson, 2021). External consultants and advisers can define standards, evaluate the education systems and policy progress, and advise on reforms. Bahrain and Qatar engage external consultants through semi-governmental agencies to overcome the rigidities of the education administration. These lead consultants effectively operate as part of a 'shadow education ministry' and have more power than ministry staff in exercising traditional leadership functions, such as setting directions and expectations in education (Mohamed and Morris, 2021).

In Sierra Leone, the Ministry of Basic and Senior Secondary Education has set up a delivery unit consisting of a team of skilled technical experts, seconded from international non-governmental organizations and agencies, who operate in parallel to the civil service. Differences in education, nationality, salary levels and organizational culture challenge effective collaboration between the education administration and the unit (Bell et al., 2023b).

Delivery units have not always led to the expected results, primarily because little focus has been placed on transforming education officials' values, attitudes and capabilities (Mundy et al., 2024). As part of the 2019 local government reform in the Punjab province of Pakistan, functions were redistributed within and across government levels and structures. Yet the introduction of accountability based on a system that flagged low-performing schools had no impact on school performance. The centralized accountability approach created the illusion of efficiency and effectiveness but reinforced centralized control with limited to no impact on learning outcomes (Cheema and Farooqui, 2019; Gulzar et al., 2023).

In Ghana, a study of a delivery management approach in three regions and five districts found that how goals and approaches are communicated impacts alignment. When communication among district officials and from district officials to schools was poor, processes and monitoring practices were misunderstood or confused. In some cases, any potential of the reforms vanished (Bell et al., 2023a).

In South Africa, circuit (local) officials are expected to provide management support to schools and promote professional development for principals. However, a lack of clarity in the assignment of roles and responsibilities hampers these support and advice functions. A survey of principals in the province of Eastern Cape suggests that the effectiveness of their interventions is limited, possibly due to a lack of clarity about the expected goal linked to their role (Bantwini et al., 2018).

Many governments see the limited capacity of public administration as an obstacle to education reform implementation. They have, therefore, experimented with new institutional structures to support or sometimes bypass the administration in systemic reform delivery (**Box 5.2**) (Hayter and Morales, 2023). A review of such actions across government in 20 countries has shown that they have not improved public sector performance (Overman and van Thiel, 2016).

BOX 5.3:

Latvia aims to strengthen its education system's institutional capacity

Latvia acknowledges the need for strengthening the leadership and management capacity of education officials for policymaking, planning and implementation. In its 2021–2027 Education Development Guidelines, it has committed to ensuring a 'sustainable and efficient management of education systems and resources' (Latvia Ministry of Education and Science, 2021).

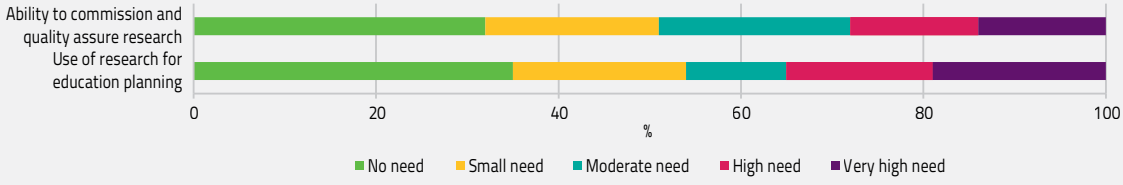
In 2023, in support of Latvia's strategy, the Organisation for Economic Co-operation and Development (OECD) conducted a mixed-methods institutional capacity assessment of Latvia's education system that focused on the Ministry of Education and Science, four national-level agencies including the education inspectorate, and municipalities. The objective was to propose recommendations for enhancing the capacity of these organizations for monitoring education quality and providing support for improving student learning. The assessment showed that capacity is needed at both the ministry and municipality level.

Survey data showed that 35% of the ministry officials reported a high or very high need for professional development for using research evidence for planning (**Figure 5.1**). The Ministry has recently recruited staff with advanced data analysis and research skills to enhance its capacity for evidence-based policymaking and planning.

FIGURE 5.1:

In Latvia, one third of education ministry officials reported high levels of professional development on commissioning and using research

Percentage of education ministry officials reporting professional development needs, 2023



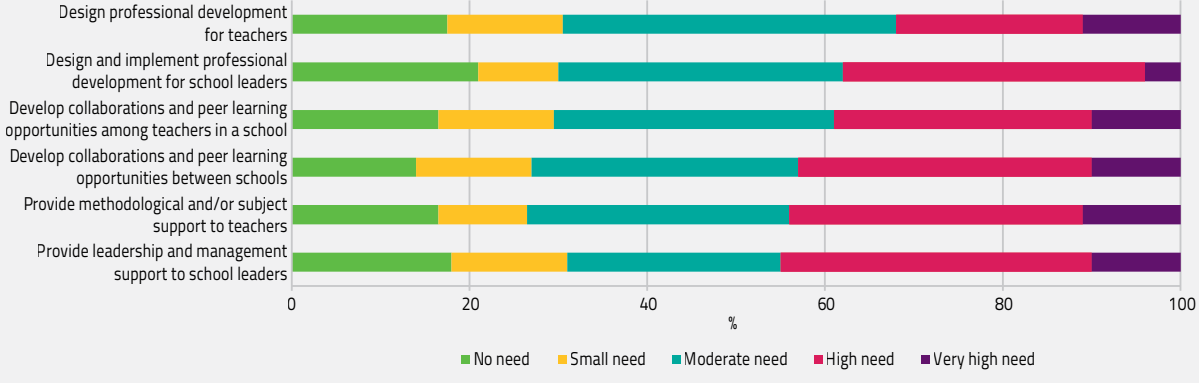
GEM StatLink: https://bit.ly/GEM2024_fig5_1
Source: OECD (2024).

A growing body of research has found that subnational education authorities can play a transformational role in improving teaching and student learning by providing educational leadership and specialist support (Education Development Trust and IIEP, 2023). The OECD assessment revealed that to fulfil such a role, the capacity of many of Latvia's municipal education authorities needs strengthening. About 48% of municipal school improvement officers reported a high to very high need for professional development on methodological and subject support to teachers, one of the key instructional leadership functions (**Figure 5.2**).

FIGURE 5.2:

In Latvia, one half of local education officials reported high levels of need for professional development on methodological and subject support to teachers

Percentage of municipality education officials reporting professional development needs, 2023



GEM StatLink: https://bit.ly/GEM2024_fig5_2
Source: OECD (2024).

Continued on next page...

BOX 5.3 CONTINUED:

The assessment findings confirmed the need for continuing and strengthening the collaboration between the Ministry, the Latvian Association for Local and Regional Governments, municipalities and other stakeholders to ensure municipalities are able to fulfil their roles and responsibilities to provide educational leadership to all their schools.

Source: OECD (2024).

SYSTEM LEADERS SHOULD BE INSTRUCTIONAL LEADERS

The volume of administrative work and bureaucratic procedures that system leaders have to deal with is so large that it is easy to lose track of the ultimate objective, which is to improve educational quality in equitable and inclusive environments. A major challenge is that civil servants employed in such positions may not be prepared for the technical aspects of their work or may not even be aware of their intended role. This section discusses three potential ways in which system leaders can help maintain a focus on learning outcomes: monitor data to understand needs, facilitate professional development and provide pedagogical support.

INSTRUCTIONAL LEADERSHIP IS EXERCISED THROUGH MEANINGFUL MONITORING

Central education ministry officials with a good understanding of research processes can use evidence to inform planning and monitoring in education. Yet ministry staff may lack such technical knowledge to serve as system leaders (**Box 5.3**) (OECD and IIEP, 2024). Director generals, directors and deputy directors in over 25% of ministries from 37 education systems in 29 OECD countries, the Russian Federation and South Africa reported they were not proficient in engaging with various dimensions of research, including commissioning and using and evaluating data and information (OECD, 2023).

Local officials, coordinators and supervisors can be involved in planning targeted interventions (IIEP, 2023). But they may simply not have the technical knowledge to collect and use data that informs decisions (Childress et al., 2020). Monitoring is then limited to administrative compliance purposes and the potential for officials to act as system leaders is lost. In India, the introduction of an integrated teacher management information system was found to be ineffective, as district officials lacked the capacity to handle and use data. Their role was limited to passing data from schools to the central government, instead of interpreting and using the information to inform decisions on teacher deployment (Naylor et al., 2020). In Ghana, a study of 174 district education offices based on dimensions of the World Management Survey showed that district officials are unlikely to strategically plan and monitor, as data are collected but not always reviewed and used (Boakye-Yiadom et al., 2023).

District officials in Bangladesh listened to vocal parents' complaints but overlooked equity considerations when it came to deciding on budget allocations (World Bank, 2020). In some provinces of Pakistan, the lack of key system leader skills, such as technical, coordination and communication skills, hampers planning based on needs and evidence. Provincial budgeting is decided top-down and carried out on an incremental basis. For example, Rahim Yar Khan district, which has one of the highest out-of-school children rates, received the lowest per student budget in Punjab province in 2017 (World Bank, 2018). A comparative study in Burkina Faso, Madagascar, Niger, Senegal and Togo reported severe difficulties in policy implementation due to low planning and monitoring capacity. In Madagascar, it was reported that priorities were being identified without considering the availability of funds (Ermini et al., 2024).

PROFESSIONAL DEVELOPMENT NEEDS A SYSTEM LEADERSHIP APPROACH

Leadership is a contextual and relational concept (Ali et al., 2021). Instructional leadership functions at the system level include planning to support the professional growth of teachers and school principals (Childress et al., 2020). In the United States, education officials' functions have evolved from a focus on supervision to coaching and mentoring (Thessin, 2019). A study of nine districts showed that chief academic officials and superintendents in large districts provided some form of professional support to principals. They directly helped principals to adopt particular teaching and learning approaches and provided principals with feedback on their practices instead of relying on external assistance (Honig and Rainey, 2019).

Education officials can exercise instructional leadership by building trusting and supportive relationships and

facilitating community engagement (Mundy et al., 2024). In South Africa, the Guidelines for the Organisation, Roles and Responsibilities of the Education Districts aimed to help district officials drive school improvement. A study conducted in two district offices in Gauteng province showed that instructional leadership was exercised through developing a shared vision, providing clear instructions, role modelling and promoting district–community collaboration (Mthembu et al., 2020).

> Education officials can exercise instructional leadership by building trusting and supportive relationships and facilitating community engagement

Continuity in district relationships helps build a trusting environment where schools feel supported. In well-performing districts of the US state of California, low turnover contributed to a sense of stability and trust. Superintendents and officers had been working in the same district in different positions, which allowed them to build relationships and develop a sense of shared responsibility. School principals had been teachers, superintendents used to be principals and senior district office administrators had been superintendents. Administrators were highly regarded for their pedagogical experience (Burns et al., 2019).

Effective system leaders provide development opportunities for teachers; this has a positive impact on their teaching practices. Coaching provided by inspectors and other coaches can be effective. In India, the National Capital Territory of Delhi institutionalized teacher development coordinators as part of a larger range of reforms. They were introduced in 2017 to engage closely with teachers and enhance school support and monitoring. The programme increased teachers' motivation but analysis for this report suggests that there is still a need to develop teacher development coordinators' capacity to engage in constructive professional dialogue for the identification of teachers' needs (Tournier et al., 2023; Sharma et al., 2024).

Local education officials can promote school clusters or networks as formalized administrative arrangements to exchange expertise and resources (Childress et al., 2020). In response to declining student outcomes and student populations in rural areas, the municipalities of Åland and Mäntsälä in Finland initiated a reform of their education systems in 2003 and 2011, respectively, based on collaboration and school-to-school networking. Local education administrators promoted participatory and cross-school collaborative approaches, engaging the community and education professionals in leadership training, with positive returns for student learning outcomes (Alava, 2019).

District officers can support organizational structures through trust-based relationships (Mayger and Hochbein, 2020). Implemented since the early 2000s, the Tulsa Area Community Schools Initiative in the US state of Oklahoma transformed schools into communities. Institutionalized community school coordinators were responsible for building relationships between students, families and schools in the network and within school communities. Coordinators reached out to marginalized families. An evaluation of the Initiative found that economically disadvantaged students reported higher scores in reading and mathematics, compared with their peers in schools that were not part of the Initiative (Adams, 2010).

INSPECTORS CAN PLAY A LEADERSHIP ROLE THROUGH EFFECTIVE PEDAGOGICAL SUPPORT

Inspection is traditionally associated with checking on schools' compliance with normative standards and predefined criteria (IIEP, 2024). School inspectors' functions have evolved over the years with the expectations that they could do more to promote school improvement.

School inspectors can potentially act as system leaders, as they are involved in advising, assisting and supporting several school principals at the same time (Ehren et al., 2017). A study conducted in the United Republic of Tanzania showed that the number of school visits and the way visits were conducted was one of the most important influences on improving learning. Officials who put in place a system to motivate teaching staff were more effective than those only implementing good management practices, which were found to impact only 10% of the learning outcomes (Cilliers et al., 2022).

In Kenya, curriculum support officers, who are the education officials working closest to schools, combine monitoring with instructional support. As part of the Tusome programme, a national literacy and numeracy programme funded by the United States Agency for International Development, curriculum support officers were trained to visit schools, support teachers in administering the programme's materials, and collect and upload data on student reading skills and teacher practices. This generated comparative and up-to-date information on programme implementation for the Ministry of

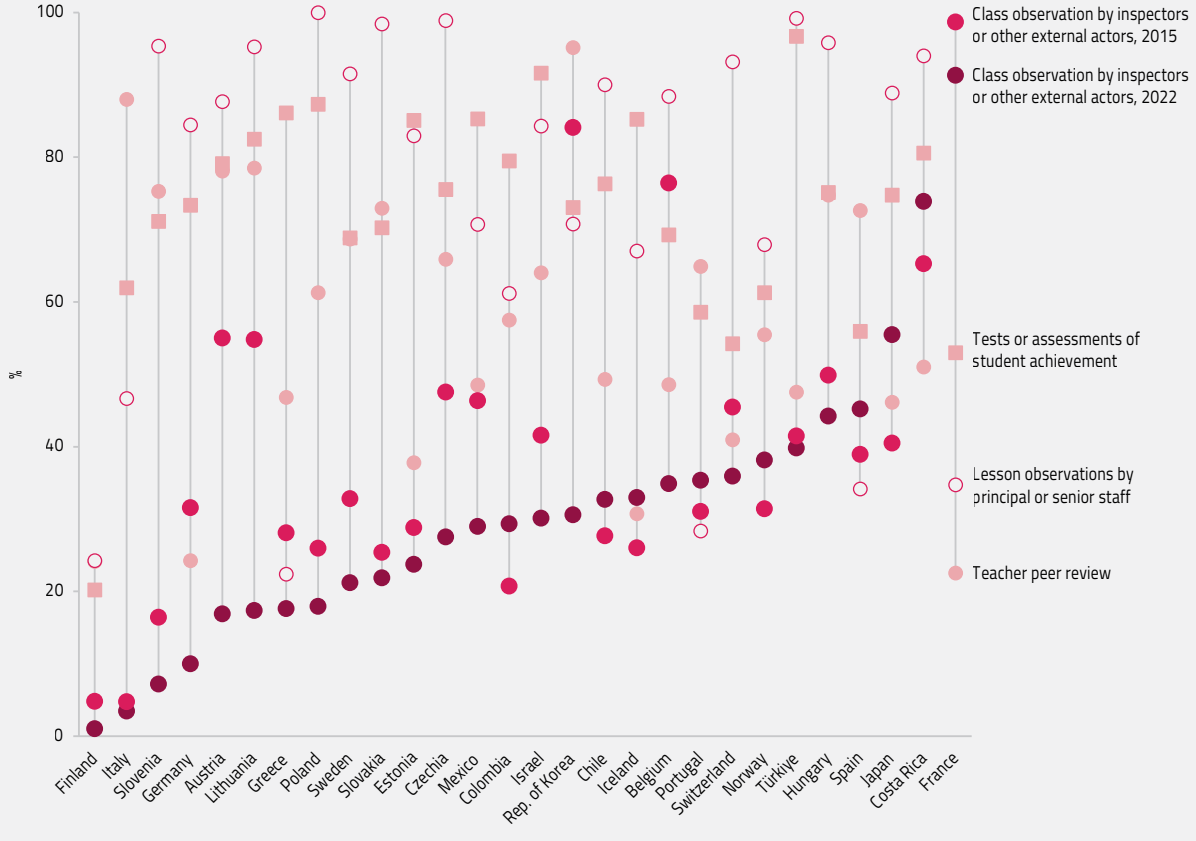
Education. At the same time, officers provided feedback to teachers about the expected practices while keeping them accountable (Piper et al., 2018).

> School inspectors can potentially act as system leaders, as they are involved in advising, assisting and supporting several school principals at the same time

Inspectors strengthen their credentials as system leaders when they have effective communication and interpersonal skills. Specific, regular and contextualized feedback with constructive suggestions leads to school improvement (Ehren et al., 2017; Ehren and Shackleton, 2016). A longitudinal study of school inspectors in Switzerland showed that feedback was a strong predictor of knowledge acquisition among teachers combined with the readiness of teachers and principals to engage in discussion (Schweinberger et al., 2017).

But overall, inspection remains limited to reporting with little effects on school performance (Ehren and Shackleton, 2016). It is often carried out for the sake of monitoring teaching and learning instead of promoting their quality (Ehren et al., 2017). In China, school inspectorates depend on the administrative authority of the education department. They evaluate school teaching quality based on defined standards and through direct observations. A study conducted in Shandong province showed that school improvement is conceived as compliance with national standards, regulations and policies. Inspectorates do not engage in identifying school processes and outcomes to be improved; equity considerations in

FIGURE 5.3:
External school inspection is becoming less common in OECD countries
Percentage of students attending schools by monitoring practices, selected OECD countries, 2015 and 2022



GEM StatLink: https://bit.ly/GEM2024_fig5_3
Source: OECD (2022).

students' achievements also tend to be overlooked (Zheng, 2020; Zheng and Thomas, 2022).

Nevertheless, a gradual transition is being observed in richer countries from school inspection performed by actors external to the school to monitoring and support based on peer-to-peer and close collaboration (Greatbatch and Tate, 2019). The percentage of students in OECD countries attending schools whose teacher practices were monitored by external inspectors fell from 42% in 2015 to 34% in 2022. In contrast, teacher peer review (60%), student tests (73%), and principal or senior staff observations (77%) were more common monitoring practices (**Figure 5.3**).

CIVIL SERVANTS ARE OFTEN NOT SELECTED TO SERVE AS SYSTEM LEADERS

Many education systems do not define the qualification requirements and competencies for education officials who could potentially serve as system leaders. Length of service, often as former secondary school teachers without any specific managerial training, is considered to be a sufficient requirement to fulfil roles within many education administrations (Childress et al., 2020). In countries where officers are recruited from among teachers, additional or specific forms of training to perform their new functions is rarely provided (Beg et al., 2021). Only 12% of planning officers in Ethiopia and fewer than 10% in Guinea had an education background in planning and management. More than half of Guinean planning officers had a long teaching career (IIEP, 2022).

> Inspectors are often recruited based on years of service and personal and even political connections in some contexts

Inspectors are often recruited based on years of service and personal and even political connections in some contexts (Ehren et al., 2017). As a countermeasure, some countries have tried to strengthen the requirements for hiring inspectors. In New Zealand, education review officers need to demonstrate substantial experience in school management, as defined in the education review officers evaluation capabilities framework (Gardezi et al., 2023). Competence, communication skills and previous experience in project, data and relationship management are assessed during a one-hour interview followed by psychometric or work-sample tests and reference and background checks (Education Review Office, 2021).

Largely influenced by private sector practices, some countries have systematized the required civil service competencies through standard competency frameworks, with an emphasis on accountability and leadership. Yet these are often too generic and abstract (Mau, 2015). Adopted in 2009, the Tanzanian service leadership competency framework remains ineffective, as training programmes have not been reviewed and training institutions have not been held accountable for providing officers with the relevant skills (Marijani, 2017). Jordan has planned to develop a leadership competency framework as part of a four-year public sector modernization strategy. The strategy aims to update the selection and promotion processes accordingly (Jordan Public Sector Modernization Committee, 2022).

Recruitment systems of education officers follow different administration traditions. Education officers can be selected through a closed and career-based system, regulated by labour laws (Bertrand et al., 2019; Breaugh and Hammerschmid, 2021). Career-based recruitment is based on a standardized competitive test and tends to identify officers with a general profile at the entry level (OECD, 2021a; van Acker, 2019). In some countries, education officials may not be expected to have education expertise. The recruitment of generalists instead of specialists has been the subject of much debate. The identification of generalists allows public administrations to position leaders with flexible skills within the system (Jann and Wegrich, 2019). At the same time, generalists may experience frequent rotation, which does not allow officers to develop a specialization and may hamper their continuity (Besley et al., 2022). Career-based systems promote career mobility based on a combination of seniority and merit (Veit, 2020).

Bangladesh, India and Pakistan have inherited a colonial model of administration in which civil servants are recruited for a lifelong career anywhere in the public administration. Their skills are usually unrelated to the technical requirements of the rotating positions to which they are assigned, as they progress through the ranks. This approach emphasizes loyalty to a cadre to which a civil servant belongs rather than merit (Zafarullah and Sarker, 2020). Occasional attempts have been made to change the model. As part of the Punjab School Reforms Roadmap in Pakistan, recruitment criteria for district officials were strengthened. Teachers who applied as teacher mentors were selected based on tests for pedagogical knowledge, coaching and leadership skills. Some district roles needed to be recruited from outside the district to ensure access to specialized data and analytical skills (Naylor et al., 2020).

BOX 5.4:

Political influence on staffing challenges effective system leadership

Some systems clearly separate elected politicians and civil servants, but in others, elected officials are integrated into the public service (Gerson, 2020). The influence of politics in the identification of the senior positions in the civil service implies that these positions change automatically with each incoming administration. Ministries may decide on selection based on formal rules related to education levels or from a pool of preselected candidates; in other contexts, ministers do not have any constraints. Ministers in Germany hardly have any restrictions in identifying and appointing höherer Dienst (top officers) in their administration (Veit, 2020).

In Indonesia before 2001, an appointment to a school supervisor position was used as a form of promotion for public school teachers. Since 2001, with a decentralization of functions, heads of district offices have gained greater control over these positions, which have now started to be occupied by non-teachers. Patronage networks have, therefore, developed under the control of local politicians. Meanwhile, teachers have been prevented from progressing to local executive positions that could improve their salary (Rosser et al., 2022).

Political influence has ethical and accountability implications (Gerson, 2020). District office heads and politicians may use personal connections rather than merit to select and promote officers. Patronage practices weaken administrations and public service delivery, as recruitment and promotion are not linked to skills and competencies but to discretionary decisions (Arif et al., 2022). In Nigeria, 40% of civil servants had neither a written test nor an oral interview before being hired, while 36% of senior officials and officers in managerial positions did not have to follow a competitive selection process (UNODC, 2019). In the state of Ebonyi, 94% of education officials surveyed reported that the recruitment process was determined by political influence (Ukeje et al., 2020).

Political influence negatively affects the effective functioning of the education system. In Bangladesh, transfers have been reported to occur more frequently before elections. Rotations are so common that officials serve on average in four institutions during their career (Zafarullah and Sarker, 2021). The practice of frequent and discretionary transferring between posts, especially at the subnational level, is reported to be pervasive in some countries. In the education administration of Pakistan, continuous rotation hampers long-term planning and provision of education services. In Balochistan province, the secretary of the secondary education department changed six times in two years, while district education officers' transfers were also frequent, abrupt and often politically motivated (Balochistan Secondary Education Department, 2020; World Bank, 2018).

By contrast, position-based systems recruit officers internally or externally based on defined vacancies (van Acker, 2019), with the possibility of identifying professionals with matching expertise, especially at the senior level (Gerson, 2020). Countries are moving towards a merit-based system or a combination of position-based and merit-based systems to increase officers' competencies (Breaugh and Hammerschmid, 2021). Based on a model from Australia and New Zealand, Chile's Sistema de Alta Dirección Pública (Senior Public Management System), introduced in 2003, identifies central and local senior management officers with managerial and leadership competencies based on an open and transparent competitive selection and an outsourced recruitment process (OECD, 2018). Since then, the system has diversified and the administration's composition has expanded. At the school level, 72% of new students are in a public school where the director was appointed through this system (Chile Ministry of Finance, 2023), with positive effects on local administration performance (Casetti, 2022). Among new appointees, 50% had a postgraduate degree, compared to 42% of those appointed prior to the change (Chile Ministry of Finance, 2019).

Some high-income countries have introduced sophisticated forms of skills assessment for senior officials. They may include situational interview questions to assess leadership competencies (OECD, 2021b). All senior civil servants in the Republic of Korea are appointed based on a mandatory leadership assessment. A group of trained assessors, including retired officers and human resource professionals from the private sector, test the candidate's leadership capacity through simulated policy and management problems (Gerson, 2020).

> "Some high-income countries have introduced sophisticated forms of skills assessment for senior officials"

As with the selection of school principals (**Chapter 3**), politicians may also interfere, making public job appointments at their discretion, based on political connections instead of individual qualifications and competencies (**Box 5.4**) (Colonnelli et al., 2020).

SYSTEM LEADERS NEED TO BE INTRINSICALLY MOTIVATED TO IMPROVE LEARNING

The motivation of education officials to initiate and sustain certain behaviours that influence the system varies. Some may be driven by their values and desire to engage and pursue a goal of connectedness (Ford et al., 2020). They may also be influenced by the organization's mission and by feeling empowered by the possibility to contribute to its achievement (Honig, 2022). Candidates for public sector jobs are believed to be moved by an intrinsic motivation to contribute to social value (Vogel and Willems, 2020). A study based on the Worldwide Bureaucracy Indicators in 132 countries found that the vast majority of professionals and officials were earning substantially less than they could in the private sector (Ali Baig et al., 2021). According to a survey conducted among more than 30,000 employees from 50 countries, the likelihood of applying to the public sector was directly related to levels of altruism – and the strength of this relationship was almost twice as high in high-income countries (Dur and Zoutenbier, 2011).

Leveraging social motivation, France launched the Choisir le service public (Choose Public Service) campaign to attract people to work in the public administration. Based on the message that public officers build 'a fair, sustainable and innovative society', the initiative is linked to an online platform that provides information about the recruitment process and job descriptions (France Ministry of Transformation and Public Service, 2022), to emphasize future officers' sense of purpose.

> "A sense of autonomy and competency is associated with the likelihood that officials exercise leadership"

A sense of autonomy and competency is also associated with the likelihood that officials exercise leadership (Ford et al., 2020). A study of civil servants working on public projects in Nigeria, including in education, showed that autonomy was positively associated with project completion, regardless of any promised incentives. Incentives and monitoring were conversely negatively associated with project completion and likely to curb officials' intrinsic motivation (Rasul and Rogger, 2018). Management practices in the education ministry also strongly influence motivation and behaviour. In Thailand, district officials who felt trusted and supported were found to have higher motivation and be more likely to prioritize social causes (Honig, 2022).

The initiation and conceptualization of reforms in India was triggered by trusted and motivated education officials (Singh, 2023). In Bihar state, Teaching at the Right Level, a remedial education programme, was rolled out under the leadership of a district magistrate, the executive head of the district administration, who was committed to equity in learning. While evidence of the approach's effectiveness was important, the commitment of education officials combined with political endorsement was a necessary condition for the administration to request its implementation in formal education. The district magistrate was the one who invited Pratham, the civil society organization that developed the programme, to implement it in the district's schools (Bano and Oberoi, 2020).

Yet education officials' performance assessments do not always include such metrics as creating value for society, engaging in participatory decision making, being accountable and ensuring an organization's integrity (Vignieri, 2018). Reward and appraisal systems usually measure organizations' ability and efficiency to produce specific outputs based on predefined goals (Önder and Zengin, 2022). Mechanisms of performance evaluation and appraisal that are designed for the private sector are not always suitable for public systems (Schnell et al., 2021) and may backfire. In Ghana, a study showed that performance evaluations may trigger behaviours that are counterproductive to effective system leadership. Employees may try to please superiors and achieve the goals set for them, rather than demonstrating initiative and leadership (Rasul et al., 2018).

In contrast to the traditional approach of performance assessment, public value management aims to introduce mechanisms to assess the creation of value for society. Commissioned by the UK government, an independent evaluation in 2017 called for an improved assessment of the public administration's sustainability and effectiveness in terms of outcomes for citizens. The evaluation emphasized the need to empower leaders within the system and encourage their creativity and innovation to contribute to public value (Barber, 2017). In 2019, a Public Value Framework and a practical guideline were developed, including dimensions based on user and citizen engagement and officers' skills and mindset with a focus on their leadership capacity (United Kingdom Treasury, 2019).

SYSTEM LEADERS CAN BE TRAINED TO PERFORM LEADERSHIP FUNCTIONS

Pre-service training and induction can provide officers with key knowledge and capabilities for leadership, as well as the opportunity to network with other professionals (Marijani, 2017) and learn about the organization's

values. In Colombia, the National Plan of Formation and Training for Public Servants mandates that an induction programme be provided for all new senior officials through the Higher School of Public Administration (Sanabria and Avellaneda, 2015). The training aims to instil the organization's ethical values in newly appointed employees (Colombia Institute of Public Ministry Studies, 2021).

System leaders with a specific skillset and mindset can serve as thought and practice leaders (Harris et al., 2021). The United Kingdom established the Leadership College for Government in 2022 to equip officers with the knowledge and skills to address complex issues within the administration and serve as leaders (United Kingdom Government, 2024). In response to an internal study highlighting the shortcomings of training and induction (Baxendale, 2015), the Senior Civil Service programme trains promoted officers and new entrants within two months of appointment for two to four weeks on ethics and leadership principles. It combines virtual learning with in-person sessions that give the opportunity to build a network and to be paired with a buddy (Government Campus, 2022).

Training and professional development opportunities may compensate for the lack of adequate competencies (Childress et al., 2020). Continuous training is institutionalized in most public administration systems, provided by individual ministries and agencies or the central authority on human resource management (OECD, 2017). Established in 2011, the Centre for Leadership and Learning in Australia designs and delivers training for between 9,000 and 11,000 employees every year. Its leadership development programme focuses on providing civil servants with capabilities associated with the practice of 'using influence to bring about change'. The programme includes modules on gender and effective communication (Australian Public Service Commission, 2020).

Some countries have institutionalized leadership academies to support the development of education system leaders. In Wales, United Kingdom, the National Academy for Educational Leadership was established in 2018 to provide a vision and strategy for education leadership and professional development opportunities for current and aspiring leaders across the education system (Wales National Academy for Educational Leadership, 2021). As part of the training, the three-year Academy Associates Programme selects and trains school and other education leaders to become system leaders and engages them in policy development that takes school perspectives into account (Tournier et al., 2023). In Ghana, the Ministry of Education's Reform Delivery Unit established the National Educational Leadership Institute in 2023 with the support of the Jacobs Foundation to provide independent and certified training on leadership to education officers and school principals. About 400 candidates were identified at the central, regional and district levels to take part in the 5 month pilot programme (Ghana Ministry of Education, 2023; Jacobs Foundation, 2023).

However, the content of training does not always focus on key areas of effective system leadership (Nolan-Flecha, 2019). Paraguay's senior and middle managers can attend in-service training once a year. However, the sessions are not sufficiently focused on developing key aspects of leadership for public officers, including motivational leadership and management, decision making, or risk management (OECD, 2018).

“Some countries have institutionalized leadership academies to support the development of education system leaders”

When training focuses on leadership, it can lead to positive outcomes (Mundy et al., 2024). Launched in 2007, Brazil's Jovem de Futuro (Young of the Future) is a national management capacity programme that has trained directors, supervisors and regional directors on identifying student-centred objectives and ensuring their alignment in policy implementation. Jovem de Futuro was found to have helped improve proficiency levels in mathematics and Portuguese (Adelman and Lemos, 2021; Paes de Barros et al., 2019).

Private providers compensate for the lack of training on leadership. Along with the review of its competency profiles for education officers, Malaysia aims to strengthen the leadership capacity of central and local officers to achieve the objectives of the Education Blueprint 2013–25. However, the National Institute of Public Administration has not been able to keep up with new demands. Edvolution Enterprise, a not-for-profit social enterprise, collaborates with the Ministry of Education to provide leadership training to public officials through the Applied Leadership Programme. The Ministry selects officials who participate in the training and allows them to allocate four hours every month to professional development on leadership. Sponsored by private donors, the programme started in 2021 and by the following year had trained 176 district education officials across the country (Edvolution Enterprise, 2022).

CONCLUSION

System leaders influence how an education system works at different levels. Central officers initiate reforms and monitor policies and progress. Local officers ensure coherent policy implementation through data use, plan teacher and school principal professional development, and support school principals. However, their roles have been under-researched and underestimated.

When empowered with resources and decision-making power, educational officers can drive change by setting expectations, leading teaching and learning, fostering collaboration, and developing people. Any educational officer, with a degree of autonomy and a sense of purpose, has the potential to improve student learning outcomes and experience.

However, officials' focus on learning is often weakened by the administrative burden and challenged by undefined responsibilities. Sometimes they are even denied a leading role in shaping reforms. Civil servants may not always have the technical knowledge and skills to serve as system leaders; they may even be unaware of the role they are called upon to play. Education ministries need to develop education officials' capacity to serve as system leaders by ensuring transparent and competitive selection and offering continuous and relevant training.

On 29 August 2024, Deputy Secretary-General Ms. Amina J. Mohammed interacts with a girl at the UNICEF-supported e-learning centre at Abdullah Naji internally displaced gathering site in Port Sudan.

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CHAPTER

6

Political leadership

KEY MESSAGES

Politics and education are closely linked.

- Ideology and education aspirations are aligned. Analysis of manifestos from 19 countries in Europe and Northern America found that left-leaning parties focused on equality of outcomes, while right-leaning parties emphasized equality of opportunities.

Elections often drive education reform more than vision does.

- Broad-based electoral pledges are often kept. Among 16 African countries that abolished school fees between 1990 and 2007, 11 did so immediately after elections.
- Promises of investment in education can attract voters, particularly in competitive elections. In India, analysis of electoral data over 30 years found that education expanded faster in constituencies with competitive elections.
- Politically motivated teacher hiring and firing, which can be exchanged for support, was still found in operation in 29% of countries in 2021.

Political leaders can have considerable influence over education vision and reform.

- Coalition building is important for driving forward reform. The practice was a central approach taken by political leaders in several countries in Latin America when undergoing highly contested teacher policy reforms in the 2000s.
- Ministers also need to have their capacity developed: A survey of 283 members of parliament underscored the need for induction and continuous professional development.
- Over 30 years, having more women in parliament significantly improves primary completion globally. Yet gender imbalances remain wide. The share of women appointed to education minister positions increased from 23% in 2010–13 to 30% in 2020–23.

Frequent changes in education ministers hinder effective education reform.

- Analysis for this report shows that the average education minister's tenure was 2 years and 3 months. The average tenure is longer if ministers are female (by 7 months), have prior teaching experience in schools (by 5 months) and have a postgraduate degree (by 4 months).
- High turnover hampers the effectiveness of education reform. Analysis of World Bank education projects between 2000 and 2017 in 114 countries found a substantive negative correlation between ministerial turnover and project performance.

Diverse actors aim to influence the direction of education systems

- Teachers, students and employers engage with governments and try to influence education priorities. In 2021, as part of a global survey of 128 union representatives, 37% reported that unions were always or often consulted by governments on education policy.
- Researchers contribute insights towards a deeper understanding of important issues, which enhance policy discussions. But whose opinions are listened to in policy discussions is a major issue.
- International organizations have come to play a very influential role in education. Their legitimacy depends on their statutes, internal procedures, and their ability to deliver support and generate evidence.
- Civil society and media organizations can keep other education actors accountable and can influence national education debates by doing so.

Political motivations determine education system development 117
The direction of education is influenced by many other actors 127
Conclusion 137

This report defines leadership as 'a process of social influence which maximizes the efforts of others towards the achievement of a goal'. Apart from individuals working within education systems, a range of other actors at the top and outside the education system play prominent roles in political and social processes to shape education goals and influence policy, planning, financing and implementation decisions.

Visionary political leaders can prioritize education for local and national development, build coalitions of action, provide enabling support, and ensure implementation. Non-state actors can steer governments towards inclusive education of good quality and demand that authorities are accountable. International organizations can help frame the global debate on education, facilitate peer learning, and provide technical advice and financial assistance to ensure national education systems respect human rights and support sustainable development. However, in reality, many of these actors' motivations and interests may not be fully aligned with the goal of education improvement. Moreover, their actions may be constrained by a lack of experience, resources and an enabling environment in which to exercise leadership.

This chapter focuses on how this diverse set of political actors exercises leadership in education. It looks at elected politicians, political parties and ministers of education, as well as individuals, groups and organizations, such as teacher unions, student associations, business councils, international organizations, research communities, intellectuals and artists, civil society, and the media. It begins by examining political motivations and actors' perceptions of their roles, responsibilities and leadership duties. It also examines three types of influence exerted on education systems: advancing agendas from an interest group perspective, lobbying for certain education ideas and priorities, and holding governments accountable.

POLITICAL MOTIVATIONS DETERMINE EDUCATION SYSTEM DEVELOPMENT

A comprehensive evaluation of political leadership in education demands an understanding not only of individual experiences but also of broader political motivations and institutions. While discussion usually focuses on individual leaders and their charismatic qualities, this makes it difficult to extract broader lessons.

EDUCATION FEATURES STRONGLY IN NATIONAL POLITICAL AGENDAS

National development plans typically see education as crucial for achieving various goals, from economic competitiveness to social cohesion (Schwab, 2019; Vladimirova and Le Blanc, 2015). The economic success of East Asian countries has been attributed to a consistent focus on educational attainment and skills (Glawe and Wagner, 2020; Morris, 1996). Lee Kwan Yew, Prime Minister of Singapore from 1959 to 1990, is held as an example of a political leader who contributed to his country's prosperity. Sustained education investment led to highly capable, well-supported professionals, including teachers, that staffed robust institutions (Tan et al., 2017).

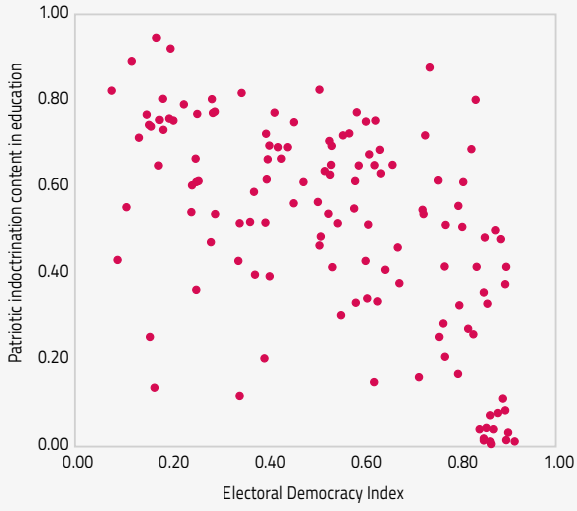
Education is frequently emphasized in political rhetoric for its potential to ensure quality and equity. In Chile, after the end of the dictatorship, education was highlighted in presidential speeches and finance ministry commitments as the key to alleviate poverty and ensure equity (Avalos, 1996). Governments also use education systems to promote certain visions of citizenship and national identity. However, the push towards education expansion has not always had benign motivations. Rather, elites have used it as a tool of social control and to counter threats against the status quo (Darden and Mylonas, 2016; Paglayan, 2022).

In 19th century Prussia, absolute monarchs turned to basic education to promote order in the countryside, strengthen military reforms and foster patriotism (Paglayan, 2024). Between 1850 and 1914, in the United States, those states with higher percentages of immigrants enacted compulsory schooling laws to promote civic values and cultural homogenization earlier than other states (Bandiera et al., 2018; Tyack, 1974). Thailand (Suryadinata, 1997) and Türkiye (Cansunar and Mrchkovska, 2024; Zurcher, 2014) implemented similarly motivated compulsory education policies in the late 1800s and early 1900s. Between 1925 and 2014, boosting primary education levels helped autocratic regimes maintain power and resist democratization. Colonial powers avoided universal education policies in their colonies, giving preference to some groups over others and sowing ethnic discord (Alesina et al., 2021).

The value of education for socializing citizens in a certain national image remains relevant today. In a 2020 survey of over 900 senior officials from 35 governments in low- and middle-income countries, socialization was ranked the highest priority outcome, followed by secondary school completion, then by foundational literacy and numeracy (Crawfurd et al., 2021). Official textbooks are a key tool to shape views about citizenship (Lerch et al., 2017). Analysis of a major textbook reform in China between 2004 and 2010 found that the reform shaped young people's attitudes on political participation and economic governance (Cantoni et al., 2017). In Ethiopia, Rwanda and South Africa, contested narratives on race and ethnicity were excluded from textbooks (Awgichew and Ademe, 2022; Russell, 2020). Curriculum emphasis differs between different types of political regimes (Paglayan et al., 2023), for instance in terms of the emphasis on patriotic content in curriculum and patriotic symbols in schools (**Figure 6.1**).

Political leaders have used language of instruction policy as a tool for nation building, but historically the vision was often not inclusive. In France, the 1833 Guizot law promoted nation building through state-sponsored mass public primary schooling and prioritizing the French language over the 40 different languages or dialects spoken in the country at the time (Blanc and Kubo, 2023). In the same period in the United Kingdom, the 1847 Reports of the Commissioners of Inquiry into the State of Education in Wales claimed that the Welsh language was not appropriate for education, 'a vast drawback to Wales, and a manifold barrier to the moral progress and commercial prosperity of the people' (Roberts, 2012). African countries have had to contend with a range of language of instruction challenges. In the United Republic of Tanzania, the 1967 Arusha Declaration emphasized education for self-reliance and a vision of national over ethnic identity centred on African socialist values and the development of Swahili as the national language (Haugen, 2022). In Senegal, the use of French as an official language has been heavily contested by national language advocates (Iwasaki, 2022).

FIGURE 6.1:
Curriculum emphasis varies by type of political regime
Patriotic curriculum content and school symbols and Electoral Democracy Index, 2021



Notes: The Electoral Democracy Index consists of indices of clean elections, freedom of expression, elected officials and suffrage. The index of patriotic indoctrination content in education measures the patriotic content in the curriculum and celebration of patriotic symbols in schools more generally.
GEM StatLink: https://bit.ly/GEM2024_fig6_1
Source: Neundorf et al. (2023).

In multi-party political systems, political leaders' education priorities can be seen in election manifestos. A study of over 2,000 political party election manifestos from 25 high-income countries between 1946 and 2003 found that educational expansion was the second most supported policy proposal in manifestos, after social services and social welfare expansion. Positive statements on expansion increased from 74% in the 1940s to 89% in the 2000s in manifestos of left-leaning parties, and from 36% to 76% in manifestos of right-leaning parties (Jakobi, 2011). A comparative analysis of 15 radical right parties' manifestos in 13 Western European countries found that they focused on school choice, discipline and vocational skills over academic skills. They favoured content that promotes national values, language, culture or history, and lobbied for parental consent for discussion or presentation of ethical, social and moral topics (Berg et al., 2023).

Ideological positions condition political parties' education goal aspirations. Another analysis of manifestos from 19 countries in Europe and Northern America found that all parties highlighted equality as an education goal. Parties on the left side of the political spectrum were more likely to talk about equality of outcomes while those on the right side spoke more about equality of opportunity (Gingrich and Giudici, 2023). A comparative analysis of India's election manifestos showed that the Indian National Congress party pledged free education for Dalit and Adivasi boys and girls, along with scholarships for scheduled caste and tribe students while the Bharatiya Janata Party advocated for universal enrolment without specifying caste beneficiaries and supported reserved positions for poor students (Adhikari et al., 2022). In the 2022 election in Kenya, the United Democratic Alliance manifesto included pledges for a National Open University and for addressing teacher shortages (United Democratic Alliance, 2021). The One Kenya Coalition party manifesto promised free education, 300,000 new teachers and school meals (Azimio la Umoja, 2021).

> "Ideological positions condition political parties' education goal aspirations"

Voters' opinions tend to reflect the ideologies of the political parties they support. In the United States, a 2023 survey showed that half of adults believed public education to be on the wrong track. Supporters of the Democratic party believed lack of funding was the main challenge (78%) while supporters of the Republican party thought that the main problem was teachers bringing personal political and social views into classrooms (76%) (Minkin, 2024). In eight Western European countries, respondents who sided with left-wing parties were the biggest supporters of increased education spending (87%), followed by centrists (77%) and those supporting right-wing parties (71%) (Busemeyer et al., 2018).

When government changes are associated with major ideological shifts, education can become a major battleground. In the Plurinational State of Bolivia, Evo Morales, its first indigenous president in 2006, focused on mainstreaming the needs of indigenous people, using his political party, Movimiento al Socialismo, to focus on ethnic and cultural inclusion (Bastidas Redin, 2020). Public spending also increased, with an emphasis on primary and secondary education (Bertelsmann Stiftung, 2024; Fontdevila and Verger, 2016). In Colombia, the election of Gustavo Petro as the first left-wing president in the country's history in 2022 was followed by the 2022–2026 National Development Plan, whose education focus was on citizenship, reconciliation, socioemotional skills, racism and climate change, while committing to increase equitable access to higher education (Colombia Government, 2023).

In Poland, in its quest for national identity building, a right-leaning government increased the centralization of school management after 2015. A new core curriculum sidelined anti-discrimination, human rights and sex education in favour of teaching traditional gender roles. Non-governmental organizations were marginalized or banned from entering educational institutions (Neumann and Rudnicki, 2023). Since the centrist coalition came to government in 2023, education system reforms have focused on reversing those decisions (Semonsen, 2024), phasing out history and family life curricula for civic and health education (European Commission, 2024).

In South Africa, the end of apartheid in 1994 also signalled a radical shift of political direction in education. The Bantu Education Act, which lasted from 1953 to 1994, infamously ensured that people of colour systematically received an inferior, segregated and less challenging education, and socialized students to accept this discrimination. The struggle against this system was a critical aspect of ending apartheid. The new Constitution emphasized redressing inequalities through education. The South African Schools Act of 1996 repealed all forms of apartheid schooling and began school desegregation and public school funding equalization reforms (Ndimande, 2013).

Education actions are often driven by elections rather than a long-term vision

While many governments try to shape education to fit their vision of national development, education decisions are often the result of electoral politics, which includes favours and exchanges between parties and voters. Despite the potential to use education as a tool to put a vision into practice, heads of government are often not willing to engage in contested education reform battles and opt to use the education ministry for political purposes, such as to reward political supporters and compensate coalition parties, or for ministers to use this position as a springboard for another position (Corrales, 1999).

Broad-based electoral pledges are often kept. In 11 of 16 fee-abolition episodes that occurred between 1990 and 2007 in African countries, fees were abolished immediately after an election (Harding and Stasavage, 2014). Analysis of individual-level data from 27 African countries showed that democratic elections significantly increased access to primary education for children in rural areas (Harding, 2020).

Competitive elections can be a push to make changes. In high-income countries in East Asia, Europe, Northern America and the Pacific, parties are more likely to include education statements in their manifestos when elections are particularly competitive and use education investments to attract voters (Jacques, 2022). In India, analysis of electoral data over 30 years showed that education was more likely to expand faster in constituencies where elections were more competitive (Read, 2022). In the United States, analysis of party competition between 1880 and 2010 from all 50 states found that systems with more party competition spent more on human capital investments, leading to longer life expectancy and education outcomes (Gamm and Kousser, 2021).

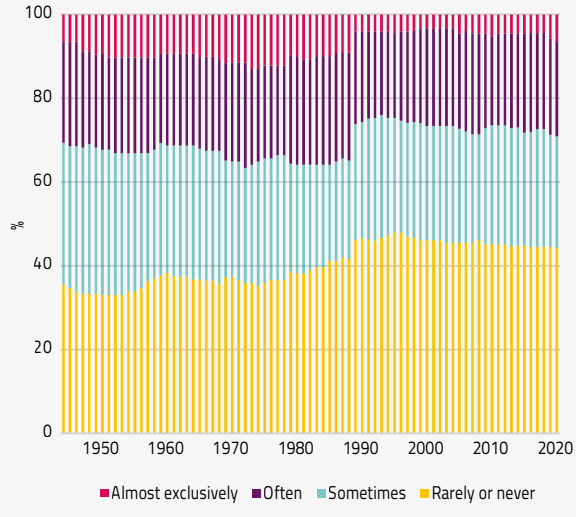
But elections are unlikely to create an incentive for politicians to promote education unless enough voters value such efforts. Voters may not reward politicians for investing in education because they may already be satisfied with the education available to them. In 21 high-income countries, the partisan composition of governments did not have any effect on public education spending from 1995 to 2010. The political directions chosen during the 1950s through the 1970s may have locked governments into following particular education spending pathways, limiting their room to manoeuvre (Garritzmann and Seng, 2016). Moreover, voters may prioritize other demands when choosing between parties. In Latin America, voters who reported lower levels of trust in politicians' promises were more likely to support transfers rather than spending on public goods, such as education, because transfers help address immediate needs, whereas education provides benefits in the long run (Keefer et al., 2020).

> Elections are unlikely to create an incentive for politicians to promote education unless enough voters value such efforts

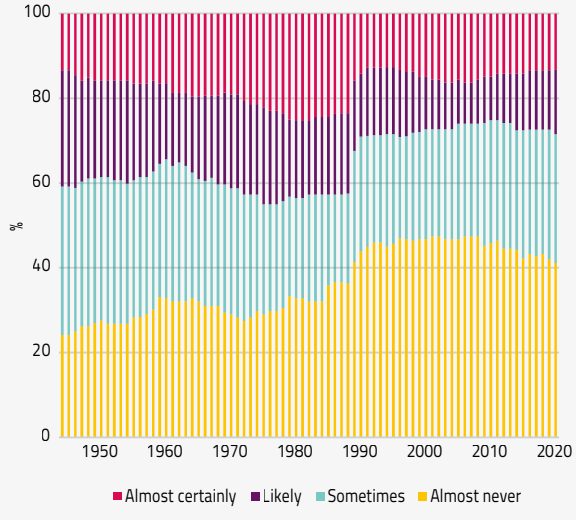
Politicians can be motivated by political gains, which can be acquired by improving public service provision or by using public services to distribute patronage. In some countries, politicians use state resources strategically through party networks while in others they rely on community leaders and informal networks for exchanges. An expert survey across 88 countries classified patronage relations into cases of gifting consumer goods, preferential access to public or quasi-public employment, social benefits, awarding of procurement contracts, and administrative proceedings and decisions (Yıldırım and Kitschelt, 2020).

FIGURE 6.2:
Teacher hiring and firing is politically influenced in many countries
Distribution of country teacher hiring and firing decisions, by political influence type, 1945–2021

a. Teacher hiring



b. Teacher firing



Notes: Political teacher hiring is based on the response to the question: To what extent are hiring decisions for teachers based on their political views and/or political behaviour and/or moral character? Political teacher firing is based on the response to the question: How likely is it that teachers would be fired if they were to publicly express political views that contradict the dominant political order?
GEM StatLink: https://bit.ly/GEM2024_fig6_2
Source: Neundorf et al. (2023).

School principal positions are a highly desirable patronage benefit that can be granted in exchange for support, as has been documented in Brazil (Brollo et al., 2020), Indonesia (ACDP, 2015) and the Russian Federation (Forrat, 2018). The extent to which countries base teacher hiring or firing decisions on the political views or affiliations of prospective or current teachers has declined, as teacher unions' independence has grown (Paglayan et al., 2023), but it remains considerable. In 2021, 29% of countries were likely to base their hiring and firing decisions, often or almost certainly, on political views (**Figure 6.2**).

In Brazil, political party turnover in municipalities increased the replacement rate of municipal school principals and teachers by 28 and 11 percentage points, respectively. The replacement rate is two to three times higher in low-income municipalities but does not differ between right-wing and left-wing parties. The new principals and teachers are likely to be less experienced and have lower education qualifications than those they replaced (Akhtari et al., 2022).

In Indonesia, the introduction of competitive, direct elections at the district level coincided with the decentralization of responsibility for hiring teachers to local authorities at that level. Analysis of government teacher censuses from 2006 to 2010 found that the number of contract teachers increased after direct elections. There were more contract teachers on payroll during election years than in non-election years. District heads were also found to have increased the certification of civil service teachers, which doubled their salaries. Contract teachers hired during election years had lower educational attainment than those hired outside election years (Pierskalla and Sacks, 2020).

Efforts to depoliticize the teacher hiring process have faced challenges. In Pakistan between 2014 and 2016, even as merit-based appointments were being promoted as a way forward, appointments were still being made on the request of some politicians. Civil servants dealt with patronage requests from the party leadership all the time (Ali, 2020).

> Education is not viewed as a high prestige cabinet portfolio position

Close political ties can be detrimental for education outcomes. In Argentina, new pre-primary schools were disproportionately constructed in districts that were favourable to the governing party, as measured by the extent of their electoral advantage (Paglayan, 2013). In Colombia, a nationwide audit of student enrolment found that stronger political links between local mayors and regional governors increased the proportion of ghost students but did not increase test scores (Fergusson et al., 2023). In Kenya, ethnic favouritism in education has led to greater availability of schools and therefore more years of educational attainment for citizens of the same ethnic group as the president and education minister (Kramon and Posner, 2016).

Overall, these examples serve as a reminder that, while it is tempting to think of political leaders as focusing exclusively on achieving specific transformational goals in education, in practice their choices are often affected by several unrelated short-term considerations.

POLITICIANS NEED TIME, SUPPORT AND INSPIRATION TO LEAD

Those in positions of authority and power are expected to take charge and lead an education agenda. The roles and responsibilities of key political leaders in education are fulfilled in a variety of ways, reflecting their experience, needs and contexts.

Education ministers balance multiple demands during short tenures

Ministers of education manage public education systems and are directly responsible for the education of the vast majority of children in the world. The selection and functions of ministers vary depending on the political system, which influences the extent of their autonomy, and their accountability relationships with their leader, political party, the legislature and voters (Dowding and Dumont, 2015). Some ministers and bureaucrats have historically had considerable influence over education policy and visions. In New Zealand, the political leadership of Minister of Education (and future Prime Minister) Peter Fraser and the technical leadership of Clarence Beeby, Director of Education, led to the Fraser-Beeby statement in 1939, which focused on free provision and equality of education opportunity (O'Neill, 2023; Renwick, 1998). In Sri Lanka, Minister of Education C.W.W. Kannangara championed the free education policy for several years before it was put into law in 1945, despite substantial opposition from socioeconomically privileged groups (Medagama, 2014; Sumathipala, 2022).

Education is not viewed as a high prestige cabinet portfolio position, compared to finance, defence and foreign affairs, which are closer to the centre of political power (Dowding and Dumont, 2015; Nyrup and Bramwell,

TABLE 6.1:
Average tenure of education ministers, by country and individual characteristics, 2010–23

	Age (years)	Male (%)	Postgraduate degree (%)	Experience in education (%)	Complete tenure (days)
World	53	73	72	23	808
Region					
Central and Southern Asia	52	84	67	17	793
Eastern and Southeastern Asia	57	84	76	16	798
Europe and Northern America	49	59	62	18	734
Latin America and the Caribbean	53	67	72	30	862
Northern Africa and Western Asia	53	73	72	23	808
Oceania	51	80	52	26	881
Sub-Saharan Africa	56	73	85	32	860
Income group					
Low income	55	79	89	29	728
Lower middle income	55	80	72	22	867
Upper middle income	54	76	82	26	784
High income	51	64	59	19	827
Liberal Democracy Index					
Low	54	84	79	23	882
Middle	54	76	80	25	733
Top	51	62	62	18	698
Year of appointment					
2010–2013	52	77	71	22	
2020–2023	53	70	70	25	

Note: The analysis covers the period 1 January 2010 to 31 December 2023 and includes 1,412 ministers of education from 211 education systems.
Sources: GEM Report team analysis; Neundorf et al. (2023) for the Liberal Democracy Index.

2020). There is a perception that education ministers are more vulnerable to be replaced than other ministers, although evidence is mixed. Retention during cabinet changes and reshuffles are indications of the perceived importance of portfolios. In Argentina, between 1983 and 2013, average tenures were 31 months for the foreign minister and 21 months for the education minister. In government reshuffles between 1947 and 2012 in Japan, finance and foreign affairs ministers were retained over 50% of the time, while education and environment ministers were only retained 30% of the time (Dowding and Dumont, 2015). But analysis of European Union country ministers did not find the same results (Perez and Scherpereel, 2017). This analysis supports the hypothesis that higher turnover is associated with lower levels of ministerial control.

Analysis of a database of 1,412 ministers of education and higher education from 211 education systems since 2010 compiled for this report shows that the average minister is 53 years old, highly educated (74% have a postgraduate degree) and male (73%). About 23% have prior experience teaching in primary and secondary education. The average tenure for those ministers whose complete tenure is observed in this 14-year period was just under 2 years and 3 months (**Table 6.1**). Ministers have a slightly longer average tenure if they are female (by 7 months), have prior teaching experience in primary or secondary education (by 5 months), and have a postgraduate degree (by 4 months). Among countries ranked by the Liberal Democracy Index, ministers from countries at the top third had the shortest average tenure (1 year and 11 months) while those from the bottom third had the longest (2 years and 5 months). The probability of surviving in this

ministerial position is 79% at one year, 49% at two years and 33% at three years (**Figure 6.3**).

Ministers in Europe and Northern America have some unique characteristics. They are the youngest (49 years), even though they come from the region with the highest percentage of people over 65; the average minister in Northern Africa and Western Asia is almost 10 years older (58 years). They have the shortest average tenure (2 years), which is 4 to 5 months less than in Latin America and the Caribbean, Oceania, and sub-Saharan Africa. And they are most likely to be female (41%); only 7% of ministers in Northern Africa and Western Asia are women.

Ministers in Latin America and Caribbean (32%) and in sub-Saharan Africa (30%) are relatively more likely to have prior teaching experience in primary or secondary education. Conversely, ministers in Central and Southern Asia, Eastern and South-eastern Asia, and in Europe and Northern America are least likely to have such a background in teaching (16–18%).

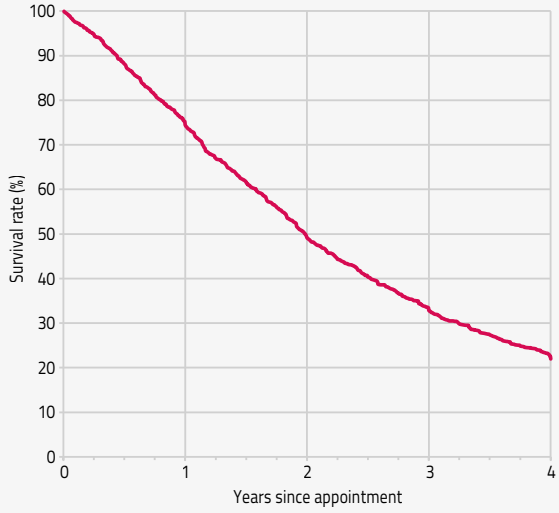
Higher education ministers tend be slightly older (56 vs 52 years), more educated (82% vs 72% with a postgraduate degree), more likely to be men (79% vs 72%), and less likely to have teaching experience in primary and basic education (14% vs 23%).

Change in ministers' characteristics has been slow in this period. Comparing ministers who were appointed in 2010–2013 with those appointed since 2020, there have been no changes in the average age (from 52 to 53 years) and the percentage of those with a postgraduate degree (from 71% to 70%). There was a slightly more noticeable increase in the percentage of those with teaching experience (from 22% to 25%). The most rapid change was in the share of women (from 23% to 30%).

Education ministers have different education and occupational experience profiles compared to other ministers. An analysis of ministerial tenures with a longer time span (1990–2021) but smaller geographical scope (128 countries) than the analysis in this report compared education, health and finance ministers. It showed that about one third of them had no prior political experience. Women were more likely to hold education (20%) and health (25%) portfolios compared to finance (8%) portfolios. Education ministers came overwhelmingly from research or tertiary education backgrounds (39% compared to just 14% among finance ministers), while a few had been teachers in the decade prior to becoming a full-time politician (6%), a much lower percentage than this report's result, which is probably related to the different reference period. Finance ministers tended to have held white collar private sector jobs (37%, compared to 4% among education ministers) or to have been a chief executive officer (14%, compared to 3% among education ministers). About one in five education and health ministers had held a white collar public sector job. Education ministers' education background was varied whereas 47% of health ministers had studied medicine and 65% of finance ministers had studied economics or management (**Table 6.2**).

Ministers leaving office in response to political exigencies is inevitably disruptive, although this is hard to prove. Analysis of World Bank education projects between 2000 and 2017 in 114 countries found a substantive negative correlation between ministerial turnover and project performance. An increase in the order of one standard deviation in the number of education ministers during project implementation was associated with a decrease of 11 percentage points in the probability of a project outcome being declared 'satisfactory' (Bedasso, 2024).

FIGURE 6.3:
Within two years of their appointment, 51% of education ministers have left office
Probability that an education minister is still in office, by time elapsed since appointment



Note: The analysis covers the period 1 January 2010 to 31 December 2023 and includes 1,412 ministers of education from 211 education systems.
GEM StatLink: https://bit.ly/GEM2024_fig6_3
Source: GEM Report team analysis.

TABLE 6.2:
Education, health and finance ministers, by background characteristics, 1990–2021

	Education	Health	Finance
Number	1,981	1,530	1,196
No prior political experience (%)	37	33	40
Female (%)	20	25	8
Previous occupation (%)			
Research or tertiary education	39	15	14
Political party	6	7	5
Medical doctor or healthcare	2	27	1
Chief executive officer	3	5	14
Private sector, white collar	4	5	37
Public sector, white collar	19	19	4
Teacher	6	2	0
Judge or lawyer	5	4	4
Non-governmental organization	2	3	2
Trade union	2	2	1
Education (%)			
Medicine	5	47	1
Other humanities	12	3	2
Law	14	11	11
Economics/business/management	15	13	65

Notes: Data come from 128 countries and the sample includes those with complete data on political experience, occupation and education background. The totals do not add up to 100%.
Source: Nyrup et al. (2023).

Ministers of education often come into the role poorly prepared for their responsibilities and lacking the enabling conditions to lead and create success. In Canada, between 2000 and 2016, there were 81 provincial education ministers, with an average tenure of just under two years. Five former ministers interviewed admitted they had been poorly prepared to the job. At the beginning of their mandate, they were given communications training and received briefings and information on legislation and budgets, but the position lacked a job description. They were overwhelmed by the workload and the diverse actors they had to engage with: departments of education, political party members and cabinet colleagues, taxpayers, students, teachers, parents, school boards, and community organizations. They highlighted how being the main representative of a high-stakes and political portfolio created anxiety. The lack of good data and conflicting opinions with department officials or other party members required political compromise for decision making. On a positive note, establishing commissions or audit committees helped reduce perceptions of political bias or influence (Rouble, 2018, 2019).

> “Ministers argue it is difficult to find time to exercise leadership”

Ministers also argue it is difficult to find time to exercise leadership. In Denmark, analysis of working conditions found that ministers across sectors, including in education, worked around 70 hours a week, spending most of their time in meetings, preparation and political work in the party, which left little time for strategy or policy innovation (Pedersen et al., 2018). In Finland, a new public management model was used to try to shift strategic decision making and high-priority goals to ministers

BOX 6.1:

Ministers have to lead coalitions and change the public's opinion to achieve their main targets

First-person accounts provide some insights about the different balancing acts ministers have to perform in their quest to reform education systems. These accounts often stress the importance of coalition building and relationship management. While illustrative, what ministers say about their tenure and achievements should be interpreted with caution. Politicians cannot fully reveal their genuine beliefs. Their claims of reform efforts' success or sustainability are difficult to verify.

In Delhi, India, Deputy Chief Minister Manish Sisodia, who had responsibility for education between 2015 and 2023, embarked on a reform to promote public education in response to wealthier parents increasingly choosing private providers. The aim was to change performance culture (Aiyar et al., 2021). Financial discretion was increased and the freedom to hire estate managers to manage school infrastructure was granted to empower and gain school principals' trust. Principals who submitted vision documents for their schools were supported to convert them into model schools (Sisodia, 2019).

In Sierra Leone, David Sengeh, Minister of Basic and Senior Secondary Education between 2019 and 2023, built a coalition to overturn a ban on pregnant girls going to school by engaging traditional and online media. His advocacy work focused on changing the perception of many national stakeholders that external donors led the discussion. The ministry established a task force to which external development partners contributed research to convince cabinet members. Once the ban was lifted, stakeholder groups and civil society organizations were engaged to oversee the change, while engagement continued with policy opponents (Sengeh, 2023).

In Peru, Jaime Saavedra, Minister of Education between 2013 and 2016, partnered with the Abdul Latif Jameel Poverty Action Lab at the Massachusetts Institute of Technology to carry out rigorous evaluations of public programmes. Curriculum reform was managed through a four-year nationwide consultation process to collect ideas and support from civil society, experts and teachers. The ministry's role in supporting teachers was key. Extensive communication ensured strong contact with media opinion leaders and public opinion support, which played an important role in negotiations over budget allocations for education with successive presidents (Saavedra, 2022).

and advisory roles to their staff. Based on memoirs and interviews with 28 ministers and top officials, including 3 related to education, a study found that strategy documents spanned much longer time frames than the typical ministerial tenure, which made ministers take a less active role in their formulation (Tiili, 2008). Some education ministers have provided their insights into the priority actions they pushed that were essential for desired policy change and improvements (**Box 6.1**).

Ministers seeking to propose their education vision are genuinely inspired by and seek to learn from examples from other countries. Much attention in the past two decades has been given to countries which have performed well in some dimensions of international large-scale assessments, giving rise to policy-borrowing processes. These have been criticized for often being superficial (Steiner-Khamsi, 2006). But when carried out with sufficient attention to context, they have helped inspire change. A historical account of education system development in Japan and the Republic of Korea has looked at how political leaders saw education as key to a national renaissance. There was strong pressure in Japan to adopt school and university system structures from the United States on a large scale in the post-war years. Following a vibrant public debate, the education ministry negotiated approaches with teacher unions that were suited to the country context, for example on teacher performance assessment. In the Republic of Korea, in the 1950s, the president sent more than 100 Seoul National University faculty members to study the experiences of the United States that led to education reform proposals, which were eventually modified (Crouch and Spindelman, 2023).

Beyond ministers, education authority is held by the heads of local government in many countries. In Italy, analysis using 1,211 close mayoral elections between 2000 and 2015 shows that educated mayors who held at least a university or technical degree increased public investment by 3 percentage points, with 1 percentage point specifically allocated to education, compared to their less educated peers (Mitra, 2023). In Brazil, public primary schools in municipalities led by highly educated mayors elected in close elections between 2000 and 2008 had smaller class sizes and employed a higher share of teachers holding a secondary education degree. But this did not translate into higher enrolment or lower dropout rates (Bastos and Sánchez, 2024).

Legislators can lead through exercising their functions

Parliamentarians can be key leaders through exercising critical responsibilities: legislating, advocating, shaping public finances, scrutinizing the executive's actions and representing their constituents. In the Canadian province of Quebec, as part of the 1997 education reform, the Committee on Education spearheaded an investigation into secondary school completion and held public hearings on the bill. They based their interventions on social consensus on the need for an early childhood education policy, school autonomy and the maintenance of school boards (Bégin-Caouette, 2010).

> "Legislators shape how education reforms are framed and perceived when they debate bills"

Legislators shape how education reforms are framed and perceived when they debate bills. In China, government agencies used the National People's Congress and the Chinese People's Political Consultative Conference between 1983 and 2007 to build policy coalitions with adequate media engagement, to change laws and policy proposals, and to increase central government spending for compulsory education (Lü et al., 2020). In India, the second amendment to the 2009 Right to Education Act, which gave states the right to make decisions about retaining children in grades 5 and 8, was debated extensively in both the Lok Sabha (lower house) and Rajya Sabha (upper house). Ministers and amendment supporters framed the problem of poor learning in terms of low levels of effort by students and teachers with only a few arguing, for instance, that a lack of facilities or parental accountability was the main reason (Kumar and Sharma, 2021).

In Türkiye, education committees' influence on government bills between 2011 and 2015 was more substantial when they utilized their scrutiny powers and consulted with sponsoring ministers and stakeholders (Bektas, 2023). In the United Kingdom, members of the Conservative Party referred to selective government secondary ('grammar') schools in parliamentary debates predominantly as 'good schools' and argued in their favour, claiming they supported social mobility and were a legitimate expression of parental choice (Bainbridge et al., 2022).

In Brazil, between 1995 and 2010, 33 of the 61 education laws that came into effect were initiated by the government. The Congress intervened significantly, through amendments and negotiations, focusing on the continuity and stability of public policies for funding basic education and evaluating higher education. In 2005, during negotiations between the executive and legislative on the funding of basic education, modifications introduced by parliamentarians were included in legal texts. But apart from such interventions, few parliamentarians focused on setting up federal schools in their own constituencies (Gomes and Martins, 2016).

Members of parliament use committees of inquiry to raise awareness and hold government to account (Keppel, 2023). But parliamentary bodies generally feel constrained in leading financial oversight. According to the Open Budget Survey, in 69 of 117 countries, executives shift funding between ministries or departments without authorization from the legislature (IBP, 2019).

The ability of legislatures to perform their functions effectively depends on capacities, incentives and roles in policymaking processes, which vary greatly across the world (Barkan, 2009; IADB, 2006). The constitutional design, historical development of executive power and internal rules governing parliament shape the relationships and the dynamics between the legislative and executive branches (Ishiyama, 2024).

In sub-Saharan Africa, relatively weak legislative oversight is linked to high turnover of legislators and limited independence from the executive (Ambasa et al., 2022; Opalo, 2019) but also to clientelism. In Ghana, responses by 80 out of 275 members of parliament in 2016 showed that citizens expected them to focus first on solving their needs, such as paying school fees, building teacher housing, extending scholarship provision and providing textbooks. This focus limited the time for core duties, leading to absenteeism and hampering oversight (Zackaria and Appiah-Marfo, 2022). Kenyan voters primarily evaluate their legislative representatives on the basis of direct constituency service (Opalo, 2020). The Education and Research Committee held over 300 meetings from 2014 to 2020, ranking sixth behind Public Investment, Public Accounts, Lands, Finance and National Planning, and Environment and Natural Resources. It spent half its time on oversight activities. But voter preference for direct constituency services led to less focus on policy work (Opalo, 2022). In Nigeria, legislators prefer to be members of committees that provide access to services for their constituency, such as education, health, and oil and gas (Demarest, 2021).

The gender of parliamentarians has been shown to matter for education policy efforts and outcomes. According to a panel analysis over a period of 30 years, more women in parliament significantly improved primary education completion rates (Dutta and Maus, 2021). Analysis of

legislators' policy priorities in Hong Kong, China, between 1970 and 2012 found that female legislators were twice as likely as male legislators to propose motions on education (Tam, 2017). Analysis of 19 Organisation for Economic Co-operation and Development (OECD) countries between 1960 and 2015 revealed that increasing the share of female legislators by 1 percentage point increased public education expenditure as a share of gross domestic product by up to 0.1 percentage points (Chen, 2021).

> More women in parliament significantly improved primary education completion rates

A survey of 283 members by the International Parliamentary Union underscored the need for new members to acquire skills in budget analysis and receive induction and continuous professional development (IPU, 2017). Induction can improve politicians' sense of effectiveness and confidence. Necessary leadership knowledge includes technical know-how, conceptual knowledge and the ability to transfer lessons from one issue to another. Political leadership development also requires emphasis on daily political life, structured learning, deliberate practice of new skills and reflection (Hartley, 2014).

THE DIRECTION OF EDUCATION IS INFLUENCED BY MANY OTHER ACTORS

Leadership on education is not just exercised by political leaders through their positions of authority, but also by various stakeholders who are affected by education and implement policies or are interested in the goals of education.

INTEREST GROUPS EXERCISE LEADERSHIP IN EDUCATION

Teachers, students and employers are stakeholders who engage with governments and try to influence education priorities.

Teacher unions can lead change but are often portrayed as resistant to it

Teacher unions – collective organizations that represent teachers' professional interests – vary in terms of size, scale, centralization, objectives and representativeness. Their powerful political influence is often used to contest reforms (Chambers-Ju, 2024; Moe and Wiborg, 2017; Paglayan, 2019). They influence education policy through lobbying, collective bargaining and strikes. In some countries, they have influence over teacher hiring, promotion and transfer decisions. As the largest professional body of civil servants, they can influence elections.

Unions have often been dismissed as expressing vested interests and opposing change (Schneider, 2022). In Ecuador, reforms passed between 2006 and 2017 expanded education and improved learning outcomes in the face of union opposition (Schneider et al., 2019). But unions have nevertheless been important partners in quality-oriented reforms. In Chile, they have been key proponents of reforms designed to increase meritocracy and teaching career prestige (Mizala and Schneider, 2020). In Mexico, many state governments successfully negotiated with the teachers' union to ensure the implementation of the teacher career reform in 2015 (Coyoli, 2024).

> Unions have often been dismissed as expressing vested interests and opposing change

Improving working conditions and education quality is best served when these objectives go hand in hand. In Punjab, Pakistan, teachers resisted a government attempt to introduce English as a medium of instruction and it had to be withdrawn, highlighting the critical need to include teachers in the design phase of radical changes. In India, a reform to introduce activity-based learning was supported by teachers, who engaged in the design and initial testing process (Aslam et al., 2020).

Governments need to engage with teacher unions as teachers are the ones who will implement reforms and have unique on-the-ground perspectives of education needs and priorities. Engaging them will reduce tension and conflict as the interested parties can work towards a shared purpose of improving teaching and learning. In 2021, as part of a global survey of 128 union representatives, 37% reported that unions were always or often consulted by governments on education policy. Unions that perceived a collaborative and supportive relationship with governments were more likely to also be satisfied with teacher pay and working conditions (Thompson, 2021). In Finland, the teacher union has been engaging with the government through a highly collaborative approach (Nivanaho and Thrupp, 2023).

It has advocated for teacher flexibility, autonomy and high academic credentials. These emphases have supported a trust-based relationship (Sahlberg, 2021).

One criticism in some countries is that unions have a weak scope to influence policy due to weak capacity to formulate credible policy proposals. Analysis of the largest teachers' organization in Indonesia argued that it only had marginal influence in debates on professional standards, training and evaluation due to limited technical capacity (Chambers-Ju et al., 2022). In Tunisia, a teacher strike in 2023 called on members to withhold marks instead of walking out of classrooms or engaging in violent protest. But interviews with participants showed that they questioned the union's strategic direction. They were also concerned that charges of clientelism and lack of respect of democratic procedures within their organization undermined their confidence in the union to lead change (Sobhy, 2024).

The exercise of leadership can, therefore, be supported by professional capacity development, in which unions can and should play an important role. Education International, with support from the Jacobs Foundation, has been implementing a project in collaboration with national unions from Brazil, Colombia, Côte d'Ivoire, Ghana, Malaysia, the Republic of Korea and Switzerland to develop effective classroom practices for formative assessment and disseminate them with the objective of informing improved national policies (Campbell et al., 2022).

Student unions have pushed for education transformation

Student unions use political activism to demand accountability in education. In higher education institutions, student unions often advocate for representation and student rights to better advocate for their interests, including education quality, access and social welfare provisions. But they also act with other actors to call for broader goals related to social justice and political reform (Klemenčič, 2024).

Student unions tend to advocate for the right to affordable education. The All-Africa students union worked with students in South Africa in the #FeesMustFall campaign for equitable access to higher education (Kodjie et al., 2024). The National Union of Ghana Students, as a member of a coalition against the commercialization of education, presented a petition to parliament demanding a higher budget for public education (Adonteng et al., 2024).
In Sri Lanka, student politics have focused on preserving the free education policy in place since the 1940s, opposing the privatization of higher education and promoting student welfare issues such as the quality of facilities, meals and monthly stipends (Dulanjana, 2024).

In some cases, student activism focuses on inclusion. In Singapore, the movement to support lesbian, gay, bisexual and transgender students aligns with the value system around respect to family and the community and tries to prevent polarization (Reza and Goh, 2024).
The Zambia National Education Coalition collaborated with the Zambia National Students Union to establish the Female Student Network, which aims to advance gender equality by increasing female representation in leadership roles. In 2021/22, Copperbelt University elected its first female union president, while the University of Zambia and Evelyn Hone College have female vice presidents in their student unions (Zambia National Education Coalition 2023).

Students are active in higher education accountability roles. The European Students' Union and its members are collaborating on developing policy and instruments on quality assurance in European higher education. The European Standards and Guidelines for Quality Assurance has made student involvement in external and internal higher education quality assurance mandatory (Darmanin et al., 2024). In Czechia, students have a strong presence at the university level, backed by national legislation which grants them at least a third of all seats in all academic senates at the faculty and university level (Hammerbauer et al., 2024).

Political interference can have an impact on student unions' effectiveness. In Kenya, the 2016 Universities (Amendment) Act moved the responsibility of selecting student council members for the student associations from an electoral process to a few delegates. The process enabled university administration to influence student council membership and reduced space for student activism. While the previous Student Organization of Nairobi University was able to stop consistent attempts to increase fees, the new politically appointed student association could not prevent student fees from more than doubling (Ojwang, 2024).

Relationships between student unions and governments are frequently confrontational, especially when student activists engage in or even lead wider demands for democratization and political reform. In many cases, these movements are suppressed with violence and their leaders are persecuted for political disturbance and portrayed as seditious.

However, when their actions lead to regime change, student leaders are recognized as heroes. In Bangladesh, student activists were instrumental in the language, education and independence movements of the 1950s and 1960s. Subsequently, however, the two main political parties used their student wings as proxies in a fierce political antagonism. These wings carried out criminal

BOX 6.2:

Students led political efforts to transform education in Chile

In the 30 years following the restoration of democracy in Chile in 1990 and until a major social upheaval in 2019, it has been estimated that 908 student protest events took place. Student protests first took on a wider significance in 2000 but gained momentum in 2006 with the so-called Penguin Revolution by secondary school students. In response, a law increased by 50% allocations to municipal schools, which served mostly more disadvantaged students. Measures such as maintenance on rundown school buildings, free school meals and bus passes were also proposed. The Presidential Commission on Education gathered 81 experts and civil society actors, including student leaders (Donoso and Somma, 2019). Despite this response, the student movement continued and led to the 2011–12 protests, mobilized by the Confederation of Chilean Students, which focused on higher education financing (González, 2020; Wiley, 2013).

The overall movement aimed to shift education from the market-driven model inherited by the military dictatorship of Augusto Pinochet to a social human right within a welfare state framework. The key components of the demand were to improve the quality of public education, remove private for-profit institutions, expand and improve equality of access to higher education, and increase the capacity of the state to regulate and guide higher education.

Student leaders and spokespeople of the 2011–12 protests – Gabriel Boric, Karol Cariola, Giorgio Jackson and Camila Vallejo – were elected to the National Congress. They led the public discussion to include student demands in the political and legislative agenda. Student leaders from the movement joined the government as advisors, assumed key roles in the public administration and started new political parties. In 2022, Gabriel Boric was elected President of Chile and appointed four former Confederation leaders to his cabinet and several others to key national central and local government positions. The student organizations were thus able to question the public's perception of the role of education in society, which led to widespread and intense national discussion on the purposes of schooling and higher education (Argomedo et al., 2024; Bellei and Villalobos, 2024). However, one of the movement's long-standing demands, which is to write off student debt now worth USD 12 billion, has been contested because it would benefit people who are well-off on average: almost half of beneficiaries in 2023 came from the richest quintile (Sanchez, 2024).

activities in campuses, such as extortion, which were tolerated if not encouraged (Patwary, 2011) to the extent that prominent figures urged for an end to these practices (Ahmed, 2019). Nevertheless, a student movement with a clear political agenda continued to operate (Jackman, 2022). One of the recurring campaigns was opposed to quotas for government jobs, which was initially meant to recognize veterans of the 1971 independence war but was subsequently used as a tool of political patronage. In 2024, this movement succeeded in toppling the government and was even recognized for its contribution with positions in the interim cabinet (Alamgir, 2024). The student movements in Chile represent a remarkable case of student leadership (**Box 6.2**).

> When their actions lead to regime change, student leaders are recognized as heroes

Employer organizations tend to promote a skills agenda

Business leaders are interested in shaping education policies to improve the competitiveness of the workforce (Peyser, 2024). Graduates' lack of readiness for the world of work, skills gaps and mismatches are common employer complaints. In 2019, over 5,000 alumni of the Harvard Business School included a weak and deteriorating primary and secondary education system in their top five reasons for the decline of business competitiveness in the United States (Porter et al., 2019). The absence of business sector leadership in education is a common concern in many countries. Business representatives perceive solving education sector problems to be the responsibility of others, even though businesses stand first to benefit from its quality. In the United States, only 3% of more than 1,100 district superintendents rated business leaders as well-informed and 14% rated them misinformed about public education (Rivkin et al., 2014).

In contrast, businesses in countries such as Germany and Switzerland have become involved, sustaining a dual vocational education system by offering apprenticeship contracts, assuring training quality and organizing examinations (Deissinger and Gonon, 2016). For instance, the Union Patronale Suisse (Swiss Employers' Association) is strongly engaged in developing the training agenda, training institutes, curricula and assessments (ILO, 2020).

> Employers can demonstrate leadership in the education and training sector through hiring practices and investments

Taking on such a leadership role is the result of decades of investment and cannot happen overnight. A review of 28 national employer and business membership organizations found that while all expressed a willingness to participate in skills systems, most could not fully lead them. They emphasized the need for a better legal framework to coordinate systems. Although involved in initial project design phases, they lacked ongoing oversight roles. One common leading role for many employer organizations is in establishing sector skills councils. In Uganda, the Federation of Uganda Employers was involved in the strategy development process for technical and vocational education and training, chaired the interim taskforce for Skilling Uganda and final Skilling Uganda Reform Taskforce, and established five sector skills councils (ILO, 2020). In Argentina, various attempts at the national and provincial level have tried to bring together education authorities, industry stakeholders and social partners. In Mar de Plata in the province of Buenos Aires, education authorities worked with the shipbuilding sector to tailor training programmes to identified needs. In San Juan province, a collaboration between public and private authorities for better needs identification and updating of educational content resulted in an agreement between the parties (Valdés, 2022).

Employers can demonstrate leadership in the education and training sector through hiring practices and investments. Temporary employment contracts, for instance, may be not conducive to skill formation (Kalleberg, 2018). Especially in the absence of proper unemployment insurance, employees have fewer incentives to invest in firm-specific skills since they can experience major negative shocks if the industries face challenges (Ahlquist and Ansell, 2023). A common comparison has also distinguished East Asia, where employer demand drove education improvements, and from Latin America, where economic development was not skill-led (Haggard and Kaufman, 2009; Schneider, 2013).

Some employer organizations try to lead by engaging in research, advocacy and philanthropic work. One example is the signalling of future skills needs. A report by the International Organization of Employers has warned governments and businesses about eight crucial skills requirements. Addressing climate change skills, the National Association of Colombian Employers developed a protocol of good practices and is coordinating projects on biodiversity and the circular economy (IOE, 2023, 2024). The Global Business Coalition for Education, established in 2012, is advocating for companies to keep education, human development and training as a core part of their environmental, social and governance strategies (GBCE, 2022). Many large businesses use corporate social responsibility initiatives for influence. In India, where corporate social responsibility spending thresholds are legally mandated, education is a top priority (CSRBOX, 2023; India Data Insights and Sattva, 2024). Philanthropic and corporate actors have championed foundational literacy and numeracy (Evans and Hares, 2021), higher education scholarships (Cosentino et al., 2019), and early childhood education (Palumbo, 2022). Rich individuals like to draw lessons from their own entrepreneurial achievements to influence education policy (Patil and Brakman Reiser, 2021). However, these disparate activities rarely propose a coherent vision for education.

SOME ACTORS LEAD EDUCATION SYSTEMS BY GENERATING IDEAS AND EVIDENCE

Intellectuals are not just another actor influencing education. Public intellectuals exert political influence in their societies through their writing or speaking. As these means of communication change rapidly, so does the modality of their interventions (McCulloch and Peterson, 2022). Their thinking provides the 'frame of reference' from which all other education actors draw. A UNESCO series on 100 historic thinkers on education from antiquity to modern times argued that they provided continuity: 'with little risk of exaggeration, it could be said that it is the mould in which all other forms of thought (philosophical, cultural, aesthetic, historical, etc.) are cast'. The series further stressed that 'philosophers, politicians, sociologists, scientists, theologians, novelists, historians, poets and essayists of every period and culture have had much to say on the subject of education which, rather than just skirting round the edges, they have generally approached head on. … Not only do these outsiders play an important role, they often outflank the theories and received ideas of professional educationists' (Morsy, 1993, p. 8). That list excluded inadvertently artists. Yet architecture, photography, painting, theatre or cinematography have also shaped and continue to shape how we think of and set education goals (**Box 6.3**).

BOX 6.3:

Film makers can be education leaders too

Art can promote 'a culture of schooling in which more importance is placed on exploration than on discovery, more value is assigned to surprise than to control, more attention is devoted to what is distinctive than to what is standard, more interest is related to what is metaphorical than to what is literal' (Eisner, 2005, p. 213). While art has lost ground in mass education systems to approaches whose teaching and testing methods are easy to standardize, art has a major influence on people's perceptions of what education should be about.

The power of film as an educational tool is widely recognized, including in the preparation of prospective education leaders (English and Steffy, 1997). But film makers play a wider role, leading to influential debates on education in many societies, through their use of stories and symbols to create meaning and pose difficult questions (Ma and Shouse, 2019). Whether arthouse movies, documentaries or blockbusters, films have portrayed inspiring educators, rebellious students and challenging social contexts, shaping viewers' beliefs and attitudes. The influence of film is global, as examples show. English-language movies that have had global reach include those from the United Kingdom, such as James Clavell's (1967) *To Sir with Love* and Ken Loach's (1969) *Kes*, and from the United States, such as Ramón Menéndez's (1988) *Stand and Deliver* and Peter Weir's (1989) *Dead Poets' Society*.

In China, Qun He's (1993) *Fenghuang qin (Country Teachers)* recounts the plight of a young teacher, casting a light on the problems of rural education. Vice Premier Li Lanqing, himself an author of a book on Chinese education reform, recognized that the film had 'unexpected influence on the State Council's decision-making process of solving [rural] teachers' problems' (Ma and Shouse, 2024). Zhang Yimou's (1999) award-winning *Yīgè dōu bùnéng shǎo (Not One Less)* tells the story of a teenager who works as a substitute teacher in a rural school for a month with the task not to let any student drop out, despite massive pressures to migrate to the city. Zhang Yuan's (2006) *Kànshangqu hěn měi (Little Red Flowers)* tells the story of a boarding preschool where a 4-year-old boy is reluctant to comply with the strict rules and reward system (Tan and Xiang, 2019).

The French film tradition on education themes goes back to Jean Vigo's (1933) *Zéro de conduite (Zero for Conduct)*, which was banned for 12 years for its portrayal of rebellious boarding school students. Laurent Cantet's (2008) *Entre les murs (The Class)*, a winner of the Palme d'Or prize at the Cannes Film Festival, used amateur actors in a secondary school in Paris to show teachers' challenges in culturally and ethnically diverse classrooms. Its documentary counterpart, *La cour de Babel (School of Babel)* by Julie Bertolucci (2013) followed 24 students from 24 different countries in a French reception class (van Hoeij, 2013). Nicolas Philibert's (2002) *Être et avoir (To Be and To Have)*, a film about the single teacher of a multigrade school, became a point of reference on the topic of rural education (Jean, 2007).

In India, Aamir Khan, a famous actor, film director and producer, who raises awareness on social justice issues, has also emphasized education in his work. His directorial debut, *Taare zameen par (Stars on Earth)* (2007) about an 8-year-old with dyslexia, had an impact not only on public perception but also on the policy of the Central Board of Secondary Education (*Hindustan Times*, 2019). *Three Idiots* (2009) related to parental pressures and teacher rigidity in the education system (Hussain and Ahmad, 2016). Set in an Indian elite school, Australian documentary maker David MacDougall's *Doon School Quintet* has made a major contribution to considering value formation and the acculturation of children (MacDougall, 2015).

In the Islamic Republic of Iran, acclaimed director Abbas Kiarostami began his career making education-related films for the Institute for Intellectual Development of Children and Young Adults in the 1970s and 1980s (The Criterion Channel, 2012). He used simple children's stories to make broader points about society and morality, including *Khane-ye dust kojast (Where is the Friend's House?)* (1987), in which a boy is trying to return his friend's school notebook in the next village to protect him from being expelled the next day. His influence on other cinematographers included Samira Makhmalbaf, whose Kurdish-language film *Takhté siah (Blackboards)* tells the story of two teachers in a border area where children and adults, who fight for their survival through smuggling, 'feel education is useless' (Kaufman, 2002). The film touched on core education questions: 'Who is the person being educated? What does he or she need from education? How is it possible to know? Can people become free through education? What does that freedom look like? And how free am I in being able to assess these issues? (Gibbs, 2014).

In Japan, Yasujiro Ozu's (1932) *Umarete wa mita keredo (I Was Born But ...)* is a film about childhood which also provided a critique of the military influence on education in the years before the Second World War (Darr, 2011). Hirokazu Koreeda brings this tradition to the present day. His documentary film (1991) *Mō ichi-tsu no kyōiku – Ina shōgakkō haru-gumi no kiroku (Lessons from a Calf)* describes a primary school's education project, which frames the entire curriculum, from biology to mathematics, around the raising of a young animal (Nolletti Jr., 2011). In *Kaibutsu (Monster)*, the respective versions of a story of alleged abuse are told from the perspective of a boy, his mother and his teacher (Georgiades, 2024).

Continued on next page...

BOX 6.3 CONTINUED:

A major cinematic tradition in Eastern Europe has also touched upon education questions. In the Soviet Union, Ilya Frez's (1975) *Eto my ne prokhodili (We Didn't Learn This)*, which followed the students of a pedagogical academy, was one of several films focused on education and young people. Dinara Osanova, a Kyrgyz filmmaker, was best known for her (1983) *Patsany (Tough Kids)*, a story of the head of a summer sports and labour camp for troubled teenagers. The contemporary challenges of curriculum, gender and sexuality are treated in Russian director Kirill Serebrennikov's (2016) *Uchenik (The Student)* and Hungarian director Katalin Moldovai's (2023) *Elfogy a levegő (Without Air)*.

For many policy makers, though, intellectuals and artists remain an indirect and distant influence. In most countries, it is members of the academic community who engage in applied research that exert more direct influence on policy. Although evidence-based policymaking is a relatively novel term, education legislation and policy changes have relied on people based in universities and research centres that have either been invited as government advisors or have advocated for policies through communicating their research findings. Researchers may also be based in think tanks and non-profit organizations, which are the vehicles of broader coalitions pushing for particular reforms. The term 'policy entrepreneur' has been used both in positive (Mintrom, 2019) and critical ways (Verger, 2008) to describe individuals who frame and advocate for reforms in ways that appeal to decision makers. Last but not least, international organizations play a legitimate role in education, although their motivations can be scrutinized with questions raised as to whether they are promoting principles or ideas or providing reasons for their existence. Regardless of motivation, all these actors can play major roles in steering education systems.

Governments and lobbyists turn to researchers to back policy proposals

Researchers primarily engage in teaching, research and administrative roles at their academic institutions. But through their public presence in conferences or the media, they often contribute insights for a deeper understanding of important issues, which may indirectly feed into policy discussions (Lingard, 2013). More active researcher engagement takes place through direct networking with policymakers and practitioners, including producing commissioned research for policy use, participating in policy-focused debates and serving in roles in government committees (Oliver and Cairney, 2019).

Approaches to education policy research depend on the discipline. Social sciences appear to have acquired an edge over other disciplines in terms of getting their policy messages across and leading national debates. A long-standing debate is about which methodological approaches – quantitative, qualitative or mixed methods – are most appropriate for policy analysis (Johnson and Christensen, 2024). Results of randomized control trials, which are considered by some to meet the highest standard of research quality (Connolly et al., 2018), have been used to inform education policy decisions, such as on remedial education for improving foundational skills (Banerji and Chavan, 2020).

“Researcher engagement takes place through direct networking with policymakers and practitioners”

The emphasis on evidence-based policymaking, away from decisions made based on intuition or beliefs, began in the field of medical research but has also gradually influenced education (OECD, 2007; Wiseman, 2010). In New Zealand, the Ministry of Education initiated the Iterative Best Evidence Synthesis Programme, under which syntheses of evidence on quality teaching, professional development, effective pedagogy, school leadership, and community and family influences were commissioned (New Zealand Ministry of Education, 2024). The thrust of policy-oriented research is to look into 'what works' in education, trying to link interventions with outcomes. In the United States, the What Works Clearinghouse was designed by the Institute of Education Sciences at the Department of Education to provide dependable, high-quality causal evidence to decision makers and educators (Lykins, 2012). In the United Kingdom, the Education Endowment Foundation, which is part of the What Works Network, was established in 2011 and has commissioned many large-scale education evaluations based on randomized control trials (Edovald and Nevill, 2021).

Developed with support from multiple donors but hosted in the United Kingdom, the What Works Hub for Global Education is a recently established multi-year collaborative research initiative that will build on evidence

collected through randomized control trials to study how to implement education reforms at scale and support governments accordingly. It will directly work with researchers in India, Pakistan, Rwanda and the United Republic of Tanzania, with further work expected in other Commonwealth countries, such as Bangladesh, Botswana, Ghana, Kenya, Nigeria, Sierra Leone and South Africa (Angrist and Kaffenberger, 2024).

But the approach is not without its critics. Some experts have argued that methods such as randomized control trials do not provide better empirical insights compared to other, less rigorous approaches, while they have questioned the ethics of experimental research on poor populations (Deaton, 2020). Complex or broad outcomes of education systems are not possible to analyse with randomized control trials, which requires a narrow intervention design and a narrow definition of outcomes of interest. Qualitative research methods may instead gather rich context-specific insights to explain 'why' interventions may or may not 'work' (Ford and Goger, 2021). The Danish Clearinghouse for Educational Research, established in 2006, opted to use several methods for synthesizing and analysing evidence instead of solely relying on randomized control trials (Hansen and Rieper, 2010).

The broader question is whether it is sensible to inquire 'what works' in one context and apply it to another education context (Steiner-Khamsi, 2021). A question often missing is what an intervention might be working 'for'. The growing emphasis on learning, for instance, risks neglecting questions about the content and purpose of learning and the relationships between students, teachers and education leaders (Biesta, 2017). The creation of research is also a political process. Evidence is more likely to be used if it supports arguments or choices of policymakers, which can change incentives of what is studied. Government commissioning of research in certain areas of evidence, which may support their policymaking interests but downplay contradictory evidence, has been criticized for fostering 'policy-based evidence making' (Cairney, 2017).

A significant critique has been the reliance on summary metrics of education sector performance, often provided by the results of standardized large-scale national learning assessments. In the United States, such indicators were adopted to guide policy research. The No Child Left Behind Act and subsequent education financing policy, which was implemented after 2001, drew attention to achievement gaps. However, it has been criticized for increasing pressure on schools without being based on a correct diagnosis or the means to improve learning (Ravitch, 2010), with some citing the absence of a rights-based approach (Darling-Hammond and Darling-Hammond, 2022). In the US state of New York, some faculty intervened in standardized assessment policies, developing alternate scoring methods to foster different discourse (Gorlewski and Tuck, 2018). In Brazil, despite the introduction of curricular standards, some universities have publicly opposed and declined to align teacher education with them (Costin and Pontual, 2020).

Standardized, large-scale, cross-national learning assessments have also attracted policymakers' attention in the past 30 years. These assessments provide representative data that help compare education system performance over time. They have substantially expanded understanding of how different school-related and contextual factors are related to learning outcomes (Hastedt and Rocher, 2020; Hernández-Torrano and Courtney, 2021). They have informed highly influential research. But some researchers criticize international organizations for encouraging governments to use the results of assessments, such as the Programme for International Student Assessment (PISA), to evaluate performance. The criticism focuses on the risk that the use of such measures poses on homogenizing and narrowing education (Bart, 2024; Zhao, 2020). Such concerns were expressed in a letter addressed to the Directorate of Education and Skills at the OECD, signed by over 3,000 researchers, which sparked an important debate (Meyer, 2014).

> "Standardized, large-scale, cross-national learning assessments have attracted policymakers' attention in the past 30 years"

Whose opinions are listened to and whose are ignored in policy discussions is a major issue (Zhao, 2020). Analysis of parliamentary debates on Sweden's education system from 2000 to 2016 shows that parliamentarians from various parties had frequently used PISA to justify reforms and assess learning equity, but research on structural or theoretical issues was often distrusted or overlooked (Lundahl and Serder, 2020). In the United States, a study examined 30 think tanks and advocacy organizations and 162 specialists in these organizations, ranking their scholarly expertise and public influence, the latter for instance based on metrics such as mentions in congressional records. Some think tanks scored low on expertise but high on education discussions in Congress, with the reverse being the case for others (Lubienski et al., 2024).

Think tanks often act as a bridge between academics and policymakers. They can range in terms of autonomy and independence from government, financing modalities and ideological commitments. A peer-reviewed global ranking of think tanks identified 73 influential education policy think tanks in 2020 (McGann, 2021). In Chile, the Centro de Estudios Públicos (Centre for Public Studies) and Libertad y Desarrollo (Liberty and Development), funded by the business sector, provided extensive and mostly critical comments on the national teacher policy and the inclusion law (Mizala and Schneider, 2020). The Aga Khan University in Pakistan is at the forefront of national education debate, contributing to policy development and producing research (Naveed and Suleri, 2015). The Philippine Institute for Development Studies has provided technical advice to the Senate and House Committees on special education, technical and vocational education, youth employment, teacher education, and higher education (Philippine Institute for Development Studies, 2024). In Sri Lanka, the Institute of Policy Studies engages in policy evaluations commissioned by the government (Kalugampitiya et al., 2023)

Policy advice often flows from consultants from high-income countries to governments in low- and middle-income countries. The South Also Knows project works to amplify the representation of low- and middle-income country experts to global audiences (NORRAG, 2024). It facilitates their engagement with each other for international education policy discussions through network development, a searchable database and a campaign to address the under-representation of these scholars (Binesse and da Silva, 2023).

International organizations aspire for education leadership

International organizations active in education share a conviction and a purpose. Their conviction is that education is a tool for human progress that develops people's capabilities to live fulfilling lives. Their purpose is to exert influence over countries' education policies. This is a difficult task given that education policy setting is a government responsibility, and that there are political risks for a government to be criticized that one of its education policies was influenced by external actors. Yet, international organizations have come to play a very influential role in education (Jones, 2007).

International organizations differ in many ways: historical origins, governance arrangements, membership, audiences, even in their definitions of a fulfilling life. They also differ in the kind of messages they convey (Elfert and Ydesen, 2023). In fact, international organizations strive to be different from each other. Differentiating and actively communicating a distinct message is linked to their need to remain relevant and not just to survive but to grow. It is, therefore, common to see international organizations competing with each other for influence to attract attention and funding. While their members call on them to collaborate, at the same time they may tolerate, if not encourage, their competition. As in other sectors, international organizations active in education need to prove the value of their services to states (Buchanan and Keohane, 2006; Finnemore, 1993).

“International organizations have come to play a very influential role in education”

In order to lead, international organizations need legitimacy, which they can derive from many sources. First, their members assign to them authority through their organizational statutes or international agreements. For example, UNESCO's Constitution allows it to submit 'recommendations and international conventions' for member states' approval, as part of efforts 'to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms' through education (UNESCO, 1948). Examples of this standard-setting authority include the Convention against Discrimination to Education, the Convention on the Recognition of Higher Education Qualifications and, most recently, the Global Standard on Ethics in Artificial Intelligence. However, legitimacy may be undermined if the capacity to apply these standards is limited.

Second, the capacity of an international organization to deliver financial and technical support effectively and efficiently confers legitimacy. Countries turn to the World Bank, for example, for funding through processes they recognize and accept. In turn, the World Bank has consistently been a major funder of education projects, while the use of formulas in funding allocations between countries leaves little room for discretion, unlike the case with bilateral donors (Davies and Klasen, 2017). However, this legitimacy can be undermined when the provision of support is made conditional on the adoption of policies to which states object, as happened during the debt crisis (Mundy and Verger, 2016), when the application of conditionality is influenced by political considerations (Kilby, 2009) or when successive projects do not deliver the desired results (Bedasso and Sandefur, 2024).

Third, legitimacy can be earned through strong internal procedures and eroded by their absence (Tallberg and Zürn, 2019). Organizations may have or lack strategic clarity, defined targets and evaluation mechanisms,

including independent evaluations. They may commit to accountability but may not practise it. Members may interfere in international organizations' activities, including in the selection of staff in leading positions (Woods et al., 2014). Organizations try to set clear objectives but may also try to expand their mandates, at least partly to increase their influence, which may raise questions of legitimacy. For example, UNICEF is mandated to advocate for the protection of children's rights, including their right to education, and is guided by the United Nations Convention on the Rights of the Child, which defines children as those under the age of 18. It has had a clear strategy and results framework. But in recent years it also extended its activities to adolescents and even youth, which go beyond its mandate (UNICEF, 2022; 2024).

Fourth, the collection, analysis and interpretation of data to support evidence-based policymaking has become a key lever for exerting influence. There is a global architecture for the development of education indicators overseen by the Education Data and Statistics Conference (UIS, 2024) and for data collection and monitoring as described in the Incheon Declaration (UNESCO, 2015). But the field of comparable education data is large and there is scope for innovation. For example, the OECD has proposed several influential ways of collecting evidence on education outcomes (Sellar and Lingard, 2014). But there is also competition over how to interpret evidence, which evidence should be seen as more authoritative and how to develop the most compelling narratives on the best interventions at the country level – or even about the future of education. Differences of opinions can be seen not only between but also within organizations. For instance, the 2022 PISA results raised important questions about the negative impact of digital technology on learning outcomes (OECD, 2023a) but these were ignored in a subsequent OECD review on digital education that was sanguine about the impact of technology (OECD, 2023b).

A related concern is that international organizations are vulnerable to fads (Heyneman and Lee, 2016), which indicates a lack of leadership. Instead, there is a need for international organizations to give legitimacy to ideas that are ahead of their time, promote human rights and capabilities, and not be subservient to short-term interests and agendas. Often these ideas may be unpopular and go against conventional wisdom. Thirty years ago, the 1994 Salamanca Statement and Framework for Action broke new ground by emphasizing the principle of inclusive education and advocating for the education of all children (Ainscow et al., 2019). While the concept of inclusion first developed in individual countries, UNESCO's support helped make it a policy foundation in countries all over the world, even if implementation challenges remain severe. The inclusion concept has also gradually developed to be identified not with a single group but to steer countries to develop their education systems so that they are accessible and beneficial to all learners to the greatest extent possible. The power of the concept of inclusion can also be seen in the over 7,000 documents published on inclusive education from virtually all countries between 1994 and 2019 (Hernández-Torrano et al., 2022).

As the world confronts major challenges, notably those related to climate change, unsafe digital environments and persistent inequalities, it is important to ask whether international organizations focus on the right questions to provide thoughtful guidance to countries, and whether their incentives are structured in a way to do so effectively, to play a leading role.

ACCOUNTABILITY IS PART OF LEADERSHIP

Holding governments to account for the extent to which they fulfil their education responsibilities is a critical role played by various formal and informal actors (UNESCO, 2018). Civil society and media organizations are prominent institutions that serve an accountability function and do so with an interest in influencing national education debates.

Civil society is often the loudest on education issues that matter the most

Civil society organizations demand accountability in a variety of ways. They track and monitor budgets (Gebremedhin and Hossain, 2024). For instance, the International Budget Partnership brings together civil society and supreme audit institutions to improve government responsiveness; they have advocated for school sanitation in Sierra Leone and school infrastructure rehabilitation in the United Republic of Tanzania (International Budget Partnership, 2024). Civil society organizations have also used members to collect data to uncover cases of corruption at the local level, such as in the Philippines Textbook Watch programme (Aceron, 2023; Westhorp et al., 2014), or to monitor education outcomes when the government was not making them available, as in the case of Pratham in India (Banerji et al., 2013) and Idara-e-Taleem-o-Aagahi in Pakistan (ASER Pakistan, 2024).

> “Civil society organizations demand accountability in a variety of ways”

Civil society is also a leading advocate for the right to education. Strategic litigation is an effective approach. In Colombia, a coalition of civil society organizations and lawyers brought a case against the government in

2009, challenging the constitutionality of an article in the education law that allowed school fees to be charged. In 2011, after the Constitutional Court had ruled that schools could not charge fees, the Ministry of Education issued a decree that made not only primary but also secondary education free (CRIN, 2016). In South Africa, Section 27 took the government to court in 2014 over its failure to provide textbooks in the Limpopo province, forcing it to take actions to improve the textbook delivery system (Section 27, 2014).

Cooperation between advocacy organizations and partnerships with international networks often make monitoring activities more effective (Krupar and Taneja, 2020). In India, the three largest advocacy networks working on early childhood, child labour and education collaborated to make education an item on the national political agenda for the 2019 elections, and reached 122 members of parliaments (UNESCO, 2024). In Nigeria, the Centre for Advocacy, Transparency and Accountability Initiative and Invictus Africa, with support from the Malala Fund, developed an education-focused political manifesto ahead of the national elections in 2023 and encouraged political parties to include education in their campaign (Malala Fund, 2023). The TaxEd Alliance links civil society institutions focused on education financing with those involved in tax justice issues at the national, regional and global levels (ActionAid, 2022).

The scope of civil society actions depends on its relations with governments (Salamon and Toepler, 2015). Organizations that more overtly support government agendas can gain privileged access to funding and participate to some degree in policy decision making. Organizations that are critical, challenge government legitimacy or demand systemic change risk being sidelined (Toepler et al., 2020). In Cambodia, a coalition of non-governmental organizations became a key pillar in education governance but was expected to implicitly support the government (Edwards Jr et al., 2018). Between 1994 and 2015, 60 countries implemented laws limiting foreign funding to non-governmental organizations (Bromley et al., 2020). For a variety of reasons, foundations that used to fund watchdog organizations in education, such as the Hewlett Foundation, the Open Society Foundations and the Wellspring Foundation, have stopped doing so in recent years (UNESCO, 2024).

Education journalism is often weak but indispensable for raising awareness

Known as the fourth pillar of democracy, the media holds governments accountable, including in education. Analysis of data from the 2019 Digital News Report Survey on news consumption and attitudes towards news in 38 countries found that people who recognize the media as performing watchdog functions are more likely to trust the news (Kalogeropoulos et al., 2024).

The way the media covers education issues can influence public perceptions. But there are concerns that large news outlets in many countries have been biased in their presentation of core issues. In the United States, analysis of prime-time television from 1980 to 2015 found that it rarely covered education issues unless they were negative, such as violence or school shootings, racial and ethnic discrimination, a shortage of funds, strikes, or a new set of test scores (Coe and Kuttner, 2018). In more recent years, coverage of education systems has grown and several outlets specialize in education news, such as Chalkbeat, Education Week, The Hechinger Report and The 74.

> “The way the media covers education issues can influence public perceptions”

In 2018, as part of a survey by Education International, 53% of union representatives felt that the media made a negative or very negative portrayal of teacher unions (Stromquist, 2018). Research into the coverage of education issues by *The Australian*, a national daily newspaper, was described as driven by an agenda that cast teachers in negative light (Baroutsis, 2019). A survey of teachers and principals in Australia confirmed that they perceived journalists as lacking in knowledge and preferred that stories come from politicians or academics instead of teachers and principals. The survey participants viewed local or regional news coverage more positively than national news, especially since local outlets had more regular contact with schools and teachers and were more willing to report on positive issues and processes (Shine, 2018).

In Chile, research has pointed at how journalists often end up following the editorial line of media owners, even though they are aware that oversimplification and use of statistics out of context prevents readers from developing a good understanding of education policy (Ansaldo, 2021). In South Africa, a review of press coverage of education issues in Eastern Cape province argued that reporting lacked in depth to help readers hold public officials to account for issues such as corruption or mismanagement (Malila, 2019).

Independence from vested interests is a precondition for the media to be credible and fulfil its leadership role. But declining resources have affected core reporting (Levy and Kleis Nielsen, 2014), including in education (West et al., 2010), turning many media organizations to seek the support of foundations. This support has come at the cost of either direct or indirect influence on the issues to be covered (and how they should be covered) (Wright et al., 2019). These challenges have affected reporting also in low- and middle-income countries (Schiffrin, 2017).

New technologies are enabling the emergence of alternative, smaller, independent journalism outlets, as in India (Dore, 2024). Ravish Kumar, a journalist who scrutinized the government record in education on a mainstream television channel, has now established a digital outlet (Mehta et al., 2023). Young social influencers, such as Dhruv Rathee and Mohak Mangal, produce educational content including investigative journalistic-style discussions on the learning crisis, new education policies and transformative educational change (Arora et al., 2023). In Hungary, Atlatszo (Transparent), a non-profit investigative journalism watchdog, has consistently produced analysis on teacher shortages and teacher attrition following the 2022 education law (Szopko and Szabo, 2023).

Investigative reporting by individual journalists and by alternative and mainstream media houses has highlighted rights violations, corruption and abuse scandals, and inclusion challenges. For example, it has focused on issues of social segregation in French schools (Au et al., 2023). It has helped uncover sexual harassment in university settings by professors in positions of power as well as sexual abuse in school settings (Chan et al., 2018; Howlett and Al Jazeera Investigative Unit, 2021; Nwakpu, 2022). An investigative analysis of 100 boys' schools in New York's Hasidic community, which received USD 1 billion in public funding, found that the students were not taking science or social studies lessons, had very poor learning outcomes, and suffered regular corporal punishment. The New York state government introduced legislation to bar corporate punishment in private schools and to hold private schools to stricter academic standards (Shapiro and Rosenthal, 2023). Reporting by the *Philadelphia Inquirer* in the United States revealed the unsafe conditions in Philadelphia's run-down public schools by building a comprehensive database. The investigation prompted the state and the school district to fund emergency clean-up operations to deal with the serious health hazards (Laker et al., 2019).

Global and regional awards highlight journalists' efforts, and provide networking and learning opportunities for investigative journalism in all regions, including in Africa, the Arab States, Asia and Latin America (Global Investigative Journalism Network, 2023). Justyna Suchecka, an education journalist, received an award for her reporting on the personal experiences of educators and students and the human impacts of politics and policies at the school and national level in Poland (Evens Foundation, 2024).

CONCLUSION

Several actors are involved in exercising influence on societies to orient them towards certain education goals. Multiple responsibilities, different sources of political power and varying perspectives on what is needed pull citizens in different directions. While institutional authority and structures may give some political actors more influence, actors in leadership roles in academia, unions and civil society, but also intellectuals, artists and journalists, can also influence movements that get their education vision to resonate in society.

Ministers are the political actors at the centre of attention. They have to deliver complex government agendas in a relatively short period of time subject to several constraints. They make decisions that are often based on short-term political calculations rather than on evidence about what might be the best long-term solution. While a lot hinges on their vision and inspiration, it is also a matter of skills to navigate diverse challenges. Whether the debate moves in the right direction also depends on the capacity and determination of those who stand for various education causes – and on the space that exists for people to express freely their concerns and ideas about education.

Monitoring education in the Sustainable Development Goals

KEY MESSAGES

More children are in school and progressing through education today than ever before.

- The participation of children under 3 in education has increased globally and, most notably, by over 10 percentage points in sub-Saharan Africa over the past decade.
- Since 2015, 110 million more children, adolescents and youth have gone to school.
- Completion rates are also rising: 40 million more young people are completing secondary school today than in 2015.
- Since 2010, the tertiary education gross enrolment ratio has increased from 30% to 43% and even faster in Latin America and the Caribbean and in Eastern and South-eastern Asia.

But those left behind are the hardest to reach, leading to stagnation and, in cases of conflict, a reversal of education development.

- Enrolment at age 5 has stagnated at around 75% for the past decade.
- Globally, 251 million children and youth remain out of school, a reduction of just 1% since 2015, of which, 129 million are boys and 122 million are girls. Exclusion is exacerbated by social norms and poverty: Around 6 in 10 children, adolescents and youth are out of school in Afghanistan and Niger.
- Too many children start school late and repeat grades in sub-Saharan Africa: 26% are at least two years too old for their grade in primary school; 35% are over-age in lower secondary school.
- The secondary completion rate has increased from 53% in 2015 to 59% in 2023. Globally, 650 million leave school without a secondary school certificate.
- Wealth gaps in secondary completion rates grew between the richest and poorest by 10 percentage points from 2010 to 2022 in low- and middle-income countries.
- Gender gaps in secondary completion rates have been eliminated globally, but remain wide in sub-Saharan Africa, where the pace of progress over the past decade has been half of that in Central and Southern Asia, the only other region where girls are behind boys.
- The percentage of adults with at least secondary completion has increased on average by 5 percentage points in the past 10 years. At this rate, it would take another 80 years to achieve universal secondary completion.
- Only 3% of adults participate in education and training. Participation rates have fallen in more than half of the countries with trend data available since 2015.
- Attacks on schools totalled some 3,000 in 2022, exacerbated by the war in Ukraine, and again in 2023 by the war in the State of Palestine. As of July 2024, 61% of schools in Gaza had been hit directly.

Standards for teachers are often too low or not met.

- Insufficient teachers in classrooms can be due to a shortage of applicants or a shortage of vacancies. The first is more common in rich countries: only 4% of 15-year-olds in the richest countries want to become teachers; the second in poorer countries: in Senegal, there was a surplus of over 1,000 qualified teachers in 2020 alone.
- Many teachers do not have the minimum required qualifications. In sub-Saharan Africa, the share has dropped from 70% in 2012 to 64% in 2022. In Europe and Northern America, it has dropped from 98% in 2010 to 93% in 2023.
- Standards vary across regions. Most countries require teachers to have a bachelor's degree to teach in primary education, while 17% of sub-Saharan African countries accept a lower secondary certificate.

Learning outcome levels were declining even before COVID-19 but the pandemic coincides with an acceleration of that trend.

- It is difficult to establish trends, as there remains an acute data gap globally: low coverage of learning assessments means there is no information on 680 million children.
- Evidence from 70 upper-middle and high-income countries that took part in the 2022 PISA (at the end of lower secondary school) shows that the share of students proficient in reading fell by 9 percentage points from 2012 to 2018 and by 3 more points to 47% in 2022.
- The share of these students proficient in mathematics increased by 2 percentage points from 2012 to 2018 but fell by 8 points to 36% in 2022. A long-term decline may have been ongoing since 2009. COVID-19 may have accelerated the decline but might mask other structural factors.
- Evidence from 6 sub-Saharan African countries that took part in the 2021 and 2023 AMPL surveys (at the end of primary school) shows that only about 1 in 10 students reached the minimum proficiency level in reading and 2 in 10 in mathematics.

Technology helps learners access education who previously could not but brings new issues.

- In upper secondary education, 8 in 10 schools are connected to the internet. Countries' progress towards their connectivity benchmarks is only three percentage points off track.
- There are major gaps between countries in familiarity with basic computer-related activities: 8 in 10 adults in high-income countries but only 3 in 10 adults in middle-income countries can send an email with an attachment.
- With respect to smartphone-related activities, 51% of youth and adults could set up security measures for digital devices in high-income countries compared to 9% in middle-income countries.
- Formal education is linked to higher digital skills acquisition. In the European Union, the share of adults with basic digital skills rises from 34% among those with lower secondary education to 51% for those with upper secondary education and 80% for those with post-secondary education.
- A faster increase in the prevalence of bullying for girls than for boys aligns with their higher vulnerability to cyberbullying. Girls are at higher risk, at least partly because they spend more time on social media.

Climate change poses challenges to infrastructure and curricula.

- Globally, almost one in four primary schools do not even have access to basic drinking water, sanitation and hygiene, yet governments need to also make more extensive investments to protect students and schools from rising temperatures and natural disasters.
- A new indicator which monitors green education content shows that climate change education needs to be taught more in the earlier grades and across more subjects than just science.

National and international investment in education is declining.

- Globally, public education expenditure fell by 0.4 percentage points of GDP between 2015 and 2022: the median level fell from 4.4% to 4%.
- The share of education in total public expenditure decreased by 0.6 percentage points from 13.2% in 2015 to 12.6% in 2022.
- The growing weight of debt servicing has implications for education spending. Sub-Saharan African countries spent almost as much on debt servicing in 2022 as they did on education.
- In terms of the twin international benchmarks of spending at least 4% of GDP and at least 15% of public expenditure for education, 59 out of 171 countries met neither target.
- Education spending per child has largely stayed the same since 2010.
- The share of aid going to education dropped from 9.3% in 2019 to 7.6% in 2022.

A young girl in class at the Tim Hines school in Tegucigalpa, Honduras. The school sets a good example of how community efforts and the involvement of parents make a positive impact for students.

Credit: © GPE/Carolina Valenzuela*

CHAPTER

7

Introduction

KEY MESSAGES

- The first Conference on Education Data and Statistics, organized by the UNESCO Institute for Statistics in February 2024, filled a major gap in shaping the governance of education statistics.
- The 28 newly elected members of the Education Data and Statistics Commission, which is the implementation body of the Conference decisions, are government representatives. This structure, which mirrors the governance of the global SDG indicator framework, completes a process by which responsibility for decisions has gradually been handed over to Member States.
- The 2024 SDG 4 Scorecard reported on progress towards national targets set by 84% of countries on eight SDG 4 indicators for 2025 and 2030. The eighth indicator, internet school connectivity, was added following the Transforming Education Summit.
- The 2025 Comprehensive Review of SDG global indicators focuses on indicator coverage. Indicators whose coverage is below 40% (by countries or population) will be replaced. The SDG 4 indicator most at risk is functional literacy and numeracy proficiency (4.6.1), which is likely to be replaced by the youth and adult literacy indicator.
- The share of students achieving a minimum proficiency level in reading and mathematics by the end of grade 3 (4.1.1a) also has low coverage. Efforts are being made to develop reporting criteria, a vetting mechanism and a financial mechanism that funds countries to choose the assessment that best meets their reporting and development needs.

Conference on Education Data and Statistics 145
SDG 4 Scorecard 145
2025 Comprehensive Review 147

In 2024, three key developments related to the monitoring of SDG 4 were the Conference on Education Data and Statistics, the release of the second SDG 4 Scorecard, and the 2025 Comprehensive Review of SDG global indicators.

CONFERENCE ON EDUCATION DATA AND STATISTICS

The first Conference on Education Data and Statistics (EDS Conference) was organized by the UNESCO Institute for Statistics (UIS) in February 2024 in Paris, in collaboration with the *Global Education Monitoring Report* team. It was attended by representatives from 130 countries. It had three key objectives: to establish an international community of practice of education statisticians that will guide the Technical Cooperation Group (TCG) on SDG 4 indicators; to communicate, discuss and reach consensus on concepts, definitions, methodologies and operational aspects of indicator measurement in the form of recommendations and guidelines for adoption as international standards; and to debate the impact of technology on education statistics (UIS, 2024).

It was the inaugural conference of a series, which will convene every three years and whose decisions will be implemented by the TCG, now renamed the Education Data and Statistics Commission (**Figure 7.1**). To measure the gap that the EDS Conference has filled, it can be noted that the International Conference of Labour Statisticians, which has been led the equivalent work on standardizing labour statistics, celebrated its centenary in 2023.

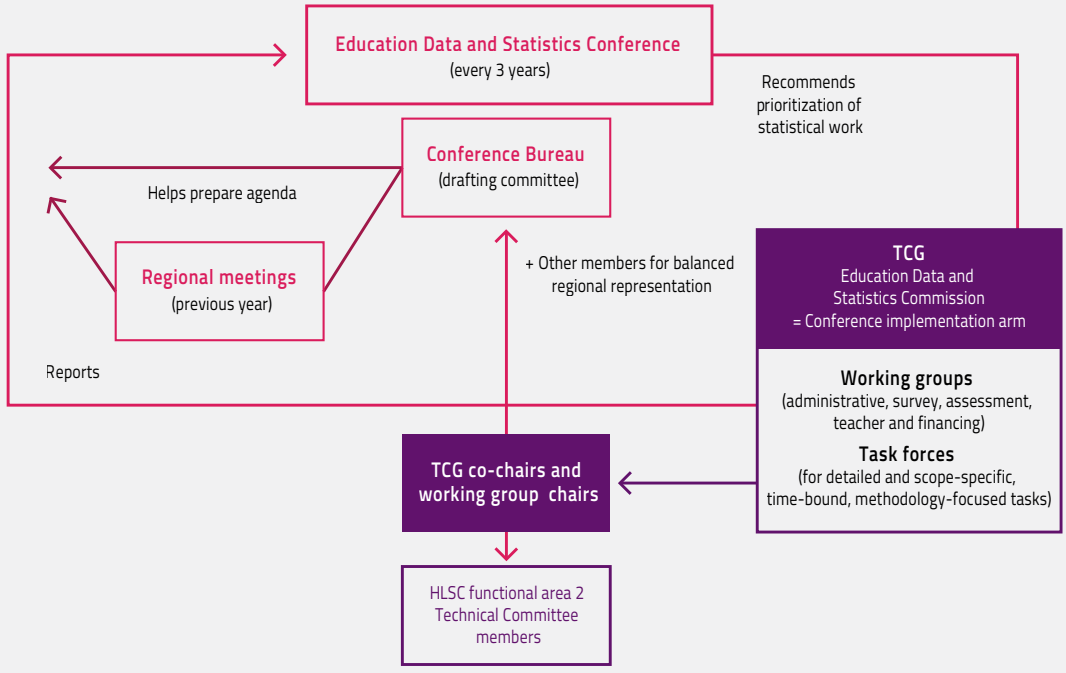
The EDS Conference marked another important moment. In 2014/15, the SDG 4 indicators had been proposed by a group of experts representing international organizations. In 2016, the TCG was established with the objective to introduce Member States to a process from which they had been originally excluded, with TCG membership combining Member States and international entities. The rotation of TCG members, which was completed just before the Conference, and the transition to the EDS Commission concludes the process of handing over full responsibility to Member States for all decisions related to education statistics. The 28 members of the EDS Commission are exclusively government representatives. This structure mirrors the governance of the SDG indicators, led by the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs), which – despite its name referencing agencies – is an intergovernmental group.

SDG 4 SCORECARD

The second edition of the SDG 4 Scorecard was launched at the EDS Conference. It is the annual snapshot of country progress towards their 2025 and 2030 national targets, or benchmarks. To date, 77% of countries have submitted at least one benchmark and another 7% of countries, which are members of the Caribbean Community and the European Union, have committed to benchmarks through their regional targets. In total, countries have set 54% of all possible target values for 2025 and 2030. This is satisfactory considering that many high-income countries have values near 100% for many indicators and therefore do not have an incentive to set a benchmark. The indicators with the highest benchmark submission rates are the early childhood education participation rate (72%) and the upper secondary completion rate (70%). The lowest submission rates are observed for the gender gap in upper secondary completion (36%) and the new benchmark indicator on school internet connectivity (33%), which was added following the Transforming Education Summit. All countries are being invited on an annual basis to submit missing or revised target values.

The SDG 4 benchmarking approach will inspire the next three editions of the *Global Education Monitoring Report*, to be entitled Countdown to 2030 series. The series will consist of two components. First, a sample of countries will be identified among those that have improved in terms of selected education indicators at fast rates (and a smaller group of countries that have stagnated or even regressed) in the past 10 to 20 years. The second component will be

FIGURE 7.1:
A country-led process will be used to make decisions on education statistics
Governance mechanism of international education data and statistics



Note: HLSC = SDG 4 High-level Steering Committee; TCG = Technical Cooperation Group on SDG 4 indicators.
GEM StatLink: https://bit.ly/GEM2024_fig7_1
Source: UIS (2024).

an analysis of why these countries have performed so well (or poorly) emerging from country case studies, looking at both a broad range of explanatory factors and a narrow range of policies believed to have made a difference.

Each of the next three editions will look at specific indicators, grouped together under broad categories. The first report (2026) will focus on access and equity indicators, for which data are much more abundant and relatively unambiguous as to the direction of countries' progress. The second report (2027/8) will focus on quality and learning indicators, for which data are not only scarce but often not very reliable. The third report (2029) will focus on indicators where education interacts with other development outcomes where progress is less well documented. Collectively, these reports should provide the basis for international dialogue on what priorities to address after 2030, informed by where countries stand and how fast they have progressed.

The 2024 Scorecard focused on the teacher indicator and on UIS efforts to resolve a long-standing lack of clear and comparable definitions for the concepts of 'qualified' and 'trained' teachers. On the first concept, the establishment of consensus that a bachelor's degree is the most common minimum academic qualification for becoming a teacher, which can therefore be used as a basis for a comparable indicator on (academically) qualified teachers, is a breakthrough (**Chapter 17**). On the second concept, consensus has been reached that an approach based on an international standard classification of teacher education programmes, despite its merits, is too cumbersome to lead to tangible results. A task force, which is a new mechanism introduced by the EDS Conference, has been established to review the definitions of (professionally) qualified teachers to serve as a basis for an indicator on trained teachers in the near future.

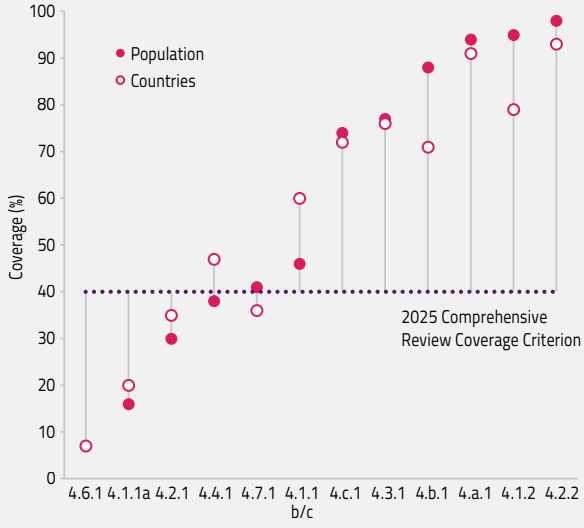
2025 COMPREHENSIVE REVIEW

When the UN General Assembly adopted the SDG global indicator framework in 2017, it scheduled two Comprehensive Review rounds to be led by the IAEG-SDGs. The first (2019–20), during which the completion rate was adopted as a global indicator, focused on indicator methodology. The second is taking place in 2024–25 and focuses on indicator coverage: data must be available for at least 40% of countries and of the population, at least in the regions where the indicator is relevant. This criterion affects several SDG 4 indicators, notably: the percentage of children developmentally on track (4.2.1), functional literacy and numeracy proficiency (4.6.1), and the minimum proficiency in reading and mathematics (4.1.1). The last indicator has sufficient coverage at the end of primary (b) and lower secondary (c) levels, but data until 2023 were available for only 16% of the population and 20% of countries at the grade 2/3 (a) level (**Figure 7.2**). For indicator 4.6.1, there was also a proposal by Singapore to remove it and replace it by the traditional youth and adult literacy indicator. A final proposal will be submitted to the 56th session of the United Nations Statistical Commission in March 2025 for its consideration.

Of all the indicators with low data coverage, the one that generated most debate was indicator 4.1.1a. It is useful to recall the history of this indicator. In 2015–17, measurement of learning outcomes in early primary grades was fiercely opposed by some high-income countries, who believed that 'testing' children at these ages is inappropriate. But this concern was misplaced. These very same countries systematically assess children at those ages. Moreover, only low-stakes assessments are needed to inform this indicator, which do not put children under pressure. In 2018, recognizing in part the major global significance of this indicator, efforts led by the UIS secured the assignment of Tier I to indicator 4.1.1a, a stamp of methodological clarity, on par with 4.1.1b and 4.1.1c.

However, countries and the international community did not build on this momentum and data coverage remained at low levels. The countries that have been reporting on indicator 4.1.1a are those that take part in two regional assessments, the francophone African PASEC (grade 2) and the Latin American LLECE (grade 3). Since 2018, the only countries to have reported on this indicator outside PASEC and LLECE have been a small group of anglophone African countries that took part in 2023 in a new assessment developed specifically to report on indicators 4.1.1a and 4.1.1b, known as AMPL (**Chapter 8**) and a group of Pacific countries that take part in the PILNA study (grade 4) that agreed to share their data in 2024. An SDG 4 High-level Steering Committee decision in June 2024 called on countries to share their plans on reporting for indicator 4.1.1a.

FIGURE 7.2:
Some SDG 4 indicators have been under scrutiny due to low data coverage
Data coverage of SDG 4 global indicators by population and country count, 2023



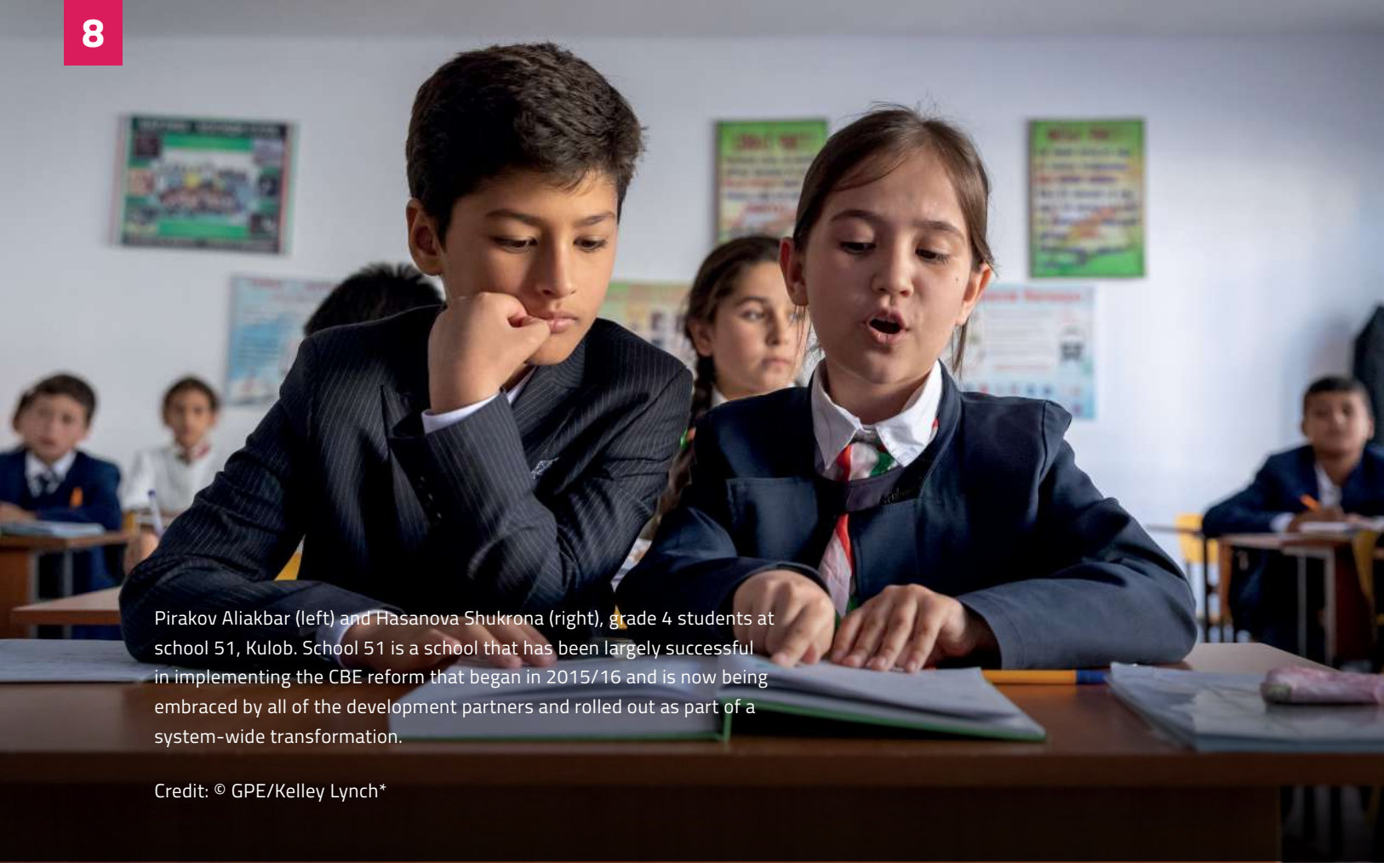
GEM StatLink: https://bit.ly/GEM2024_fig7_2
Source: UIS.

Some other donor-funded assessments, administered to children on a one-to-one basis, have been proposed as potential sources for reporting on indicator 4.1.1a: the Early Grade Reading Assessment, which is administered in schools; the foundational learning module of the Multiple Indicators Cluster Survey, a general household survey; and the citizen-led assessments of the People's Action for Learning Network, which are education-focused household surveys. However, these assessments do not meet the criteria for reporting, primarily because they collect information on learning at a level below minimum proficiency. Moreover, they are administered in ways that may affect the reliability of outcomes. Critically, they lack clear documentation of methodology, survey design and results (Montoya and Crouch, 2024a). There are also two significant concerns of a more political nature. First, countries have not shown a willingness to use the results of these assessments for reporting. Second, these

assessments – while helpful for advocacy or project evaluation – have not helped develop education ministries' assessment capacity. Yet developing national capacity must remain a core purpose of monitoring the SDGs.

In December 2023, the UIS convened a meeting of technical experts within the framework of the Global Alliance to Monitor Learning – the working group of the EDS Commission – that focuses on learning assessments. Assessing children in early primary grades presents problems not encountered in assessments at the end of primary and the end of lower secondary education: a greater variety in assessment languages and in ways of test administration. Criteria for reporting are therefore being developed further to recognize that minimum proficiency in reading builds on two sets of precursor skills: oral language comprehension and decoding with fluency. The above-listed assessments collect information on these precursor skills that could be used to partially report on minimum proficiency; full reporting will require more data on reading comprehension skills. A similar approach to precursor skills could be followed for mathematics.

The UIS is also calling for improvements to the institutional set-up for learning assessments. The cost of assessment is very high for low- and lower-middle-income countries, and so all or most of this cost must be supported by external funders. However, such external financing has been fragmented and inefficient. At best, it has been uncoordinated and contributes to keeping the costs of assessment at very high levels. At worst, it has gone against the interest of the countries involved, focusing on the evaluation of donors' own projects rather than on developing country capacity to assess learning. Unifying funding mechanisms and setting up a vetting mechanism to ensure that assessments meet the reporting criteria are two essential building blocks of reform. Countries should be able to choose from a menu of assessment options, including their own national assessment, as long as these options meet the reporting criteria (Montoya and Crouch, 2024b). Equally, countries should have access to funds to choose the assessment that suits their reporting and development needs, and such funding should be unrelated to the preferences of individual funders.



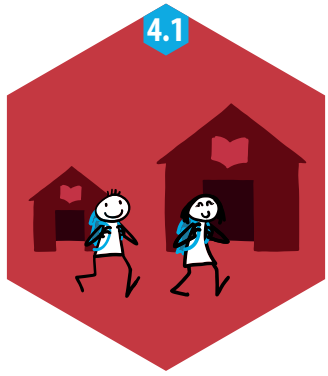
Pirakov Aliakbar (left) and Hasanova Shukrona (right), grade 4 students at school 51, Kulob. School 51 is a school that has been largely successful in implementing the CBE reform that began in 2015/16 and is now being embraced by all of the development partners and rolled out as part of a system-wide transformation.

Credit: © GPE/Kelley Lynch*

KEY MESSAGES

- Globally, 251 million children, adolescents and youth are out of school, with a reduction of just 1% since 2015. The out-of-school rate is 33% in low-income, 19% in lower-middle-income, 8% in upper-middle-income and 3% in high-income countries. COVID-19 does not appear to have had a negative impact.
- Completion rates have increased faster: between 2015 and 2023, they increased from 85% to 88% in primary, from 74% to 79% in lower secondary and from 53% to 59% in upper secondary education.
- In sub-Saharan Africa, 26% of primary and 35% of lower secondary school students are over-age students. There is a 11 percentage point gap between those completing on time (67%) and those completing with several years' delay (78%).
- Conflict affects the precision of school attendance estimates. Evidence from five major crises suggests that the out-of-school population may be underestimated by at least 5.5 million. Conflict also takes a major toll on education development. The primary completion rate has increased four times faster in Togo than in Yemen, two countries that were at the same level in 2006.
- Globally, 58% of students achieve the minimum proficiency level in reading and 44% in mathematics at the end of primary school. However, these estimates rely on patchy data and include data prior to COVID-19.
- Analysis of 57 countries with data from the Programme for International Student Assessment show that the proportion of students achieving a minimum proficiency level at the end of lower secondary declined by 12 percentage points in reading and 6 points in mathematics between 2012 and 2022.

CHAPTER 8



TARGET 4.1

Primary and secondary education

By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

GLOBAL INDICATORS

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*

4.1.2 – *Completion rate (primary education, lower secondary education, upper secondary education)*

THEMATIC INDICATORS

4.1.3 – *Gross intake ratio to the last grade (primary education, lower secondary education)*

4.1.4 – *Out-of-school rate (primary education, lower secondary education, upper secondary education)*

4.1.5 – *Percentage of children over-age for grade (primary education, lower secondary education)*

4.1.6 – *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*

4.1.7 – *Number of years of (a) free; and (b) compulsory primary and secondary*

ACCESS AND COMPLETION

It is estimated that 251 million children and youth were out of school in 2023, of which 71 million were primary school-age children, 57 million adolescents of lower secondary school age and 120 million youth of upper secondary school age. Although about 110 million more children, adolescents and youth have enrolled in school since 2015, the out-of-school population has declined by just 3 million, or 1%, at the same time (**Figure 8.1a**). In contrast, in the 8 years before 2015, the out-of-school population had declined by 43 million, or by 14%. The rate of progress has, therefore, slowed down by over 90%.

> 251 million children and youth were out of school in 2023

The out-of-school rate fell from 17.2% in 2015 to 16.1% in 2023. Among school-age children, adolescents and youth, it was 33% in low-income, 19% in lower-middle-income, 8% in upper-middle-income and 3% in high-income countries (**Figure 8.1b**). Globally, about 10% of primary school-age children, 14% of lower secondary school-age adolescents and 30% of upper secondary school-age youth are out of school. These estimates are based on a model developed by the *Global Education Monitoring Report* team and the UNESCO Institute for Statistics (UIS), which combines administrative and survey data and is featured on the VIEW website.

Although home to 4 of the 12 countries with the largest out-of-school populations in the world (Afghanistan, Bangladesh, India and Pakistan), Central and Southern Asia has continued making rapid progress in access to education. Its share of the global out-of-school children population has declined, from 44% in 2000 to 33% in 2015 and 21% in 2023. Its share of the out-of-school adolescents population has also declined, from 44% in 2000 to 33% in 2015 and 25% in 2023, In contrast, the share of sub-Saharan Africa in the global out-of-school children population has increased, from 32% in 2000 to 51% in 2023; and even faster in the global out-of-school adolescent population in this period, from 25% in 2000 to 51% in 2023 (**Figure 8.2a**). In fact, the number of out-of-school children in sub-Saharan Africa has not changed since 2000, while the number of out-of-school adolescents and youth in the region did not change between 2000 and 2015 but increased by 26% from 2015 to 2023 (**Figure 8.2b**).

FIGURE 8.1:
Since 2015, the out-of-school population has stagnated
Out-of-school rate, out-of-school children and enrolled children in primary and secondary education, 2000–23

a. World

Continued on next page...

The out-of-school estimation model suggests that, globally, stagnation kicked in around or shortly before 2015. It predates COVID-19 and does not appear to be related to it. However, the model's structure cannot detect short-term changes. For that reason, it is important to look closely at administrative data for individual countries that may be more sensitive to such effects. Young people of upper secondary school age were more vulnerable to leaving school early as a result of prolonged school closures. In the particular case of the United States, where homeschooling has been a popular and viable option for some households, some decline in public school enrolment has been observed (Goulas and Pula, 2024).

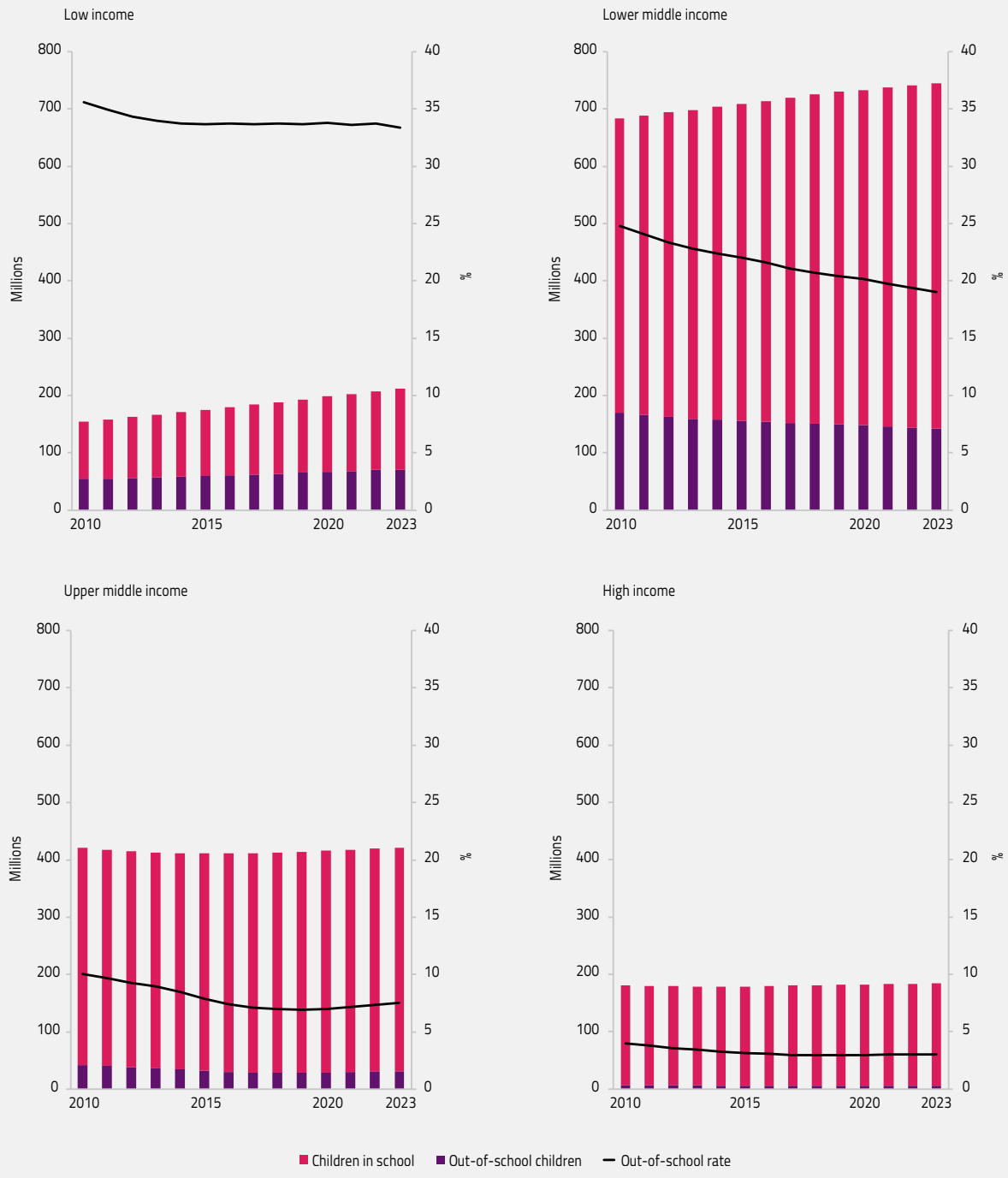
But this appears to be an exception. A review of 34 countries with data for 2019, 2021 and 2023 is consistent with the model estimates and does not suggest that COVID-19 had any negative impact on enrolment. Of those countries, the out-of-school rate of youth of upper secondary school age declined in 14 countries (with a median fall of 7 percentage points between 2019 and 2023), stayed constant in 11 countries and rose in 9 countries (with a median increase of 6 percentage points) (**Figure 8.3**).

FIGURE 8.1 CONTINUED:

Since 2015, the out-of-school population has stagnated

Out-of-school rate, out-of-school children and enrolled children in primary and secondary education, 2000–23

b. By country income group



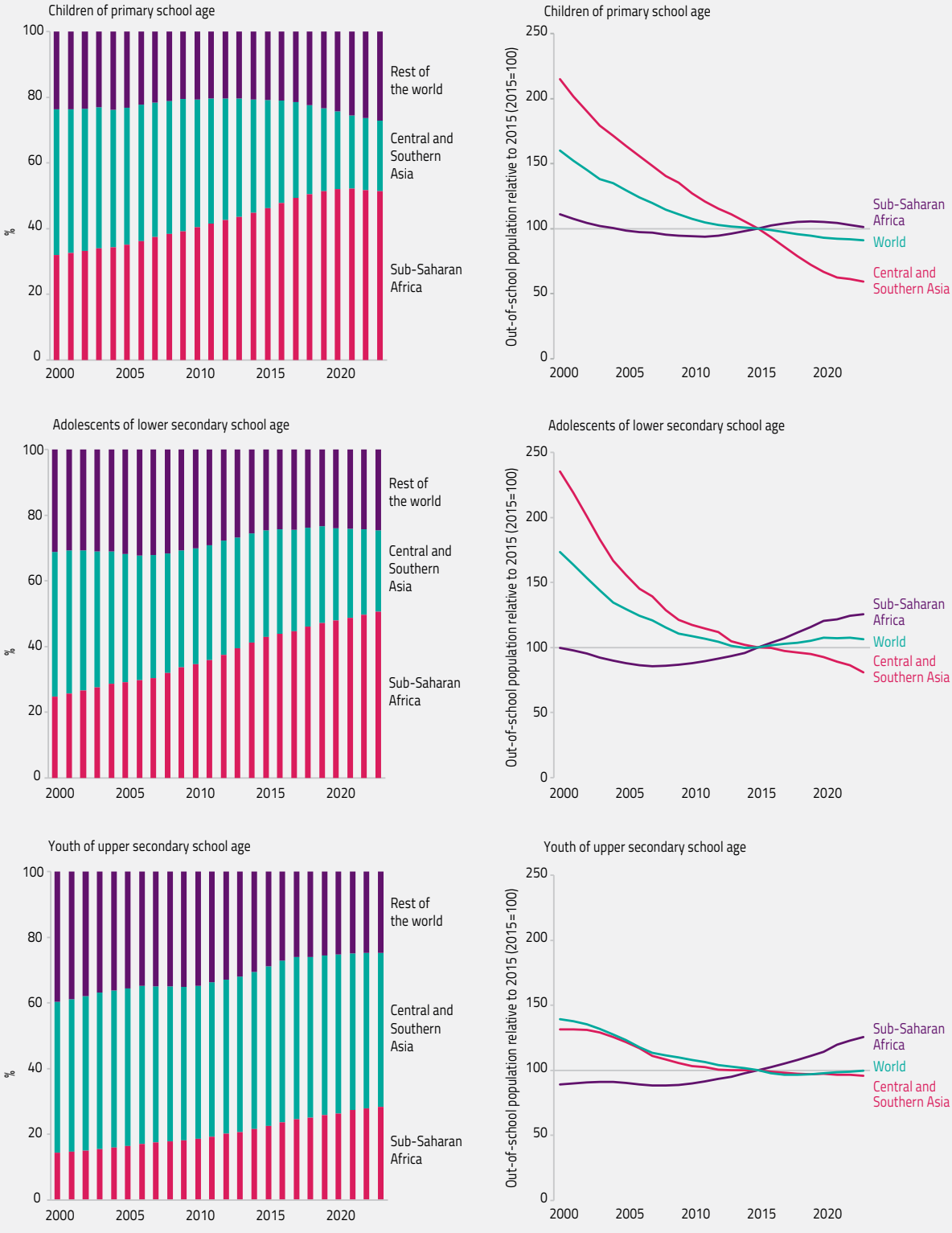
GEM StatLink: https://bit.ly/GEM2024_fig8_1

Source: VIEW database.

FIGURE 8.2:
Sub-Saharan Africa accounts for more than half of the total number out-of-school children and adolescents

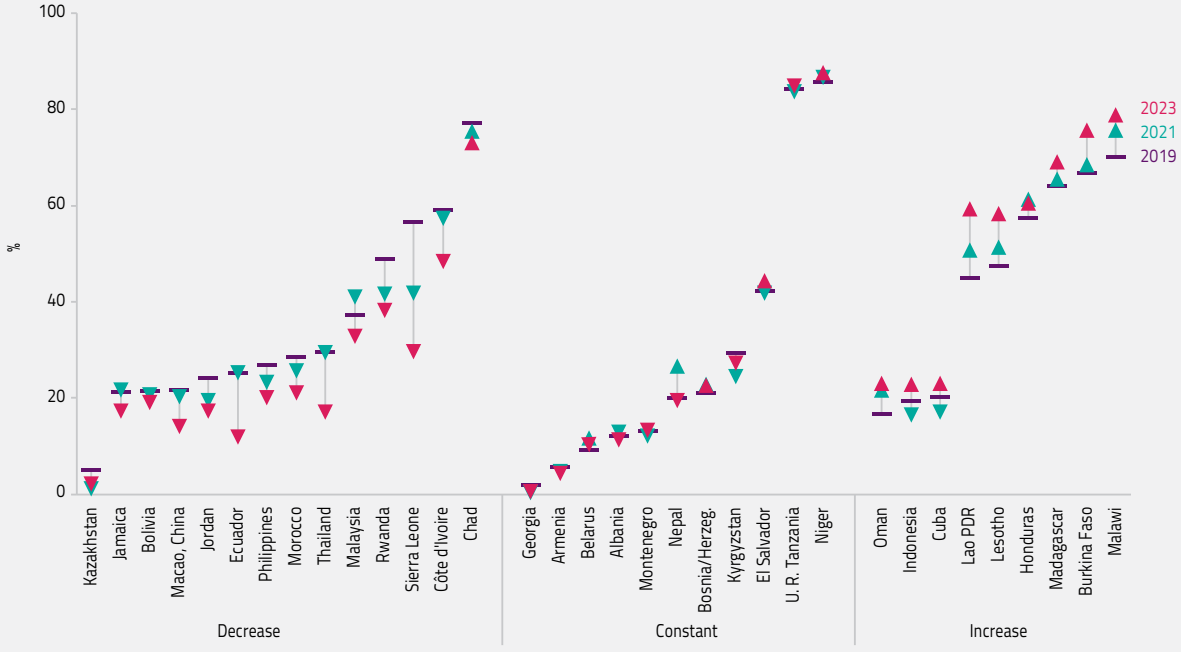
a. Distribution of out-of-school population, by region, 2000–23

b. Relative change in the out-of-school population, by region, 2000–23 (2015 = 100)



GEM StatLink: https://bit.ly/GEM2024_fig8_2
Source: VIEW database.

FIGURE 8.3:
COVID-19 does not appear to have had a negative impact on out-of-school rates
Out-of-school rate of youth of upper secondary school age, selected countries, 2019, 2021 and 2023



Note: The 34 countries are those with data for each of the 3 years and have a population of over 1 million.
GEM StatLink: https://bit.ly/GEM2024_fig8_3
Source: UIS database.

Another case where models may underestimate the extent of the out-of-school problem is in emergencies. In a situation of armed conflict or natural disaster, it may be impossible to collect data in affected areas, yet official estimates may not recognize such undercounting. An effort is currently underway to try to address this gap by introducing a systematic way to filter available information to make ex post adjustments of out-of-school estimates (**Box 8.1**).

SDG global indicator 4.1.2 tracks completion rates across different levels of education. Completion rates have steadily increased, albeit slowly. The primary completion rate increased from 85% to 88%, or by 3.1 percentage points between 2015 and 2023; the lower secondary completion rate increased from 74% to 78%, or by 4 percentage points. The upper secondary completion rate increased from 53% to 59%, or by 5.9 percentage points, which is equivalent to an annual growth of 0.7 percentage points. In contrast, in Yemen, a conflict-affected country, the upper secondary completion rate has increased by just 0.2 percentage points per year over twice as long a period (**Box 8.2**).

> “The primary completion rate increased from 85% to 88%, or by 3.1 percentage points between 2015 and 2023”

The completion rate is defined as the percentage of students who complete an education level within three to five years after the official graduation age (e.g. in systems where primary school is expected to be completed by age 11, primary completion is calculated over the age group of 14- to 16-year-olds). This measure captures students who started an education cycle on time and did not repeat grades. In practice, both problems – late completion and grade repetition – are common in poor countries, which means that many complete each education cycle with several years' delay. A complementary measure to the official, timely completion rate is the ultimate completion rate, which takes into account those who complete an education cycle with up to an eight-year delay.

BOX 8.1:

How can the impact of crises on out-of-school populations be estimated?

When crises strike, out-of-school estimates cannot be updated unless there is new information. Sometimes such new information is collected. For instance, UNICEF carried out a Multiple Indicators Cluster Survey in Afghanistan in 2022/23 shortly after the new regime banned girls from attending school. But this was an exception. In most cases, monitoring breaks down in crises. A lack of security and urgent humanitarian priorities do not allow the usual data collection processes to continue. This hampers the counting of children in these countries in global reporting.

An ideal approach would systematically try to improve the way governments document whether their education data collection is comprehensive or excludes particular regions and populations. Stronger collaboration among government institutions as well as between government and humanitarian agencies is needed for this to happen. This approach is difficult to implement in practice, however. Alternatively, an ad hoc approach can provide a short-term solution. Using documentation from humanitarian agencies, it should be possible to estimate by how much high-level out-of-school population estimates would need to be adjusted to reflect the situation on the ground. To examine the possibilities and limitations of this approach, documentation on access to education in the five gravest humanitarian crises according to the International Rescue Committee was examined (IRC, 2024).

The largest displacement crisis in the world is in **Sudan** since civil conflict erupted in April 2023. More than 8 million people, about 15% of the population, have either been internally displaced or have fled to neighbouring countries. According to the UIS/GEM Report model, there were 5.4 million, or 41%, of children, adolescents and youth out of school in 2022 prior to the conflict. This estimate was also consistent with the results of a 2022 nationally representative household survey. Civil conflict mostly affected the regions of Darfur, Khartoum and Kordofan (Sudan Education Sector, 2023). Of their respective school-age populations, about 60% in Darfur and Kordofan and 18% in Khartoum were out of school in 2022. Assuming that no children went to school after April 2023 in these 3 regions, 4.2 million would need to be added to the out-of-school population, bringing the total to 9.6 million. A widely circulating estimate that 19 million children are out of school (Dahir, 2023) would, therefore, be exaggerated, considering that the school-age population is about 13.3 million. While some schools opened in Darfur in January 2024 (Radio Dabanga, 2024), the entire region remained in crisis throughout 2024 with other provinces dragged into the conflict.

In **the State of Palestine**, all the estimated 550,000 children aged 6 to 17 years in Gaza have been out of school since October 2023 (Global Education Cluster, 2024) and would need to be added to the global estimate (Chapter 15).

South Sudan has suffered from a seemingly endless spiral of conflict and vulnerability to natural disasters. There are no easily accessible data for triangulation. The UIS/GEM Report out-of-school model estimated that there were 2.1 million children, adolescents and youth out of school in 2022. An estimate in December 2023 raised that estimate to 2.8 million (South Sudan Education Cluster, 2023). If verified, an additional 0.7 million children would, therefore, need to be added to the global estimate.

In **Burkina Faso**, a crisis of insecurity due to continued attacks has spread to almost the entire country. However, 5 of the 13 administrative regions are disproportionately affected: Boucle du Mouhoun, Centre-Nord, Est, Nord and Sahel. The UIS/GEM Report out-of-school model estimated 2.9 million children, adolescents and youth out of school in 2022, of which the 5 most heavily affected regions accounted for 1.5 million. Data from two surveys in 2019 and 2022 were used, so the estimate is up-to-date, although it is hard to know whether enumeration was representative in the affected areas. An estimate by the education ministry in May 2023, with the support of the education cluster, found that more than 5,000 primary and secondary schools were forced to close in these regions, with almost 900,000 students losing access to education (Burkina Faso Ministry of National Education, Literacy and Promotion of National Languages, 2023). Most likely, this estimate overlaps with the existing higher estimates of the out-of-school population; it might, therefore, be safe to assume that no further upward adjustment is needed for Burkina Faso.

It is more difficult to assess the situation in **Myanmar**, as the last available official data are from 2018. The model projects that the improvement observed around the mid-2010s, when the total number of out-of-school children, adolescents and youth was reliably estimated at around 2.9 million, would have continued, leading to an estimate of just 1.2 million out of school in 2022. But this is likely to be unreliable. An education factsheet in September 2023 suggested that 3.7 million lacked 'access to learning', but this is not the same as saying this population is out of school, nor is the age group clearly defined (UNICEF, 2023). It is also unlikely that the out-of-school population would have increased by so much. In other words, it is not possible to make an informed estimate without more information.

Continued on the next page...

BOX 8.1 CONTINUED:

In summary, evidence from three of five major crises for which reasonably reliable and comparable information is available suggests that the out-of-school population may be underestimated by 5.5 million. Each crisis is different in terms of characteristics such as intensity, spread and duration, as well as in terms of data availability. Education clusters, which are mandated to coordinate humanitarian responses in areas where the state may be absent, party to the conflict, or not have the resources to identify needs and provide education services, are tasked with estimating the number of 'People in Need' of education. But it is important to note that this is a different definition than being out of school. Clusters assess education needs for purposes other than global reporting. The result is that it is hard to combine and integrate their findings into official statistical reports. But more can be done to take into account the data they provide, and cross-check them when they can be triangulated with other sources.

It was decided at the first Conference on Education Data and Statistics in February 2024 to establish a task force to propose a systematic process on how to take supplementary information into account for estimating a margin of error in out-of-school population calculations – for a limited number of the most-severe humanitarian crises. The UIS and the GEM Report will be working with Education Cannot Wait and experts in affected countries to identify the way forward.

Globally, the difference between the timely and ultimate completion rate is 4.4 percentage points in primary and lower secondary education and 3.3 percentage points in upper secondary education. This translates to 62% of youth ultimately completing upper secondary school. Sub-Saharan Africa is the region with the largest discrepancy between timely and ultimate completion rates. In 2023, 67% of children had completed primary school on time but 78% did with several years' delay, a difference of 10.4 percentage points. This is an improvement relative to 2015, when the gap was 11.8 percentage points. The gap between ultimate and timely completion is 9 percentage points in lower secondary and 4.3 percentage points in upper secondary education – but there has been no improvement at these two levels since 2015 (**Figure 8.4**).

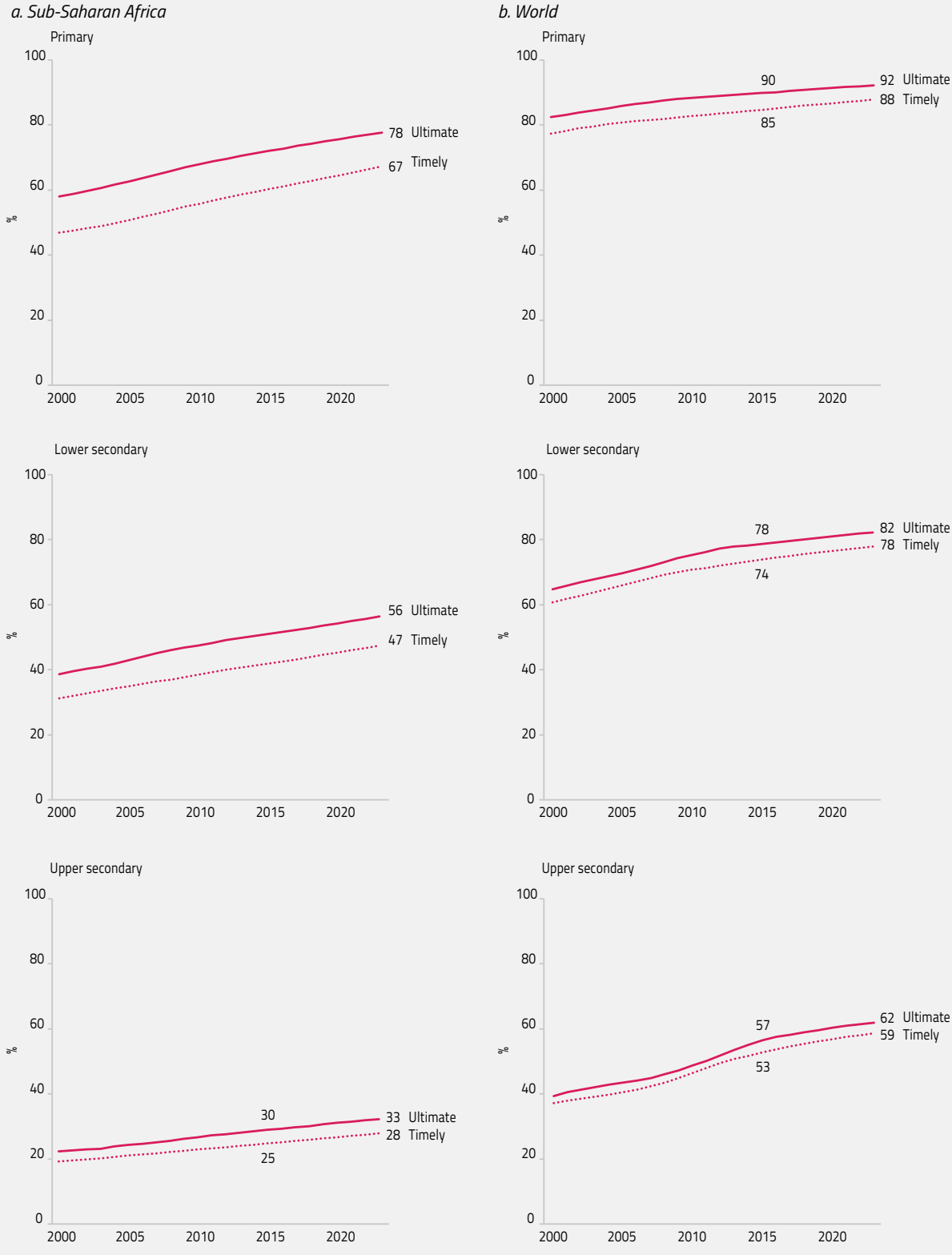
This high level of discrepancy reflects the large share of children in primary and secondary education who are at least two years too old for their grade. According to SDG thematic indicator 4.1.5, the percentage of over-age children in sub-Saharan Africa was 26% in primary education and 35% in lower secondary education in 2023. The region with the next highest over-age rates was Oceania, at 15% in primary and 13% in lower secondary education in 2023. Over-age rates are at 10% or less in the other five SDG regions.

LEARNING

SDG global indicator 4.1.1 tracks the percentage of students who achieve the minimum level of proficiency in reading and mathematics at three stages in their education trajectory, Globally, it is estimated that 58% of students achieve the minimum proficiency level in reading and 44% in mathematics at the end of primary school. Similarly, 64% of students achieve the minimum proficiency level in reading and 51% in mathematics at the end of lower secondary school.

Considering that 12% of children do not complete primary school on time (or that 8% never complete, using the extended definition of ultimate completion) and that 22% of children do not complete lower secondary school on time (or that 18% never complete), these figures need to be adapted. This link between completion and learning is captured by indicator 4.1.0, which asks whether the entire cohort of children and adolescents (and not just those in school) are 'prepared for the future'. This indicator 4.1.0 is the product of indicators 4.1.1 and 4.1.2 and assumes that no child that does not reach the end of primary school or the end of lower secondary school has achieved the minimum proficiency level. While there may be a few cases where this is not true (**Box 8.3**), indicator 4.1.0 captures the spirit of SDG target 4.1 which calls on countries to ensure that all children complete each level of education and achieve relevant and effective learning outcomes.

FIGURE 8.4:
The gaps between timely and ultimate completion rates have remained persistently high in sub-Saharan Africa
Timely and ultimate completion rates, by education level, 2000–23



GEM StatLink: https://bit.ly/GEM2024_fig8_4
Source: VIEW database.

BOX 8.2:

In Yemen, conflict has denied an entire generation of education opportunities

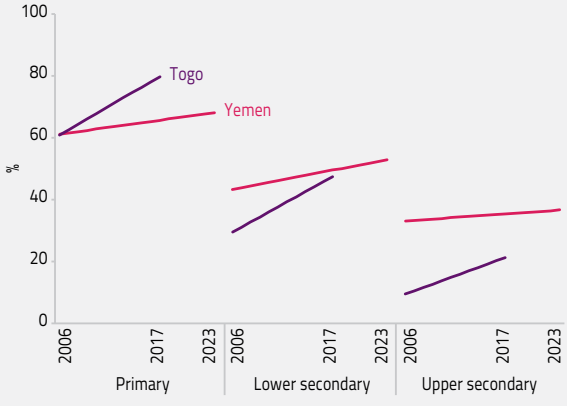
Yemen has been engulfed in a protracted nine-year military conflict, resulting in a severe humanitarian and economic crisis. As of 2023, some 18.2 million Yemenis required critical humanitarian assistance. The crisis has devastated livelihoods, with 80% of the population living in extreme poverty. Recent reductions and suspensions of food assistance mean that 2.7 million children suffer from acute malnutrition (UNICEF, 2024). At the end of 2022, it was calculated that 4.5 million people were displaced due to the conflict (UNHCR, 2023). It has been estimated that displaced children are twice as likely to drop out of school compared to their peers in host communities (Save the Children, 2024).

Although Yemen lacks a comprehensive population census, UNICEF carried out a Multiple Indicators Cluster Survey (MICS) in 2023, offering a unique opportunity to examine trends, as another MICS had been carried out in 2006. Progress in completion rates was very slow at all levels in this 17-year period. Primary completion rates increased from 61% to 68%, or by 0.4 percentage points per year. In Togo, which started from the same point in 2006 but has not been affected by conflict, the annual progress in the primary completion rate between 2006 and 2017 was more than 4 times as high, at 1.7 percentage points. Progress in upper secondary completion was 5 times faster in Togo (1 percentage point per year) than in Yemen (0.2 percentage points per year) (**Figure 8.5**).

FIGURE 8.5:

In Yemen, conflict has compromised the education opportunities of an entire generation

Completion rate, by level, Togo and Yemen, 2006–23



GEM StatLink: https://bit.ly/GEM2024_fig8_5

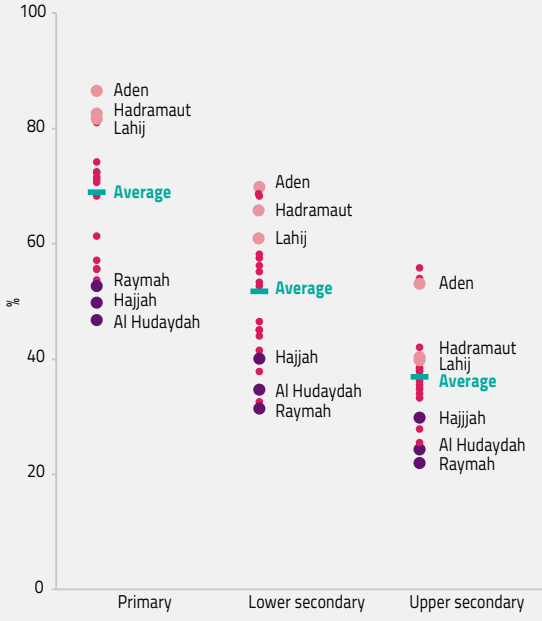
Source: GEM Report team analysis based on the 2023 Multiple Indicators Cluster Survey data.

There is some association between conflict and the regional variation in completion rates. Completion rates are lower in the governorates of Al Hudaydah, Hajjah and Raymah, located in western Yemen and affected by some of the highest civilian casualty rates in the country. Completion rates are higher in the governorates of Aden, Hadhramaut and Lahej, where casualty rates have been considerably lower (ACLED, 2024) (**Figure 8.6**).

FIGURE 8.6:

Completion rates in Yemen show significant regional variation

Completion rates, by governorate and level, Yemen, 2022/23



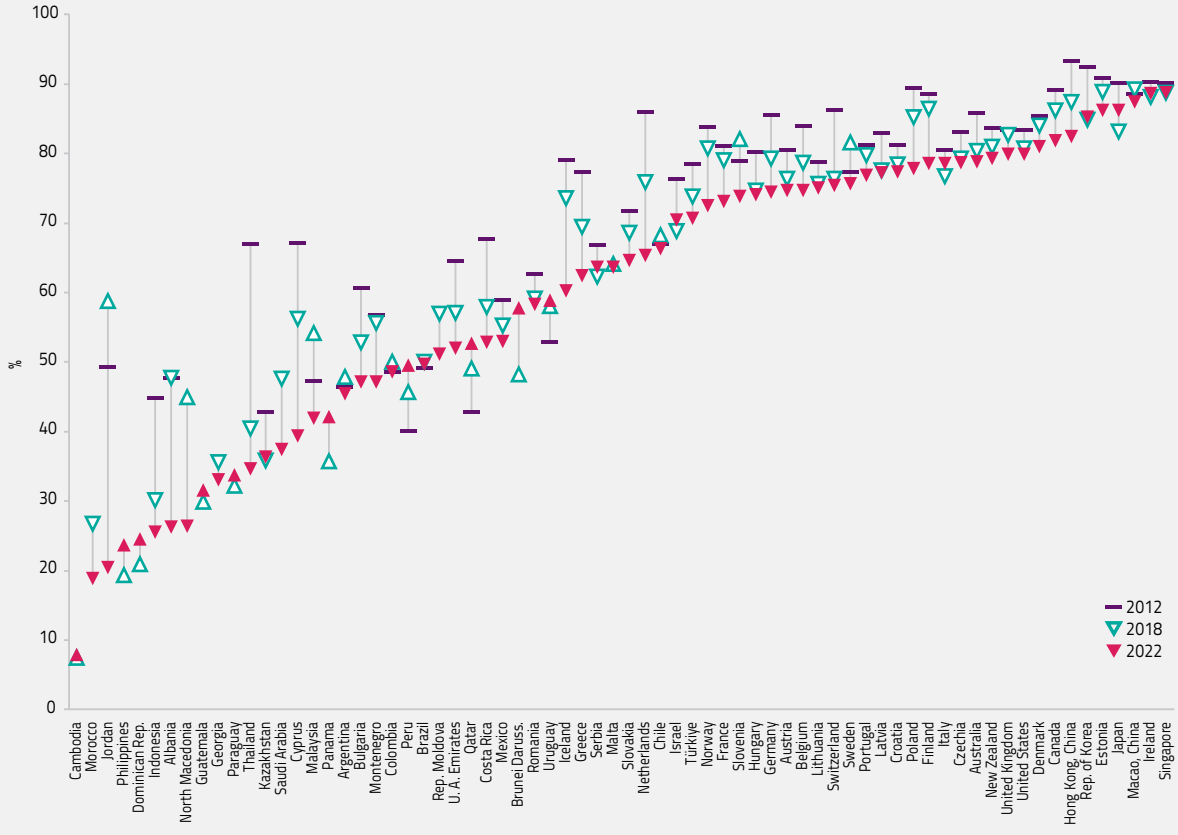
GEM StatLink: https://bit.ly/GEM2024_fig8_6

Source: GEM Report team analysis based on the 2022/23 Multiple Indicators Cluster Survey data.

Although conflict has lessened since the 2022 truce, ongoing security concerns continue to affect parents' trust in schools and deter children from attending (Save the Children, 2024). An immediate stop to all conflict is essential to implement effective social policies that can help put Yemen back on the path to education and social progress.

FIGURE 8.7:
Adolescents' learning outcome levels fell in reading and especially mathematics between 2018 and 2022
Percentage of students achieving a minimum level of proficiency at the end of lower secondary, selected middle- and high-income countries, 2012, 2018 and 2022

a. Reading



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According to indicator 4.1.0, globally, 51% of children achieve the minimum proficiency level in reading at the end of primary school and 50% at the end of lower secondary school. Meanwhile, 39% of children achieve the minimum proficiency level in mathematics at the end of primary school and 40% at the end of lower secondary school. In both subjects and both levels, the share needs to be adjusted upwards by two percentage points if the ultimate completion rate is used.

Indicator coverage remains lower than desirable (**Chapter 7**). In addition, much data that inform the above estimates date from before the COVID-19 pandemic. There has been considerable attention to the potential impact of COVID-19 on learning outcomes due to the disruption caused by school closures. Two international large-scale assessments have provided insights. The 2021 Progress in International Reading Literacy Study (PIRLS) assesses reading at grade 4 (considered as equivalent to the end of primary school and reporting to indicator 4.1.1b) and was covered in the 2023 *Global Education Monitoring Report*. Its results suggested a decline of just one percentage point in the share of students that achieved the minimum proficiency level in 37 mostly high-income countries, an imperceptible impact.

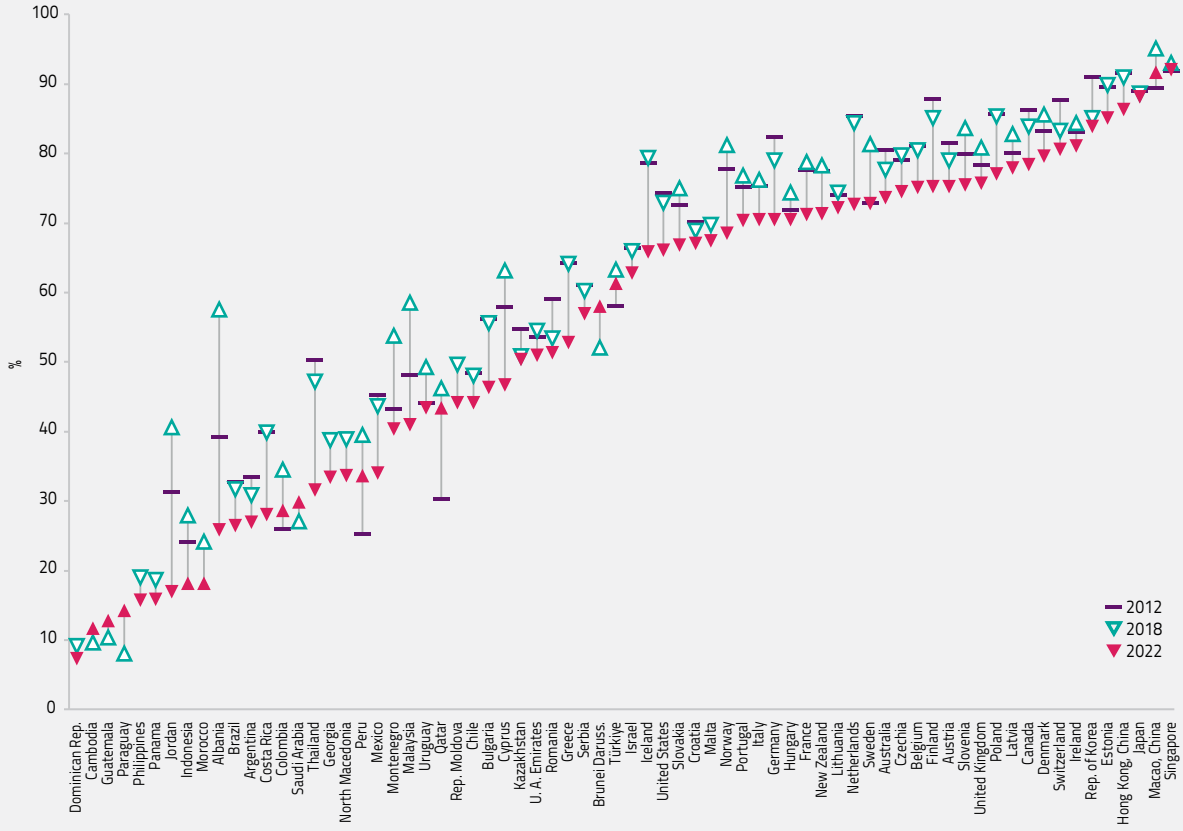
Second, the 2022 Programme for International Student Assessment (PISA) assesses reading and mathematics among 15-year-olds (considered as equivalent to the end of lower secondary school and reporting to indicator 4.1.1c).

FIGURE 8.7 CONTINUED:

Adolescents' learning outcome levels fell in reading and especially mathematics between 2018 and 2022

Percentage of students achieving a minimum level of proficiency at the end of lower secondary, selected middle- and high-income countries, 2012, 2018 and 2022

b. Mathematics



GEM StatLink: https://bit.ly/GEM2024_fig8_7

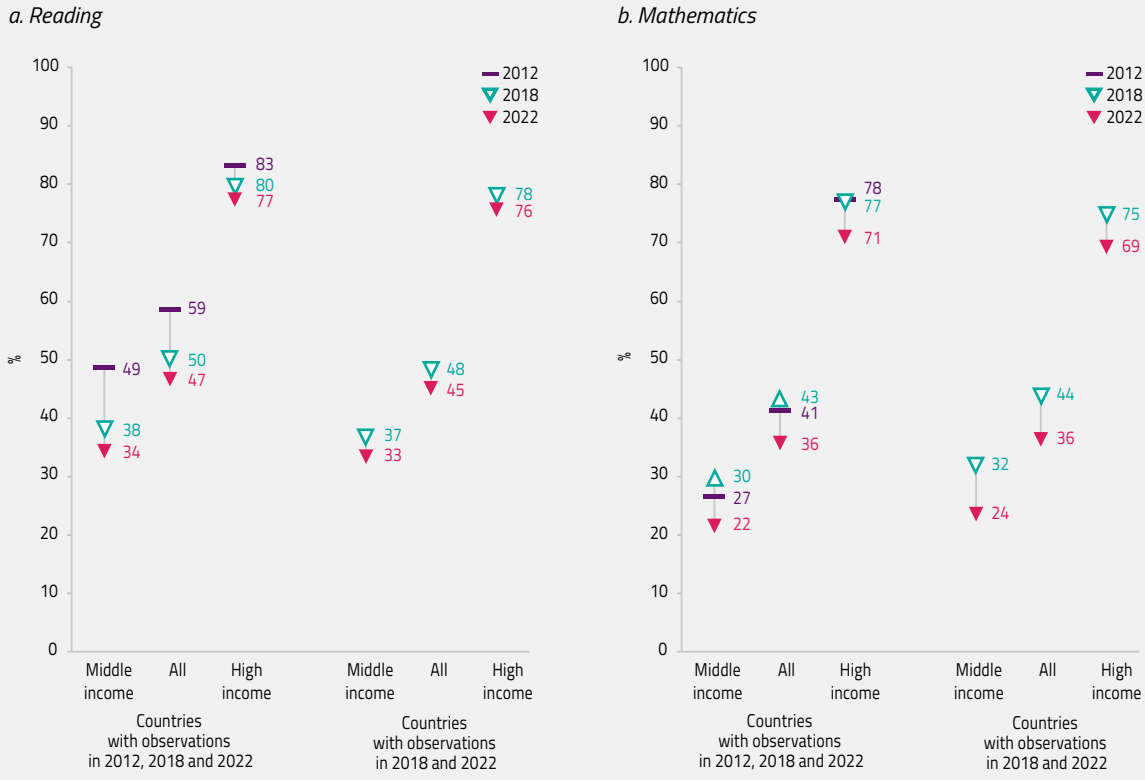
Source: GEM Report team analysis based on 2012, 2018 and 2022 PISA data.

These data also correspond to richer countries, although in this case, 25 of the 70 countries whose trends can be compared over time are middle-income countries. Results need to be interpreted with caution for two reasons. First, as these countries were at a much higher starting point, any learning loss is going to be more visible compared, for example, to low-income countries, where at most 2 in 10 children achieve the minimum proficiency level (**Box 8.4**). Second, these countries also had the means to protect their students from the worst impact of the pandemic.

Results differ somewhat for reading and mathematics. In the case of reading, learning outcome levels fell but it is difficult to link the result exclusively to COVID-19, as results in 2022 continued a long-term trend which goes back to at least 2012. Countries that have experienced large declines in achievement levels include Costa Rica, Cyprus, Iceland, Jordan, the Kingdom of the Netherlands and Thailand. Among the few countries that have managed to improve throughout this period are Peru, Qatar and Uruguay (**Figure 8.7a**).

In the case of mathematics, learning outcome levels appear to have improved between 2012 and 2018 and as a result the fall in 2022 appears more drastic than in reading (**Figure 8.7b**). However, a closer look at PISA trends raises the question of whether the improvement in 2018 might have been an exception and whether, in fact, a long-term decline may have been ongoing since 2009. COVID-19 may have accelerated the decline but may mask other structural

FIGURE 8.8:
Since 2012, the percentage of students achieving minimum proficiency has fallen by 12 percentage points in reading and 6 percentage points in mathematics
Percentage of students achieving a minimum level of proficiency at the end of lower secondary, selected middle- and high-income countries, 2012, 2018 and 2022



GEM StatLink: https://bit.ly/GEM2024_fig8_8
Source: GEM Report team analysis based on 2012, 2018 and 2022 PISA data.

factors. More research is needed to disentangle the potential role that issues such as increased diversity, the distracting impact of technology, changes in home environments and even growing levels of mathematics anxiety (**Focus 8.1**) may have played.

To summarize these trends, it is helpful to look at two groups: the 57 countries with observations in 2012, 2018 and 2022 and the expanded set of 70 countries with observations in 2018 and 2022. In the case of reading, the percentage of students who achieved the minimum proficiency level fell by 9 percentage points from 59% in 2012 to 50% in 2018 and by a further 3 points to 47% in 2022. The overall decline between 2012 and 2022 was 12 percentage points but has been larger in middle-income (14 points) than in high-income countries (6 points) (**Figure 8.8a**). In the case of mathematics, the percentage of students who achieved the minimum proficiency level increased by 2 percentage points, from 41% in 2012 to 43% in 2018 (although it increased by 3 percentage points in middle-income countries and fell by 1 percentage point in high-income countries). There was then an 8-point fall to 36% in 2022. The overall decline between 2012 and 2022 was 6 percentage points and was similar in middle- and high-income countries (**Figure 8.8b**).

New data are expected to be released in coming months from the 2023 Trends in International Mathematics and Science Study, which also focuses on relatively richer countries. It will not be until 2025 at the earliest that data from Africa, Latin America and Southeast Asia will help provide a fuller global picture of progress, or a lack thereof, as 2030 draws nearer.

BOX 8.3:

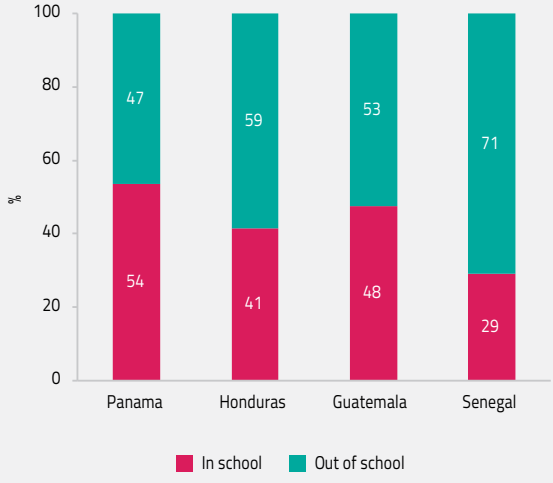
Those who do not reach the end of lower secondary school are highly unlikely to be proficient in reading and mathematics

To verify the assumption implicit in SDG indicator 4.1.0 that not reaching the end of primary or the end of lower secondary school is equivalent to not achieving the learning outcome levels expected at those stages, it is important to assess the differences in learning achievement between those in school and those out of school. The PISA for Development (PISA-D) study, carried out in eight lower-middle-income countries (Cambodia, Ecuador, Guatemala, Honduras, Panama, Paraguay, Senegal and Zambia) offered a rare chance to reflect on this assumption in four countries that assessed out-of-school populations in 2017–18: Guatemala, Honduras, Panama and Senegal. The PISA-D study examined a range of trajectories of 15-year-olds who were 'out of school': they had never enrolled; they had dropped out either before or after completing primary school; they had remained in school but were too old for their grade; or they had remained in school but attended irregularly.

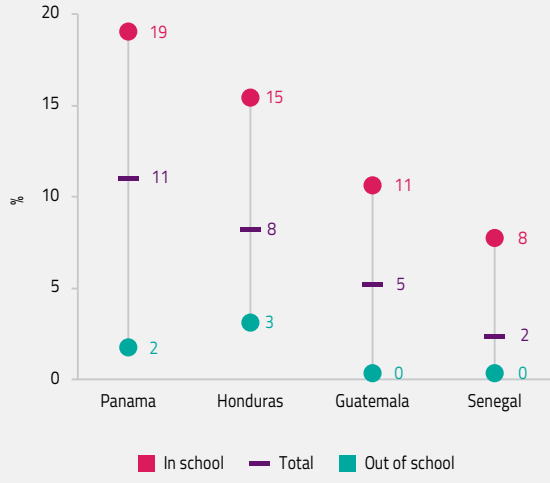
A range of findings emerged. First, barely 5 in 10 15-year-olds in the 3 Central American countries and 3 in 10 in Senegal were in school (**Figure 8.9a**). Second, learning outcome levels of those in school were very low overall. Only 19% of 15-year-old students in Panama and just 8% in Senegal achieved the minimum proficiency level in mathematics. Third, there is a clear correlation between attachment to school and proficiency levels. Students who were the right age for their grade and attending school achieved higher proficiency levels than those who had dropped out or were over-age for their grade (Ward, 2020). In Guatemala and Senegal, none of those out of school achieved minimum proficiency; in Honduras 2% did and in Panama 3% did (**Figure 8.9b**).

FIGURE 8.9:
Those who drop out of school or do not attend school regularly are highly unlikely to achieve minimum proficiency levels
School attendance and learning outcomes of 15-year-olds, Guatemala, Honduras, Panama and Senegal, 2017–18

a. Distribution of 15-year-olds, by school attendance status



b. Percentage of students achieving a minimum level of proficiency in mathematics at the end of lower secondary, by school attendance status



GEM StatLink: https://bit.ly/GEM2024_fig8_9
Source: GEM Report team analysis based on PISA for Development data.

Accounting for 15-year-olds who are out of school shows that overall minimum proficiency levels for the total 15-year-old population are much lower than what the data for those in school alone suggest. In Senegal, the share of the entire cohort achieving minimum proficiency falls from 8% to 2%. The results show, therefore, the importance of an indicator like 4.1.0. Proficiency levels as captured by global indicator 4.1.1, although already significantly lower in lower-middle-income than in upper-middle-income and high-income countries, give a misleading picture because they exclude the out-of-school population.

BOX 8.4:

The Assessment for Minimum Proficiency Level is a new source of evidence on learning in low- and lower-middle-income countries

Well-established cross-national assessments, such as PIRLS and PISA, have been created in high-income countries that already have relevant capacity to measure learning and have developed their own national assessments. Some middle-income countries have invested in their participation in such assessments. But the cost is prohibitive for most countries. Moreover, even students in middle-income countries such as Egypt, Morocco and South Africa tend to score well below the countries that helped set up the assessment.

While there are some exceptions, middle-income and especially low-income countries lack sufficient capacity to develop their own, robust national assessment mechanisms. To address this challenge, the UIS has developed the Assessment for Minimum Proficiency Level (AMPL) to help poorer countries preserve the integrity of their national assessment framework if available; develop their national assessment development skills; and enable them to produce internationally comparable data to report on SDG global indicator 4.1.1 within their capacity and budget.

The AMPL was developed in two stages. The first stage (2021) was part of the COVID-19: Monitoring the Impacts on Learning Outcomes project, which aimed to evaluate the impact of COVID-19 on learning outcomes. It was administered in English and French at the end of primary education in six African countries (Burundi, Burkina Faso, Côte d'Ivoire, Kenya, Senegal and Zambia). The second stage took place in 2023 in various world regions. In Africa, the Gambia and Zambia administered the AMPL to assess learning at the end of lower primary education while Kenya, Lesotho and Zambia administered it at the end of primary education. Each country sampled between 220 and 300 schools.

Selected results from six of the countries that administered the AMPL at the end of primary education in 2021 and 2023 show that only about 1 in 10 students reached the minimum proficiency level in reading, except in Kenya where 1 in 4 students did. In contrast, apart from in Côte d'Ivoire, a larger proportion of students achieved the minimum proficiency level in mathematics: 16% in Zambia, 20% in Lesotho, 24% in Burkina Faso, 34% in Senegal and 37% in Kenya.

Gender gaps differ by subject. In mathematics, there is parity in four of the six countries; in reading, girls have an advantage, although at the observed low levels of learning, the differences do not exceed three percentage points. Burkina Faso is the only of the six countries where girls lag behind boys in both subjects, although only in mathematics is the gap of four percentage points noticeable.

In contrast, the urban–rural gaps are considerable. In reading, no more than 5% of students from rural schools achieve the minimum proficiency level in five of the six countries. In all countries, students from urban schools are at least three times as likely to read with comprehension; in Burkina Faso and Lesotho, they are six times as likely. In mathematics, the urban–rural gap is 7 percentage points in Côte d'Ivoire; 16 percentage points in Burkina Faso, Senegal and Zambia; and 22 percentage points in Kenya and Lesotho. In Kenya, students in urban schools are the only population group where the majority, 51%, has achieved minimum proficiency (**Figure 8.10**).

Continued on the next page...

FOCUS 8.1. MATHEMATICS ANXIETY NEGATIVELY AFFECTS MATHEMATICS PERFORMANCE

Among a range of barriers to student engagement and success in mathematics is 'mathematics anxiety', which is defined as 'anxiety that interferes with manipulation of numbers and the solving of mathematical problems in a wide variety of ordinary life and academic situations' (Richardson and Suinn, 1972). Mathematics anxiety not only deters students from participating in mathematics-related academic pursuits and career paths in science, technology, engineering and mathematics (Choe et al., 2019), it also has broader implications for mental health and overall well-being across all age groups (Mammarella et al., 2019).

> "The first signs of mathematics anxiety can appear as early as age 6"

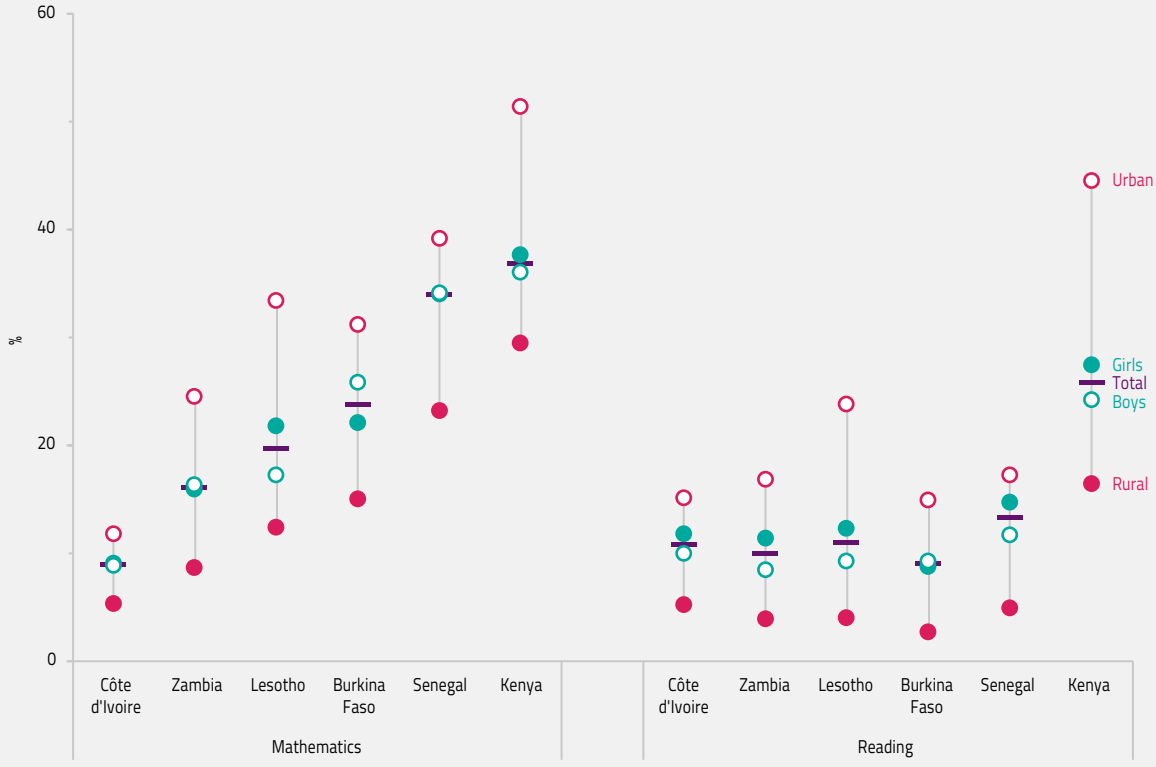
Over the past decades, there has been more interest in understanding when and how mathematics anxiety develops, as well as more attempts to measure it. Research indicates that the first signs of mathematics anxiety can appear as early as age 6 (Aarnos and Perkkilä, 2012), with significant implications for later development, as anxiety tends to remain stable or increase over time (Cargnelutti et al., 2017; Pekrun, 2016). Despite the possible early onset of this condition, research on primary school children remains limited due to challenges in

BOX 8.4 CONTINUED:

FIGURE 8.10:

By the end of primary school, only about 1 in 10 children read with comprehension in poorer African countries

Percentage of students who achieve minimum learning proficiency in mathematics and reading at the end of primary school, by sex and location, selected African countries, 2021–23



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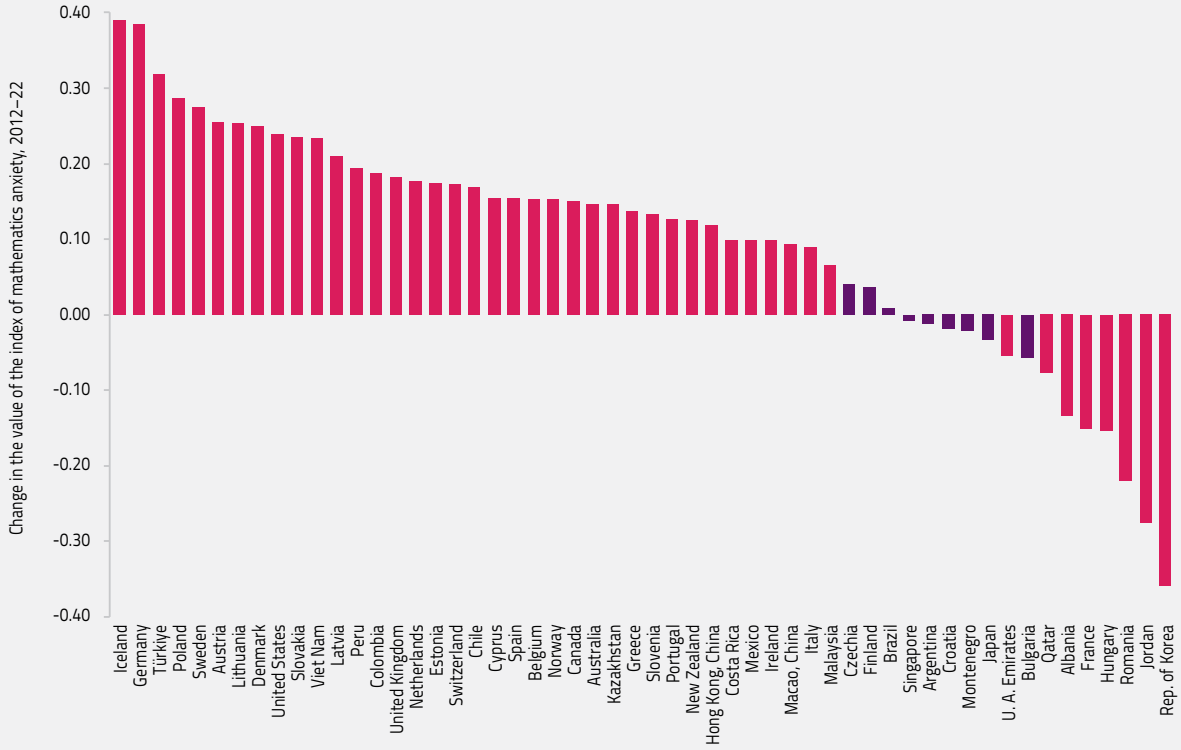
Source: GEM Report team analysis using data from the 2021 and 2023 Assessment for Minimum Proficiency Level.

accurately assessing mathematics anxiety in this age group (Cipora et al., 2018).

Since 2003, PISA has attempted to evaluate mathematics anxiety among 15-year-old students. PISA measures mathematics anxiety by asking students to respond to six statements with the levels of agreement 'strongly disagree,' 'disagree,' 'agree' or 'strongly agree'. The statements are: 'I often worry that it will be difficult for me in mathematics classes'; 'I worry that I will get poor marks in mathematics'; 'I get very tense when I have to do mathematics homework'; 'I get very nervous doing mathematics problems'; 'I feel helpless when doing a mathematics problem'; and 'I feel anxious about failing in mathematics.' The responses are aggregated to form the PISA index of mathematics anxiety, providing a standardized measure to compare anxiety levels across different countries and over time (OECD, 2004, 2013, 2023a).

The index of mathematics anxiety increased in a statistically significant way in 37 countries and economies between 2012 and 2022, most notably in Austria, Denmark, Germany, Iceland, Lithuania, Poland, Slovakia, Sweden, Türkiye, the United States and Viet Nam (**Figure 8.11**). In Poland and Sweden, for example, 15-year-old students in 2022 were at least 10 percentage points more likely to report getting very tense when doing mathematics problems and mathematics homework than their peers did in 2012. In contrast, anxiety towards mathematics has decreased significantly in Albania, France, Hungary, Jordan, the Republic of Korea, Qatar, Romania and the United Arab Emirates (OECD, 2013, 2023a).

FIGURE 8.11:
Students' mathematics anxiety levels have risen
Index of mathematics anxiety among 15-year-olds, selected countries, 2012 and 2022



Notes: Education systems where there was no statistically significant change at the 5% level between 2012 and 2022 are marked in purple.
GEM StatLink: https://bit.ly/GEM2024_fig8_11
Source: GEM Report team analysis of 2012 and 2022 PISA data.

In most countries, the gender differences in levels of mathematics anxiety are wide (OECD, 2023a; UNESCO, 2024). In particular, Denmark, France, Germany, Switzerland and the United Kingdom, which have above-average mean scores in mathematics and a low mathematics anxiety index after accounting for students' and schools' socioeconomic profiles, are also among the 10 countries that reported the largest absolute gender gaps in the mathematics anxiety index. During the COVID-19 school closures, boys reported significantly less anxiety towards mathematics if their schools provided adequate support to maintain learning and well-being (OECD, 2023b).

Differences in mathematics anxiety related to socioeconomic status are less pronounced than gender differences but nonetheless exist. Notably, during periods of COVID-19 school closures, the majority of students with a higher socioeconomic status report markedly reduced anxiety towards mathematics compared to their disadvantaged peers. This trend was particularly pronounced in Hungary, Jamaica and Ukraine. However, this pattern is not observed in all education systems (OECD, 2023b).

> "Mathematics anxiety and low mathematics performance are closely linked and potentially exacerbate each other"

Mathematics anxiety and low mathematics performance are closely linked and potentially exacerbate each other (Barroso et al., 2021; Carey et al., 2016; Young et al., 2012). PISA results underscore this cyclical relationship by showing that countries where students report high levels of mathematics anxiety also tend to have lower mathematics performance, regardless of individual or school characteristics (OECD, 2004, 2013, 2023a).

However, even among high-performing countries, levels of mathematics anxiety can vary widely. For instance, Japan ranks among the top five in mathematics performance in the 2022 PISA but also reports high levels of mathematics anxiety (OECD, 2023a). This suggests that a variety of complex and nuanced factors contribute to the development of mathematics anxiety beyond just academic performance.

One such factor is negative self-perception. Findings from the 2022 PISA highlight that, on average, more than 6 of every 10 students express concerns about their ability to succeed in mathematics classes (OECD, 2023a). In contrast, students with a growth mindset, characterized by the belief in improving abilities and intelligence through effort and practice, typically have lower mathematics anxiety levels compared to peers who think that their abilities are fixed. Moreover, the impact of mindset orientation extends beyond the mere alleviation of mathematics anxiety. In 46 of 73 surveyed countries and economies, students showing a growth mindset perform better in mathematics, despite experiencing high mathematics anxiety levels. This underscores the resilience and adaptive capabilities fostered by a growth mindset (OECD, 2023a).

Another factor is a lack of support systems, such as supporting teachers, a supportive school environment and family involvement (Luttenberger et al., 2018). Sensitivity from teachers to students' attitudes towards the subject and their identification of when students require additional help can alleviate mathematics anxiety (Aldrup et al., 2020; Lazarides and Buchholz, 2019). Furthermore, school leaders can reduce mathematics anxiety by fostering a supportive school culture and providing professional learning opportunities (Horne, 2022).

> The 2022 PISA results show that students who receive more support from teachers tend to experience lower levels of mathematics anxiety

The 2022 PISA results show that in 64 countries and economies, students who receive more support from teachers tend to experience lower levels of mathematics anxiety. This correlation is particularly strong in Croatia, Estonia, Hungary and Norway. A positive disciplinary climate in classrooms, characterized by less noise and distraction from digital devices and better student attentiveness to teachers, also strengthens the impact of teacher support. Across all surveyed countries and economies, students who receive more family support show greater confidence in their ability to learn independently and generally have lower anxiety towards mathematics (OECD, 2023b).

Traditional mathematics curricula and an emphasis on high-stakes testing also significantly contribute to mathematics anxiety (Simzar et al., 2015). Mathematics interventions in India, the Islamic Republic of Iran, the Kingdom of the Netherlands, Saudi Arabia, the United Kingdom and the United States focusing on innovative pedagogical techniques have proved efficient in boosting confidence, reducing anxiety and improving performance (Balt et al., 2022; Dowker et al., 2016; Ramirez et al., 2018). However, the outcomes of certain interventions remain mixed, especially among primary school students (Balt et al., 2022). For example, in Belgium, an intervention targeting over 300 children aged 6 to 12 with digital game–based learning in mathematics showed no reduced anxiety levels, but did lead to improved performance (Vanbecelaere et al., 2020).

In response to the previously described individual, social and academic factors which contribute to mathematics anxiety, education systems worldwide are implementing targeted initiatives. To foster a constructive attitude towards mathematics, the United States introduced the Mathematical Mindsets programme. Based on interdisciplinary research spanning psychology, neuroscience and mathematics education, the programme aims to cultivate a broader understanding of mathematics by emphasizing fundamental concepts such as number sense, pattern recognition and algebra as a problem-solving tool. It adopts a pedagogical strategy centred on engaging students with open-ended tasks and explicitly reinforcing a growth mindset (Boaler, 2019b, 2019a). Rolled out across 10 school districts in various states, teachers reported a notable shift in students' perceptions of their mathematical abilities and the nature of mathematics (Boaler et al., 2021).

To provide teachers with effective strategies and tools for boosting confidence and teaching mathematics effectively, England (United Kingdom), introduced the mathematics mastery reform in 2014, aimed at changing the pedagogical approach to teaching mathematics through an innovative professional development programme and exchange programme with other countries, including China. Establishing 32 maths hubs was central to operationalizing this reform (Department for Education, 2014). Evaluations commissioned by the Department for Education have demonstrated improvements in teachers' understanding of teaching mathematics, confidence and willingness to discuss effective teaching methods. Consequently, students have become more confident, resilient and skilled in solving mathematics problems. They demonstrated a better grasp of mathematical concepts and more effectively expressed their understanding and areas where they needed help (Boylan et al., 2018, 2019).

To make mathematics less abstract and more relevant to daily life, thereby reducing its intimidation level and making it more enjoyable for students, countries are updating their curricula and integrating technology into mathematics learning. Estonia's approach to mathematics education includes an initiative that offers options for integrating mathematics with other subjects within its mathematics curriculum. This initiative demonstrates the practical applications of mathematics across diverse disciplines such as languages, literature, natural and social sciences, art, music, technology, and even physical education (Estonia Government, 2023). Singapore's Ministry of Education has implemented the Student Learning System, a comprehensive digital platform that provides curriculum-aligned resources for students and teachers, promoting self-directed learning experiences (Singapore Ministry of Education, 2024). A notable advancement within this framework is introducing an artificial intelligence-driven adaptive learning system explicitly tailored for mathematics (Singapore Ministry of Education, 2023).

Countries are also re-evaluating their assessment practices. Since 2019, Austria has introduced additional national assessments at grades 4 and 8, with the implementation process underway. These assessments aim to provide teachers with comprehensive insights into student mathematics competencies. In contrast, Ireland has decentralized its assessment approach, granting schools autonomy to select their preferred assessment instruments. Ireland has embarked on a holistic approach to student evaluation as part of broader reforms to the lower secondary cycle curriculum. This approach is encapsulated in the Junior Cycle Profile of Achievement, which integrates classroom-based assessments, state examination results, and comprehensive reporting on formal and informal learning, encompassing aspects of student well-being. Sweden, meanwhile, has proposed a comprehensive overhaul of its national assessment system through the Inquiry on National Tests. This proposal advocates for a new tripartite system comprising national tests, national assessment support materials and a mechanism for national knowledge evaluation (May and Chamberlain, 2024).

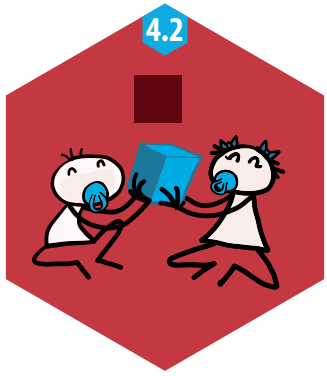
Weam, 35, has lived in Za'atari refugee camp since it opened 12 years ago and, with UNICEF's support, is a Syrian Assistant Teacher in one of the camp's Kindergartens. Her role is to support learning in the classroom.

Credit: © UNICEF/UNI499331/Al-Safadi*

KEY MESSAGES

- Over the past decade, participation in early childhood education has increased for children under 3, notably in Africa, but has stagnated for 3- to 5-year-olds: enrolment for those one year before the official primary entry age has remained at around 75% for the past decade, albeit with increases in the two regions lagging furthest behind: Northern Africa and Western Asia and sub-Saharan Africa.
- Many children enter primary education early. In Burundi, where the official entry age to primary education is 7 years, nearly 90% of enrolled 6-year-olds are in primary instead of pre-primary education. Excluding children enrolled in primary education would lead to about a 20% drop in the global indicator on enrolment one year before the official primary entry age.
- Pre-primary attendance and supportive home environments can improve child development, including school readiness, early literacy and numeracy skills, and social and emotional skills. In at least 10 sub-Saharan African countries, over 30% of children were left under inadequate supervision.
- Caregivers need training. A survey of caregivers in low- and middle-income countries found that only half engaged in key activities essential for stimulating learning and school readiness.
- Preschool leadership is important, but many preschool leaders have no preparation or specified requirements. Administrative tasks often dominate. In Israel and Türkiye, leaders spend less than 20% of their time on pedagogical leadership.

CHAPTER 9



TARGET 4.2

Early childhood 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

GLOBAL INDICATORS

4.2.1 – *Proportion of children aged 24–59 months 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 – *Gross early childhood education enrolment ratio in (a) pre-primary education and (b) early childhood educational development*

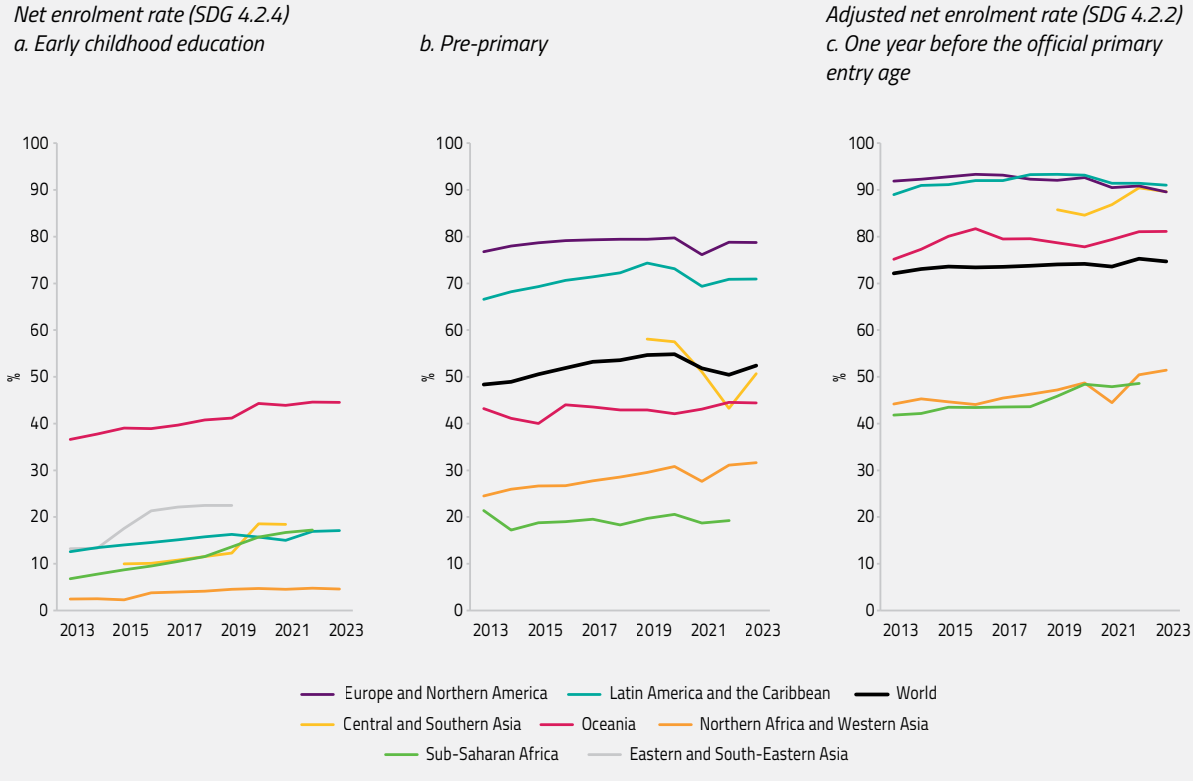
4.2.5 – *Number of years of (i) free and (ii) compulsory pre-primary education guaranteed in legal frameworks*

SDG target 4.2 aims to ensure that all young children enjoy age-appropriate education opportunities before they enter primary school. The International Standard Classification of Education (ISCED) classifies early childhood education into two types of programmes: early childhood educational development, targeted at children under 2; and pre-primary, targeted at children between age 3 and the start of primary.

Thematic indicator 4.2.4, which monitors education participation for this age group, was modified in 2023 (UIS, 2023). The indicator used to be the gross enrolment ratio, which is calculated as the total enrolment in an education level regardless of age divided by the population of the theoretical age group for that education level. This indicator can exceed 100% if there are children enrolled that are too old or too young for their age. In contrast, the now-used net enrolment rate only considers children of the theoretical age group enrolled in that education level and therefore cannot exceed 100%. It requires age-specific enrolment data, which may not be available for all countries, but provides a better understanding of the actual participation of the appropriate age population in each education level. Over the past decade, participation in early childhood education has increased for younger children but has remained relatively stable for older ones (**Figure 9.1**).

Net enrolment in early educational development programmes has increased in all regions with available data and, most notably, by over 10 percentage points in sub-Saharan Africa (**Figure 9.1a**). For pre-primary education, enrolment has stagnated or only slowly progressed in most of the world. In Central and Southern Asia, there was a sharp decline after 2020, driven mostly by a sharp drop of participation in India, from 61% in 2020 to 40% in 2022 (**Figure 9.1b**). The lower participation is a result of the COVID-19 pandemic, from which pre-primary education, unlike higher education levels, had not yet recovered by 2022 (Times of India, 2022). The government reported fewer schools available due to long-lasting closures, as well as fewer teachers (Chandra, 2022). Recovery began in 2023, with an increase in participation to 51%.

FIGURE 9.1:
Education participation has increased for younger but not for older children
Early childhood education participation indicators, 2013–23



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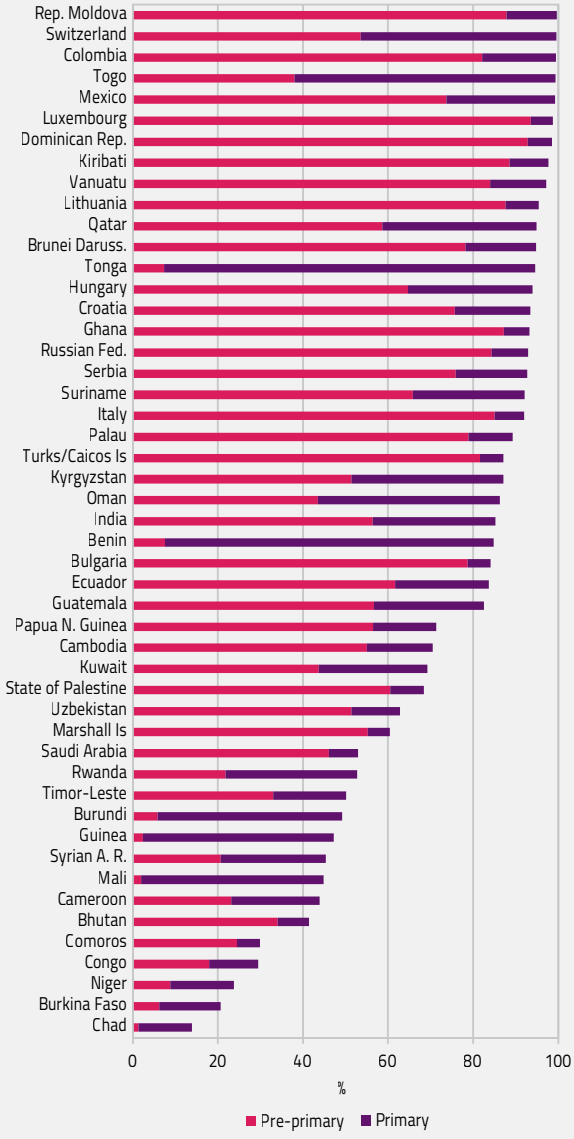
Source: UIS database.

FIGURE 9.2:
Many children are enrolled in primary education one year before the official entry age
Share of children enrolled one year before the official entry age for primary education, by education level, 2018–20



Note: Countries shown have at least 5% of children enrolled in primary education one year before the official entry age.
GEM StatLink: https://bit.ly/GEM2024_fig9_2
Source: UIS database.

The other education participation indicator for SDG target 4.2 is global indicator 4.2.2, which measures enrolment in organized learning one year before the official primary entry age. Unlike indicator 4.2.4, which focuses on participation at specific education levels, indicator 4.2.2 focuses on a single year of age. Because participation in education tends to increase as children get older, overall levels for this indicator are expectedly higher (**Figure 9.1c**). Over the past decade, however, participation has stagnated globally at around 75%. Participation rates increased by 7 percentage points in the two regions lagging furthest behind: Northern Africa and Western Asia (from 44% in 2013 to 51% in 2023, despite a sharp drop to 44% in 2021) and sub-Saharan Africa (from 42% in 2013 to 49% in 2022).

> “Over the past decade, participation has increased by 7 percentage points in the two regions lagging furthest behind: Northern Africa and Western Asia and sub-Saharan Africa”

The age-specific indicator 4.2.2 is meant to highlight the importance of having children participating in organized learning activities before entering primary education. However, assessment is hampered by the fact that the indicator does not distinguish between children enrolled in pre-primary education and those who entered primary education a year early. Early entrance can be harmful. In India and Uganda, under-age children are less likely to acquire foundational literacy and numeracy skills than those of appropriate age (Dyer et al., 2019). Early entry into primary education is a common phenomenon worldwide. In at least 49 countries, over 5% of children are enrolled in primary education one year earlier than the official entry age (**Figure 9.2**). In Burundi, where the official entry age to primary education is 7 years, nearly 90% of 6-year-olds enrolled are in primary instead of pre-primary education. Excluding children enrolled in primary education would lead to about a 20% drop in the global indicator ‘enrolment in organized learning one year before the official primary entry age’.

Countries vary in their transition patterns between pre-primary and primary education, even among countries with a high share of early entry (**Figure 9.3**). In Benin and Tonga, the de facto entry age to primary education seems to be 5 instead of the officially determined 6. Nearly as many 5-year-olds as 6-year-olds are enrolled in primary education, few of whom previously attended pre-primary education. In Burkina Faso and Chad, the de facto and official entry age into primary education seem to match – most children enter education at age 6. However, among

FIGURE 9.3:
Countries show different patterns in early entry to primary education
Number of children enrolled by age and education level, selected countries with official primary entrance at age 6, 2018–20

a. De facto entry age for primary does not match the official age

b. Many 5-year-olds enter directly in primary education a year early

c. Nearly all children attend at least one year of pre-primary

GEM StatLink: https://bit.ly/GEM2024_fig9_3
Source: UIS database.

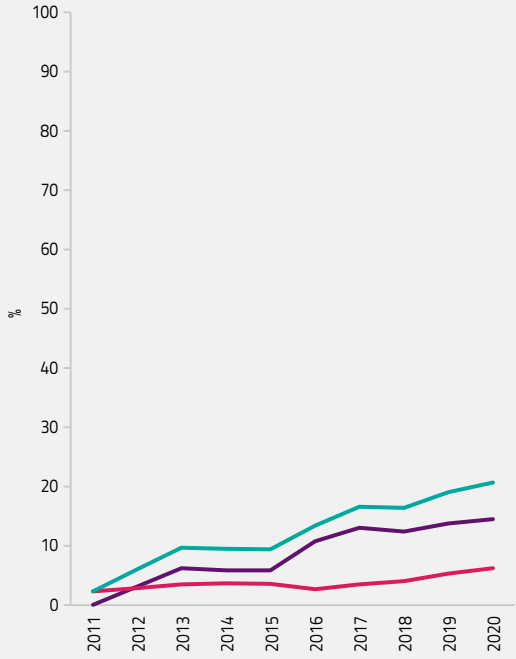
the minority that enrol a year earlier, most go directly to primary education. The situation is different in Guyana and Tuvalu, where nearly all children attend at least one year of pre-primary education at age 4, even though a considerable share of 5-year-olds enrol in primary education a year before the official entry age.

Analysing the share of early entry is important in better understanding trends in global indicator 4.2.2.
In Burkina Faso, for example, the net enrolment of children one year younger than the official primary entry age increased from 3% in 2011 to 21% in 2020. However, most of this increase was due to an increase in early enrolment in primary education (**Figure 9.4a**). There are many potential reasons for early entry into primary education, including having older siblings that can help with childcare at school (UNESCO, 2020). In Burkina Faso, part of the reason may be that early childhood education institutions are concentrated in urban areas, and the great majority of them are private and too expensive for families (Light for the World, 2020). The percentage of children enrolled in private institutions is 80% in pre-primary education but only 24% in primary education.

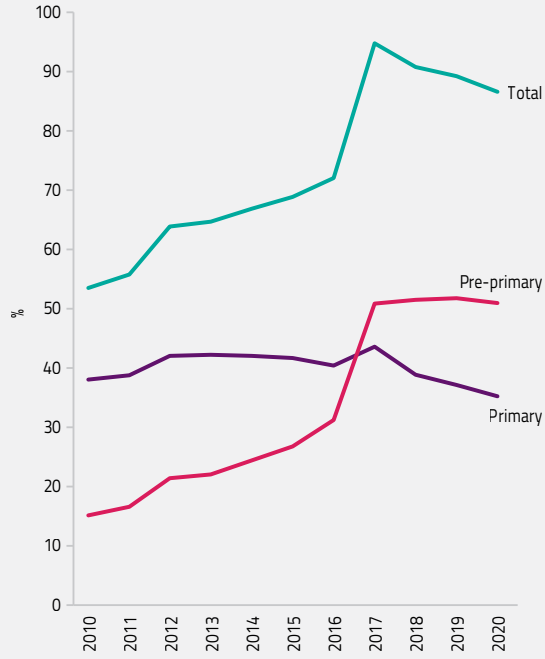
In Kyrgyzstan, where the official entry age to primary education is 7, the net enrolment of 6-year-olds increased from 54% in 2010 to 87% in 2020, mostly due to an increase in pre-primary participation (**Figure 9.4b**). Kyrgyzstan has made increased coverage of early childhood education one of its top priorities (Dzhusupbekova, 2020; UN Women,

FIGURE 9.4:
Increased education participation of children one year before primary entry age can be due to an increase in pre-primary or in primary enrolment
Net enrolment rate one year before the official primary entry age, by education level, 2010–20

a. Burkina Faso



b. Kyrgyzstan



GEM StatLink: https://bit.ly/GEM2024_fig9_4
Source: UIS database.

> In Kyrgyzstan, there has been a steady increase in the number of preschool institutions, from 503 in 2008 to 1,712 in 2021, nearly 90% of which are public

2019). The government guarantees four years of free pre-primary education and made one year of it compulsory in 2014. There has also been a steady increase in the number of preschool institutions, from 503 in 2008 to 1,712 in 2021, nearly 90% of which are public (National Statistical Committee of the Kyrgyz Republic, 2022; UN Women, 2019). Many of these are community -based kindergartens set up in rural areas or communities with a high poverty rate to reduce inequality in access (UNICEF, 2019). Moreover, government spending on pre-primary education tripled between 2008 and 2017, all of which helps explain the increase in enrolment at this level. Developing the capacity of preschool directors is another investment countries pursue to improve education quality (**Focus 9.1**).

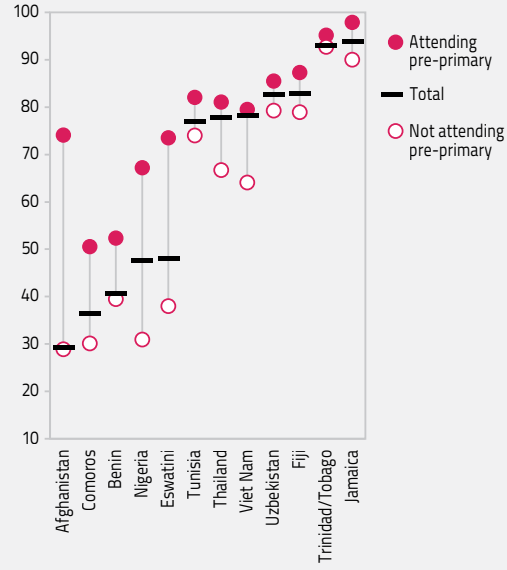
Pre-primary attendance is associated with better overall child development. Studies show that attending pre-primary education programmes improves school readiness, early literacy and numeracy skills, as well as social and emotional skills (Cascio, 2021; Meloy et al., 2019). Global indicator 4.2.1 measures the proportion of children aged 24 to 59 months who are developmentally on track in health, learning and psychosocial well-being. The indicator is currently measured by UNICEF's new monitoring tool, the Early Childhood Development Index 2030, which has been rolled out in the latest round of its Multiple Indicator Cluster Surveys (MICS), as well as in the Demographic and Health Surveys and in national surveys such as Mexico's Encuesta Nacional de Salud y Nutrición (National Health and Nutrition Survey) (Petrowski et al., 2022).

Results from the Early Childhood Development Index 2030 are only available for a few countries but show wide variation both within and between countries (**Figure 9.5**). The share of children developmentally on track ranges from less than 30% in Afghanistan to 94% in Trinidad and Tobago. Children who are richer and attending pre-school are more likely to be developmentally on track. In Eswatini, 74% of children attending pre-primary education are developmentally on track, compared to 38% of those not attending. Part of this gap is explained by differences in wealth, as richer children are also more likely to attend pre-primary education. But this does not explain everything. In Thailand, attendance in pre-primary education is around 74% for children from all wealth quintiles, yet the gap in development between those attending and not attending pre-primary education is 14 percentage points, even wider than the gap across wealth quintiles (UNICEF, 2022).

Also important for children's development is the quality of interactions in their home environment. SDG thematic indicator 4.2.3 assesses whether children experience a positive and stimulating home environment in the form of adults' engagement in a range of activities: reading or looking at picture books; telling stories; singing songs; taking children outside the home; playing; and naming, counting and/or drawing. Such parenting practices are associated with better developmental outcomes, especially for children from disadvantaged backgrounds (Fletcher and Reese, 2005; Mizunoya et al., 2020; UNESCO, 2021a).

In many countries, however, children do not receive suitable care. UNICEF's measure of inadequate supervision, defined as a child under 5 left alone or under the supervision of another child younger than 10 years of age for more than an hour at least once in the previous week, is used to describe this phenomenon. In at least 10 sub-Saharan African countries, over 30% of children were left under inadequate supervision. In Chad and Guinea-Bissau, the share exceeded 60%. Structural barriers such as poverty and lack of childcare options, as well as cultural norms, such as preparing older siblings for future caretaking roles, help explain why this arrangement is common in many low- and middle-income countries. In Ghana, cultural beliefs that childcare is also the responsibility of kin and community may contribute to mothers assuming that children are safe without direct adult supervision (Iwo et al., 2023). Training programmes focusing on parents and other caregivers can support children to receive better care (**Focus 9.2**).

FIGURE 9.5:
Children attending pre-primary education are more likely to be developmentally on track
Proportion of children aged 24 to 59 months developmentally on track, selected countries, 2021–23



Note: Child development is measured using the Early Childhood Development Index 2030 tool.
GEM StatLink: https://bit.ly/GEM2024_fig9_5
Source: MICS Survey Findings reports.

Countries where children are more likely to have inadequate supervision have lower shares of children experiencing positive and stimulating home environments (**Figure 9.6**). This negative relationship is expected. First, by definition, positive home environments are those where children interact with adults, which does not happen during inadequate supervision. Second, research has shown that lower levels of adult supervision are associated with negative outcomes such as a higher risk of childhood injuries, behavioural problems and poorer school performance (Ruiz-Casares et al., 2018). Relying on older siblings for infant care may also impact the development of the older sibling, as the time, energy and emotional labour required may be detrimental to their well-being (Camilletti et al., 2018).

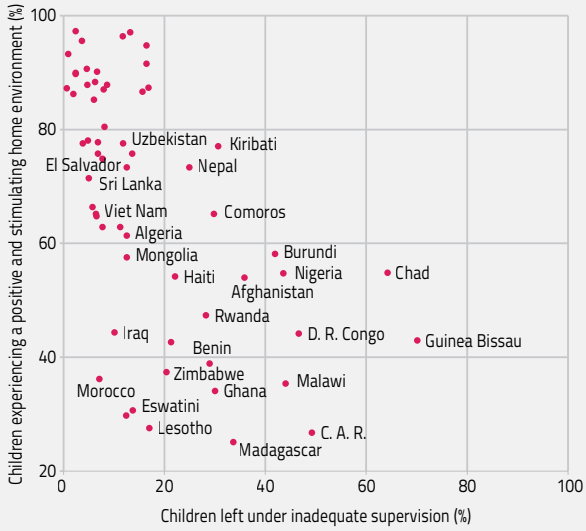
FOCUS 9.1. PRESCHOOL LEADERSHIP NEEDS ATTENTION

High-quality and inclusive early childhood care and education (ECCE) plays a crucial role in laying the foundations for lifelong learning and well-being (UNESCO, 2021c). Leadership in early childhood centres and preschools is, therefore, critical (Rodd, 2020). Leaders can influence work environments, the quality of care and education, and children's educational outcomes (Cheung et al., 2019). Good leadership is also essential for fostering change (Fonsén et al., 2022; Thornton, 2020). Yet early studies reported that leaders had a limited awareness of their role (Muijs et al., 2004).

Leadership needs at this education level are distinct from those of other education levels due to the unique developmental needs of young children and the additional care responsibilities often involved (Waniganayake et al., 2012), which has raised calls for 'caring leadership' (Siraj and Hallet, 2014). A focus on pedagogical leadership is, therefore, even more important in early childhood education (Fonsén, 2013). In Finland, research in early education units in 14 municipalities showed that leaders with stronger pedagogical competences were associated with a range of positive child outcomes, including related to learning, emotions and social relationships (Fonsén et al., 2022).

Early studies highlighted the reluctance of ECCE educators to be designated as 'leaders' (Muijs et al., 2004). Many emphasized the need to see their work as a collaborative effort (Heikka, 2014). One of the reasons is the high prevalence of collaborative work with other actors involved in childcare, such as health institutions (Fonsén et al., 2022). The 2018 Starting Strong Teaching and Learning International Survey (TALIS) covered leaders of centres for children under 3 in Denmark, Germany, Israel and Norway, and preschool leaders in Chile, Denmark, Germany, Iceland, Israel, Japan, Norway, the Republic of Korea and Türkiye. It indicated that about two thirds of ECCE leaders communicated with staff and/or leaders from other ECCE centres at least on a monthly basis, and one third regularly consulted with child development specialists (OECD, 2020). Establishing relationships with families and communities is also vital. In Chile, the Framework for Good Teaching in Early Childhood Education guides educators on pedagogical reflection and practice, promoting family involvement in most domains (Chile Undersecretariat for Early Childhood Education, 2019). In TALIS countries, four in five ECCE leaders communicated with children, families or social services (OECD, 2020).

FIGURE 9.6:
Inadequate supervision is associated with a lower prevalence of positive and stimulating home environments
Percentage of children aged 24 to 59 months experiencing positive and stimulating home environments and percentage of children under 5 left under inadequate care, selected countries, 2017–23

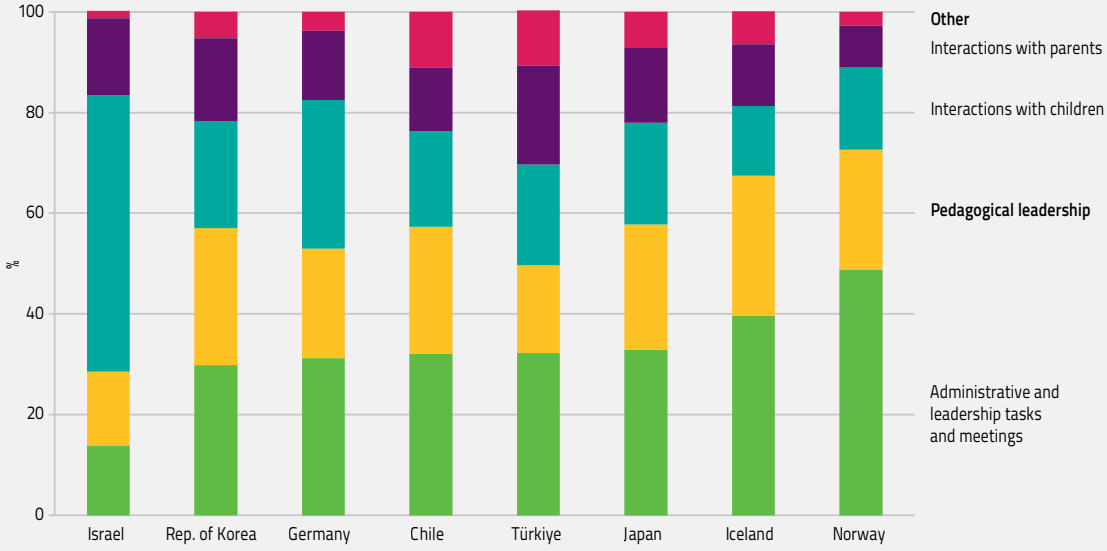


Notes: A child is considered to have a positive and stimulating home environment if any adult household member has engaged in four or more activities to provide early stimulation and responsive care in the previous three days. A child is considered under inadequate care if left alone or under the supervision of another child younger than 10 for more than an hour at least once in the previous week.

GEM StatLink: https://bit.ly/GEM2024_fig9_6
Source: UNICEF (2023).

ECCE leaders must balance operational tasks with a vision while working with very young children. They need to oversee daily activities, manage resources, ensure compliance with regulations, and maintain a safe and nurturing environment for children. On average, preschool leaders spent around 30% of their time on administrative tasks across TALIS countries, with those in Norway (49%) spending almost four times as much time as those in Israel (14%) (OECD, 2020). In smaller centres or in centres for children under 3, leaders spend even more time on administrative tasks (Fonsén et al., 2019; Hujala et al., 2016). Pedagogical leadership made up more than 25% of preschool leaders' time in Chile, Iceland, Japan and the Republic of Korea (**Figure 9.7**).

FIGURE 9.7:
Early childhood care and education leaders devote more time to administration than pedagogy
Distribution of preschool leaders' time, by task, 2018



GEM StatLink: https://bit.ly/GEM2024_fig9_7
Source: OECD (2020).

In some countries, leaders who received training in early childhood education or pedagogical leadership spent more time on pedagogical tasks. For example, leaders in Germany and Israel who received focused ECCE training reported higher engagement in pedagogical activities compared to those without such preparation (OECD, 2020). Responsibilities can be particularly challenging for directors of multiple centres. In Finland, at least two in three directors reported leading more than one centre, which makes sharing leadership with other staff very important (Halttunen and Waniganayake, 2021; Heikka, 2014).

While some countries have set specific requirements for ECCE leaders (Rodd, 2020), others leave directors to learn on the job (Modise et al., 2023).

In Australia, the National Quality Framework requires ECCE leaders to have formal qualifications in both early childhood education and management, ensuring they are well-prepared to handle the complexities of their roles (ACECQA, 2020). Canadian provinces have various requirements for ECCE centre directors and supervisors but they rarely include specific training provisions (McCuaig et al., 2022). In Finland, the 2018 Early Childhood Education and Care Act requires ECCE centre directors to have the same qualifications as ECCE teachers and social workers, as well as skills in management. Starting in 2030, they will need to have a master's degree

"In Australia, the National Quality Framework requires ECCE leaders to have formal qualifications in both early childhood education and management"

in early childhood education. The Malaysian Qualification Agency programme standards require ECCE centre heads to have at least a master's degree in ECCE and three years of working experience in ECCE. In Singapore, ECCE leaders must have at least three years of management experience in a preschool and hold relevant teaching and leadership diplomas (Singapore Ministry of Education, 2024).
In the United States, directors hired after 2016 under the Head Start programme needed to have a bachelor's degree and experience in staff supervision, fiscal management and administration (United States Department of Health and Human Services, 2019).

In Colombia, a 2002 decree proscribes that for preschool (and for basic rural primary school) directors, a bachelor's degree in education and four years of professional experience are required, while six years are required in other primary schools. In Côte d'Ivoire, preschool directors must hold the State Diploma of Permanent Educators and

a teaching certificate. In Indonesia, aspiring directors must comply with specific criteria specified in the 2005 National Standards, including being an active kindergarten teacher, possessing academic qualifications and proficiency as an educator per relevant legal requirements, having at least three years of teaching experience, and demonstrating leadership and an entrepreneurial aptitude in education. In Jamaica, the 2005 Early Childhood Act and Regulations prescribe that an ECCE institution director or manager must be a qualified teacher, i.e. a teacher with a bachelor's degree in education or a diploma in teaching.

Some countries have emphasized policies requiring directors to be equipped with the necessary leadership skills. Leadership preparation is a key component of directors' professionalism, which is an important dimension of pedagogical leadership (Fonsén et al., 2022). However, many countries lack appropriate preparation at this education level (Diale and Sewagegn, 2021; Tefera, 2018). In New Zealand, the Te Whāriki early childhood curriculum emphasizes the role of leadership in supporting culturally responsive and inclusive practices (Howley-Rouse, 2023; New Zealand Ministry of Education, 2024). ECCE leaders are expected to undergo continuous professional development, particularly in areas of indigenous knowledge and inclusive pedagogy. Singapore's Early Childhood Development Agency provides structured leadership training that includes pre-service and in-service programmes focused on management, staff development and curriculum oversight (ECDA, 2021).

Access to mentorship and professional networks is critical for ECCE leaders to share experiences and address challenges. In many countries, especially in low-resource settings, leaders are isolated and lack the support needed to develop leadership skills. Communities of practice are essential to supporting ECCE leadership (Ratner et al., 2018; Watson, 2024).

The absence of formal training contributes to disparities in how ECCE leaders manage centres, staff and learning environments. ECCE leaders often face significant challenges in securing adequate resources. In Bangladesh and Kenya, ECCE centres often operate with minimal funding, and leaders struggle with limited infrastructure and teaching materials (Oloo et al., 2023; Rashid and Akkari, 2020). High turnover is another challenge, exacerbated by stressful working conditions and low pay (Alchin et al., 2019; Modise et al., 2023b). In the United States, the turnover rate for ECCE centre directors was high in at least one in three centres surveyed in 2019, with large shares of staff leaving their roles due to the long working hours, administrative burdens and inadequate compensation (Amadon et al., 2023). This affects the continuity of care and education provided to children.

In many countries, ECCE leaders' roles and responsibilities are not clearly defined in national policies. As a result, leaders can operate in a grey area, with unclear expectations and limited support (Modise et al., 2023a). However, countries including Australia, Finland, New Zealand and Singapore have developed comprehensive policies that clearly define ECCE leaders' roles. This has helped ensure a structured approach to leadership and higher quality standards across the sector (Rodd, 2020).

FOCUS 9.2. TRAINING FOR PARENTS AND CAREGIVERS CAN SUPPORT EARLY CHILDHOOD DEVELOPMENT

Globally, around 50% of children under age 5 are at risk of not reaching their full developmental abilities (Black et al., 2017). International early childhood care frameworks, such as the Nurturing Care Framework, underscore the critical importance of good quality interactions between caregivers and children for a child's brain development, based on multisector evidence from neuroscience, health and education (UNESCO, 2021b; WHO et al., 2018). Caregivers, including parents or other adult household members who have the primary responsibility of taking care of children (Friedlander and Perks, 2024), play a crucial role in creating a positive and stimulating home environment and can significantly mitigate the developmental risks children living in vulnerable contexts face (Bendini and Devercelli, 2022; UNESCO, 2021, 2023).

Despite the widespread recognition of the need to improve caregiver engagement, there is still scope to do so. In low- and middle-income countries, only half of the caregivers surveyed engaged in at least four activities essential for stimulating learning and school readiness during the three days prior to the survey, such as reading, telling stories, singing songs and playing (Britto et al., 2015). Among countries with available information, only around one in three children in sub-Saharan Africa and around three in four children in Latin America and the Caribbean benefited from such engagement. Large-scale public training programmes for parents have been credited as one of the reasons for the quality of parental engagement (Cárdenas et al., 2024).

Parental training interventions are a widely used policy tool that target parents' behaviours, attitudes, knowledge and skills that, in turn, improve children's health, development, learning, protection and well-being (Jeong et al., 2018). These programmes exist within a

complex landscape, employing a diverse set of training providers, delivery settings, lengths and recurrence, and evaluation strategies (Britto et al. 2017). They are often delivered as part of multisectoral interventions or national programmes across the health, social protection and education sectors. Sometimes parental training may be a component, but not the main focus, of larger programmes, such as cash transfer programmes or adult literacy initiatives (Heckman, 2018; UNESCO, 2015).

Comprehensive global systematic reviews demonstrate the effectiveness of parental training programmes in enhancing both parenting behaviours and child outcomes. A systematic review of 105 studies focusing on parents' interaction, behaviours, knowledge, beliefs, attitudes and practices in 33 low- and middle-income countries reported improvements in children's cognitive and non-cognitive

> A meta-analysis of 102 studies of parental training programmes found significant positive effects on children's cognitive, language, motor and behavioural development

skills (Britto et al., 2015). Moreover, a meta-analysis of 102 randomized controlled trials examining such programmes in 11 low- and 14 high-income countries highlighted improvements in parenting knowledge, practices and interactions – and significant positive effects on children's cognitive, language, motor and behavioural development (Jeong et al., 2021).

Some parental training programmes that have been studied over time highlight improvements in child outcomes lasting well into adulthood. A famous 2-year programme implemented from 1987 to 1989 in Jamaica targeted 127 stunted children aged between 9 and 24 months and combined parental training and nutrition intervention (Carneiro et al., 2019). The training arm was implemented as weekly one-hour home visits during which community health workers helped mothers engage their children in activities such as labelling and describing objects, playing educational games, singing songs, and using picture books to facilitate language acquisition (Gertler et al., 2021). Randomized controlled trials that followed these children when they had reached the ages of 22 and 31 found that those children whose parents received training reported long-term benefits that outlasted the duration of the intervention, regardless of whether they had received nutrition supplements. At age 22, there were significant reductions in violent behaviour (Walker et al., 2011) and at age 31, their average wage was 43% higher than the average wage of the control group (Gertler et al., 2021).

Most studies come from high-income countries. In the United States, various early childhood education programmes with parental training components have been studied over time (National Center for Parent, Family and Community Engagement, 2015). Chicago's child-parent centers offered pre-school programmes with a focus on parental engagement along with other education support to children in low-income neighbourhoods for two years. Impact evaluations conducted right after the intervention, by the time they had reached secondary school age, after secondary school and at age 28 found that children of caregivers who had received training had higher educational attainment, higher annual incomes and lower crime rates (Campbell et al., 2012).

Broadly, these interventions improve child outcomes in two ways. First, they provide children with early learning opportunities at home. Second, they improve parents' knowledge and practices related to caregiving.

Increasing early play and learning opportunities and providing necessary materials have been the focus of many parenting interventions for young children. In Zambia, a 10-week home-work support workshop sensitized rural parents on the importance of communicating with their children and on using home learning materials for supporting their grade 4 children's mathematics and Chitonga language homework. A randomized control trial conducted in two primary schools in Kalomo district showed that students who were part of the intervention reported increased parent–child interactions and had higher scores than their peers in the control group (Simweleba and Serpell, 2020).

In the Caribbean, the Roving Caregivers programme used home visits to train parents of young children. Initiated in Jamaica in 1993, it has since been adapted to Belize, Dominica, Grenada, Saint Lucia, and Saint Vincent and the Grenadines due to its cost effectiveness (Greene et al., 2016). A longitudinal and quasi-experimental study that followed almost 400 children in Saint Lucia found significant positive effects, especially on the younger cohort's motor and visual skills, such as identifying patterns or drawing (Janssens and Rosemberg, 2014).

In China, a systematic review of 10 studies in 14 provinces, mostly in the Central and Western regions, found that parental training programmes, focused on providing children under 5 with activities that stimulated learning, improved their language and social-emotional skills. Certain parenting practices, such as reading or storytelling, were found to reduce the risk of poor cognitive development (Emmers et al., 2021).

Interventions can include a focus on training caregivers to respond promptly, consistently and appropriately to their child's cues and needs. A recent meta-analysis showed that responsive caregiving interventions had significantly greater effects on child cognitive development, parenting knowledge, parenting practices and parent–child interactions than interventions that only focused on children's early play and learning opportunities (Jeong et al., 2021).

In Rwanda, Save the Children piloted the Intera za Mbere (First Steps) parenting education programme in Ngororero district to promote positive disciplinary strategies and other actions to support their children's development. Caregivers of children aged 6 to 24 months were trained during weekly sessions, using a mix of radio and trained community volunteers. After 17 weeks, children whose parents received parenting education had significant improvements in their cognitive, motor and social-emotional skills. The evaluation also found that the quality of engagement improved not only among female but also among male caregivers (Abimpaye et al., 2020).

Chile's Nadie es Perfecto (Nobody is Perfect) workshops began in 2014 as a national, low-cost programme to promote positive parenting practices. Local public health workers organized group sessions with caregivers of children under 5 using a semi-structured curriculum that fostered parents' sense of self-efficacy, encouraged them to engage in developmentally appropriate activities at home and use positive disciplinary strategies to manage children's behaviour. A large-scale evaluation of the programme conducted three years post-intervention among children whose caregivers had received training a few times a week over two to three months showed lasting positive effects on cognitive outcomes, such as vocabulary and personal social development, compared to children of parents in the control group (Carneiro et al., 2019).

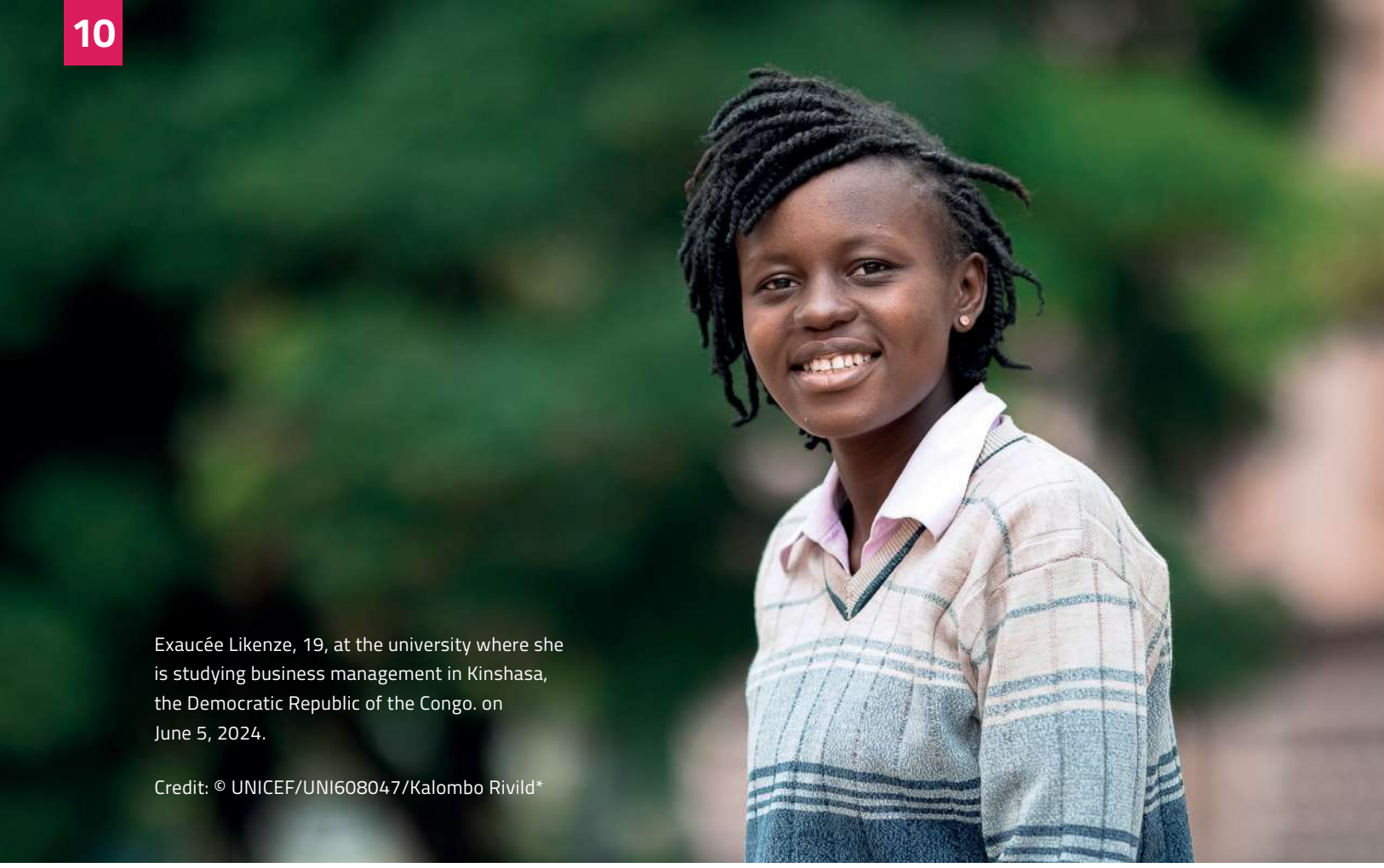
It is challenging to sustain positive impacts post-intervention because the effects fade over time. A systematic review of parenting programmes found that the positive average impact on parenting practices and child development outcomes started fading out as soon as one to three years after the programmes had ended (Jeong et al., 2021). In Mexico, the evaluation of Programa Educación Inicial (Initial Education Programme) a community-based programme delivered by local facilitators in 160 rural communities in 6 states over a period of 9 months, reported improvements in parenting practices in the first year. Parents of children under 4 participated in group training sessions at least once a week on child health and safety, personal development and communication styles. However, these effects were not sustained into the second year of the intervention. This could partly be explained by the low programme uptake, with the average household attending only 11 meetings in the first year (Cárdenas et al., 2024).

Few interventions include fathers or male caregivers, and even fewer measure the impact on them. Despite the recognition that training fathers positively impacts the home environment and improves child outcomes, most interventions focus only on mother–child interactions (Luoto et al., 2021). In a systematic review, only 3 of 105 parenting intervention studies looked at fathers (Britto et al., 2015). In another systematic review, only 7 of 102 parenting interventions engaged fathers, of which only one measured paternal outcomes (Jeong et al., 2021).

Most evaluations systematically evaluate cognitive, motor and language outcomes but overlook social-emotional learning skills. In a meta-analysis of 21 parenting interventions published from 2004 to 2020 and evaluated using randomized controlled trials, only 7 evaluated social-emotional skills (Zhang et al., 2021). An evaluation of a parenting intervention in Kenya that combined home visits, group sessions and observations of children's classroom behaviour showed improvements at the end of the 11-month implementation period (Luoto et al., 2021).

Evidence on effective modes of delivery is inconclusive. Group sessions may improve parenting behaviours and outcomes but do not systematically improve child outcomes. Individual sessions, on the other hand, focus on personalized interventions but do not benefit from the peer-to-peer learning in group sessions (Aboud and Yousafzai, 2015). Many interventions include complementary approaches such as direct child engagement, book or toy provision, and nutritional supplementation; however, this means it is hard to disaggregate the individual impacts (Cárdenas et al., 2024).

Parental training programmes help provide children with a stimulating home learning environment that, in turn, positively influences cognitive and non-cognitive outcomes. However, further research is needed to identify effective parenting programmes that sustain impact in the long run, including assessment of various non-cognitive skills and involving male caregivers.



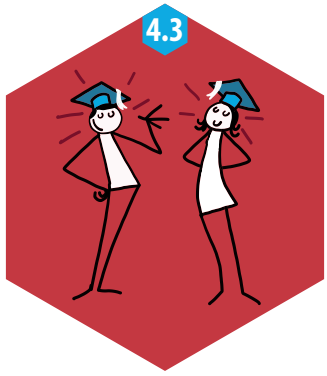
Exaucée Likenze, 19, at the university where she is studying business management in Kinshasa, the Democratic Republic of the Congo. on June 5, 2024.

Credit: © UNICEF/UNI608047/Kalombo Rivild*

KEY MESSAGES

- Globally, 3% of adults participate in formal and non-formal education and training. The share exceeds 10% in only 15 out of 106 countries, which are mostly high income. Participation rates have fallen by 0.5 percentage points since 2015 in countries with trend data available, in many cases a consequence of COVID-19.
- Gender disparities are pronounced in adult education but vary by context. In high-income countries, 73 men participate for every 100 women, whereas in low-income countries, only 50 women participate for every 100 men.
- Although the number of countries with data is limited, enrolment in technical and vocational education and training (TVET) appears to have modestly increased between 2010 and 2023.
- Globally, the tertiary education gross enrolment ratio has increased from 30% in 2010 to 43% in 2023 and even faster in Latin America and the Caribbean and, especially, in Eastern and South-eastern Asia.
- In most countries, women considerably outnumber men in higher education, while the opposite is true in TVET.
- Higher education leaders often do not have autonomy to take decisions. Almost 40% of countries do not recognize institutional autonomy by law.
- Women are under-represented in higher education leadership, making up only 25% of leaders in the top 200 higher education universities worldwide.

CHAPTER 10



TARGET 4.3

Technical, vocational, tertiary and adult education

By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

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*

SDG target 4.3 calls for equitable access to quality technical, vocational, tertiary and adult education. In today's fast-evolving economies, knowledge and skills can quickly become outdated, making continuous learning essential for full integration into the workforce. SDG global indicator 4.3.1 addresses this need for lifelong learning by measuring the 'participation rate of youth and adults in formal and non-formal education and training in the previous 12 months'. Collecting reliable data for this indicator has been challenging due to the frequent changes in policies that define and regulate adult education (Sekmokas et al., 2024). The UNESCO Institute for Statistics (UIS) has gathered recent data for over 120 countries through surveys from the International Labour Organization's (ILO) repository.

ADULT EDUCATION

Participation in formal and non-formal education and training is globally low. The share exceeds 5% in fewer than 30 countries and 10% in only 13, which are mostly high-income countries (**Figure 10.1**). The only low- and lower-middle-income countries where participation exceeds 5% are the Plurinational State of Bolivia, Madagascar, Nigeria and Timor-Leste. Among upper-middle-income countries, only Belarus and Tuvalu surpass the 10% threshold. The highest participation rates are observed in the Nordic countries: Denmark (20%), Finland (22%), Norway (24%), Sweden (25%) and Iceland (30%). However, even within the high-income group, 16 countries report participation rates below 5%.

Factors other than a country's average income level may influence participation in education and training, including national policy targets and cultural attitudes toward education. A combination of cultural norms, supportive welfare policies, flexible learning opportunities and strong partnerships between governments, the labour market and educational institutions has contributed to the Nordic countries' notably high participation rates (Ranki et al., 2021).

FIGURE 10.1:

Adult formal and non-formal education participation rates exceed 10% in very few countries

Adults aged 25 to 54, formal and non-formal education and training participation rate in the previous 12 months, by country income group, 2022–23

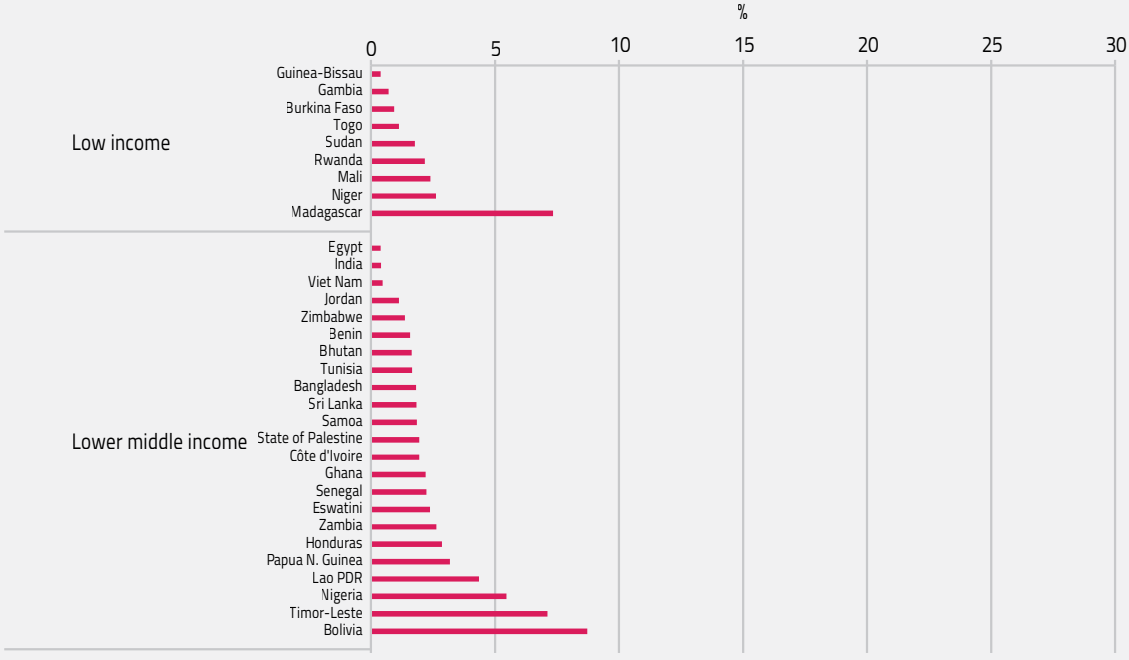


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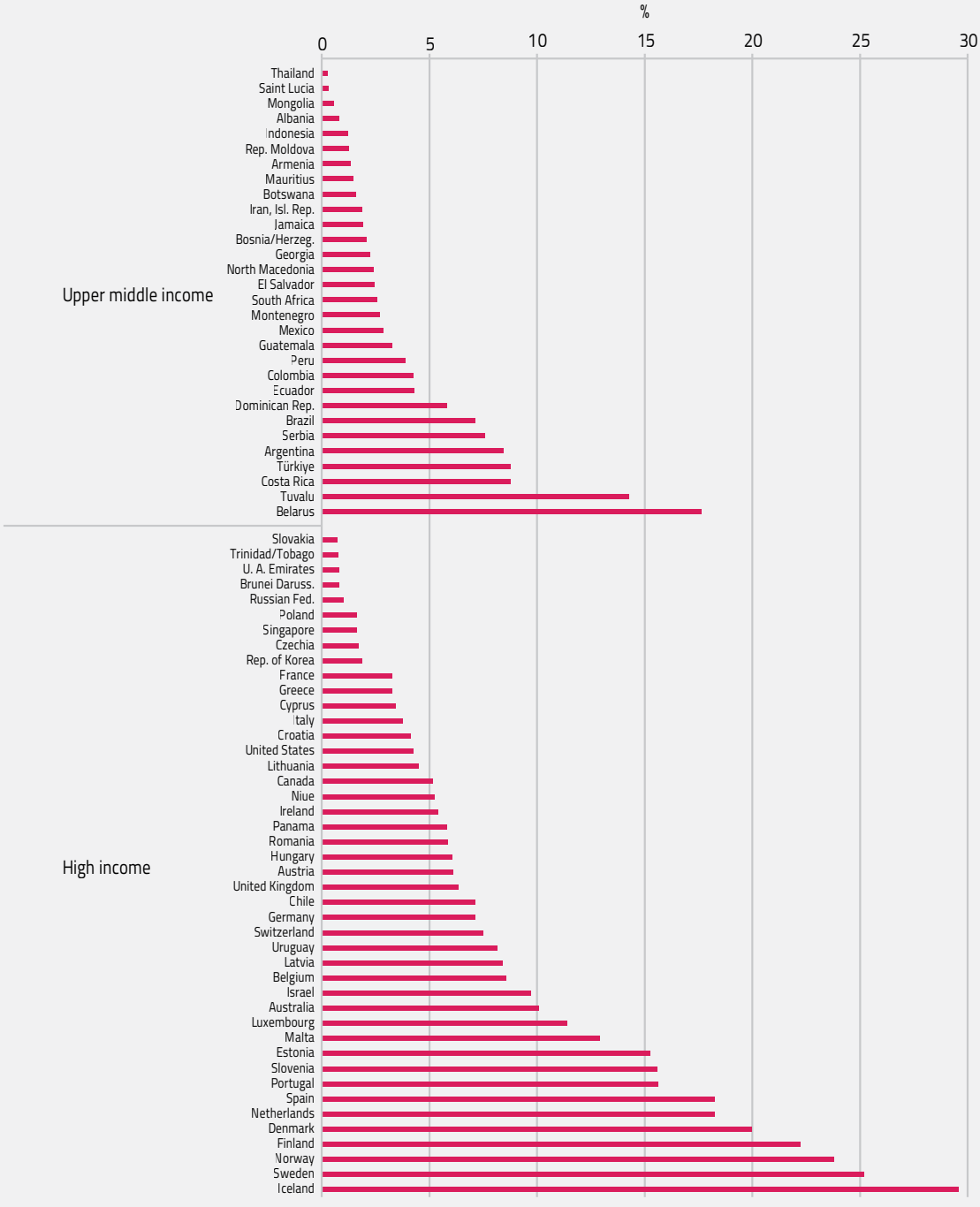
FIGURE 10.1 CONTINUED:

Adult formal and non-formal education participation rates exceed 10% in very few countries

Adults aged 25 to 54, formal and non-formal education and training participation rate in the previous 12 months, by country income group, 2022–23



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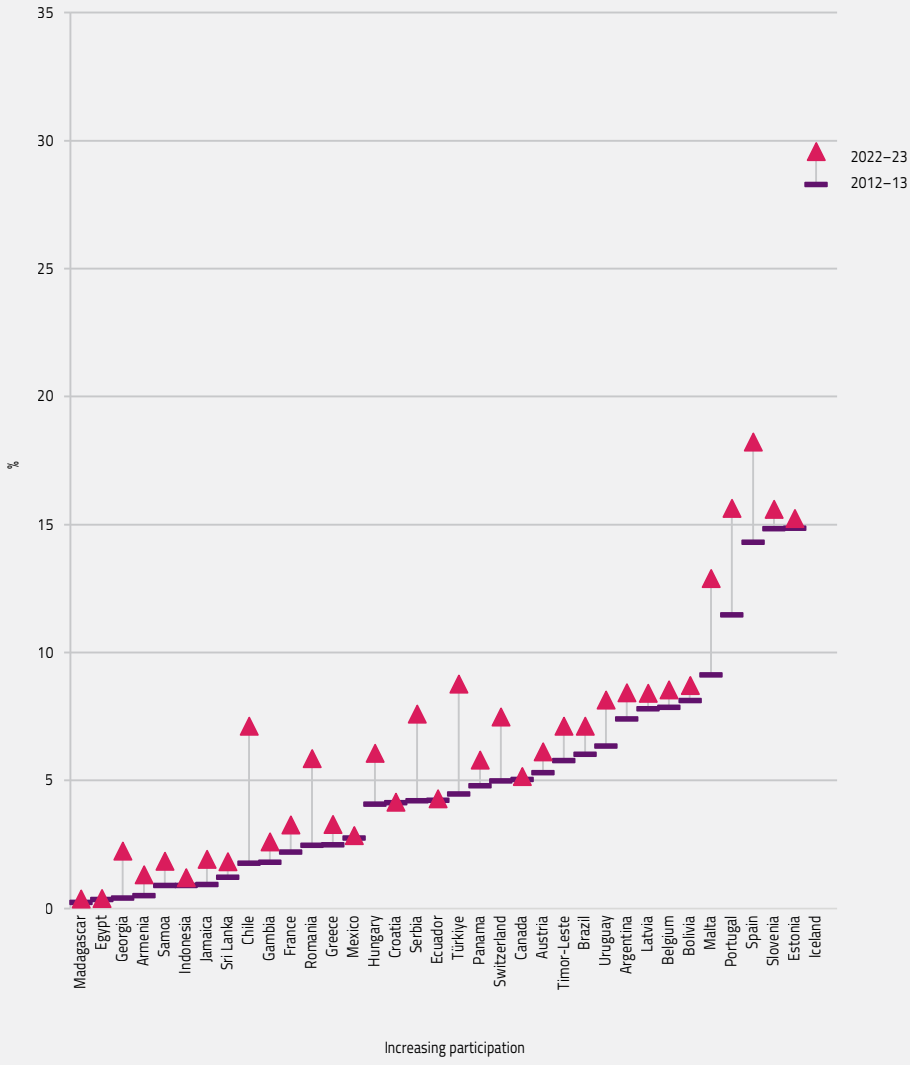
Source: UIS database.

FIGURE 10.2:
More than half of countries have seen a decline in formal and non-formal education participation rates in the last 10 years
Adult aged 25 to 54, formal and non-formal education and training participation rate in the previous 12 months, by country income group, 2013 and 2023



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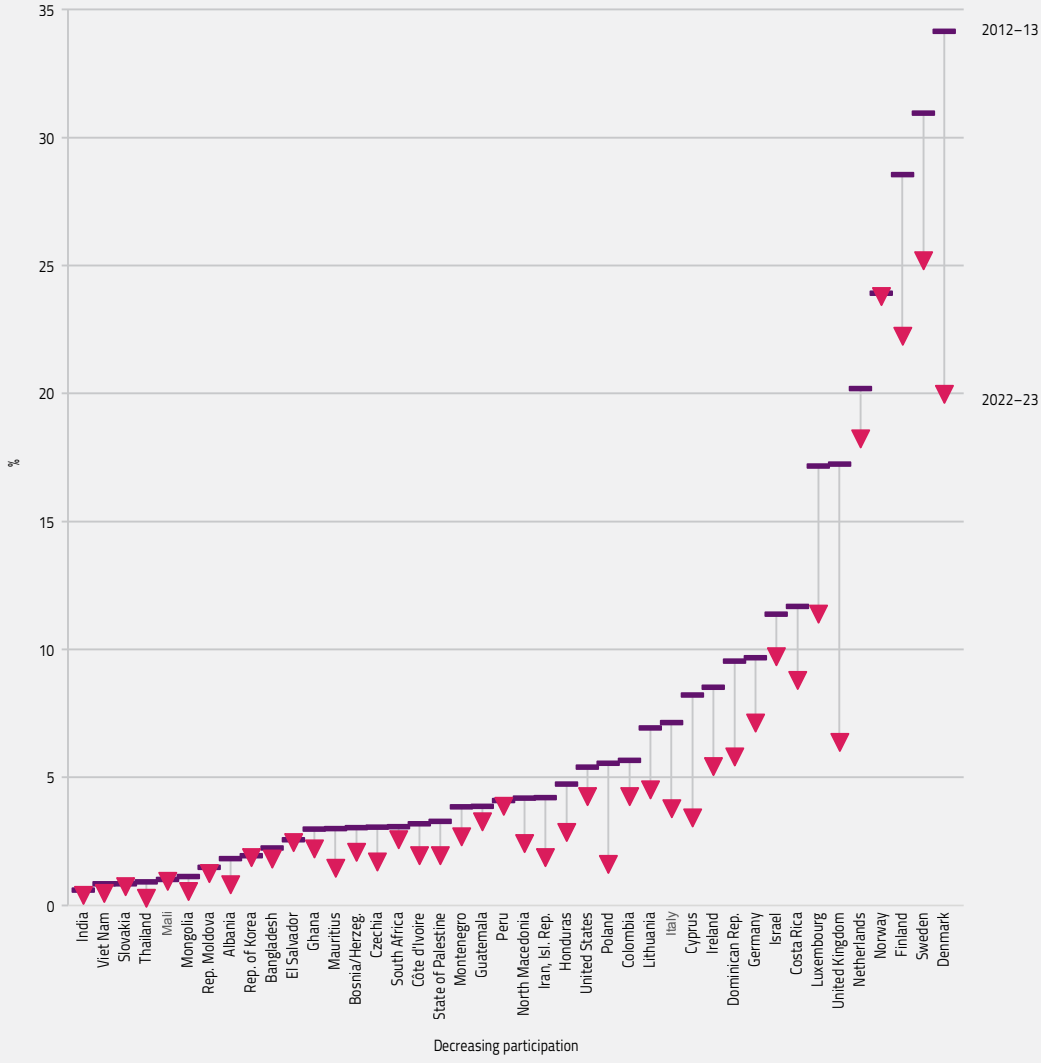
Participation remained stable over the 10 years from 2013 to 2023 (**Figure 10.2**). The average change was just 0.5 percentage points. However, in 42 out of the 78 countries with trend data available, adult participation rates have decreased. This largely reflects the fact that the data for high-income countries, which have high levels of participation and high levels of reporting, refer to 2022 and were still bearing the impact of COVID-19. But some countries that once had relatively high participation rates (above 25%) were already experiencing a decline before COVID-19. For instance, the participation rate in Denmark has dropped from 34% to 20% over the past 10 years. Companies have struggled to allocate time for employee training, while adult vocational training systems have not proven sufficiently flexible to meet evolving business demands (Vorting and Toftild, 2023).

Conversely, there are notable cases where participation has increased over the last decade. In Chile, for instance, the participation rate rose from 2% in 2012–13 to 7% in 2022–23. This increase can be attributed to a series of national policies and programmes aimed at enhancing

FIGURE 10.2 CONTINUED:

More than half of countries have seen a decline in formal and non-formal education participation rates in the last 10 years

Adult aged 25 to 54, formal and non-formal education and training participation rate in the previous 12 months, by country income group, 2013 and 2023



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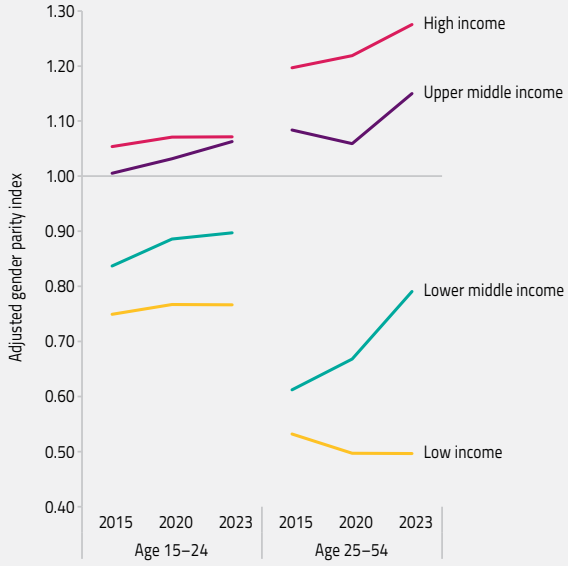
Source: UIS database.

post-secondary education. For example, a tuition-free policy was introduced for all higher education students from the poorest 60% who attend accredited institutions. A recent national initiative has also facilitated the transition to vocational education to better connect upper secondary and post-secondary education with the labour market (Lemaître et al., 2021).

> “Over the 10 years since 2013 to 2023, adult education and training participation rates decreased in 42 out of 78 countries”

FIGURE 10.3:
There is a large gender disparity in adult education and training participation
Adjusted gender parity index of participation rate of youth (aged 15–24) and adults (aged 25–54) in formal and non-formal education and training in the previous 12 months, by country income group, 2015, 2020 and 2023



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Source: UIS database.

In terms of gender gaps, upper-middle- and high-income countries see greater female than male participation in adult education and training programmes. Conversely, in low- and lower-middle-income countries, men tend to participate more than women. In 2023, in high-income countries, 93 young men (15- to 24-year-olds) participated in formal or non-formal education or training for every 100 young women. In low-income countries, however, only 77 young women participated for every 100 young men. This disparity becomes even more pronounced in the adult group (25- to 54-year-olds). In high-income countries, 73 men participate for every 100 women whereas in low-income countries, only 50 women participate for every 100 men.

Since 2015, gender disparity in youth formal and non-formal education participation has remained relatively stable across all income groups, with a modest improvement in lower-middle-income countries. However, among adults, female participation in education and training programmes has increased relative to male participation across all groups, except in low-income countries.

In lower-middle-income countries, this represents an improvement towards gender parity, although women are still considerably less likely to participate than men. But in upper-middle- and high-income countries, there has been a move further away from parity (**Figure 10.3**).

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

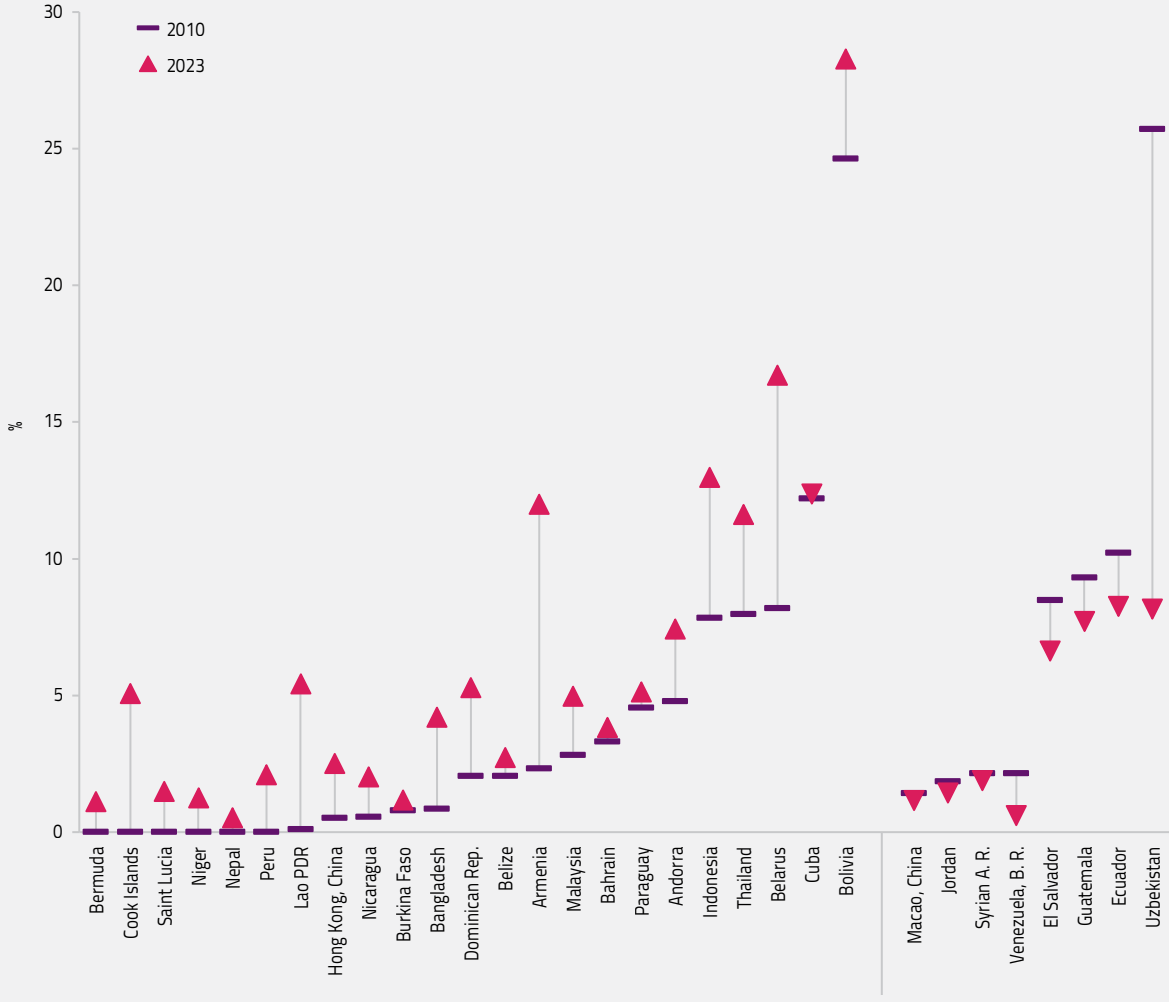
Technical and vocational education and training (TVET) programmes help align young people's skills with labour market demands, especially those wishing to quickly upskill and secure meaningful employment. However, the COVID-19 pandemic disrupted TVET systems, both because it is the type of education most suited to in-person teaching and learning and because the economic crisis intensified the need for reskilling (UNESCO, 2022).

> "In Uzbekistan, vocational education enrolment declined when vocational education shifted from a compulsory to an optional component of upper secondary education"

Between 2010 and 2023, enrolment in TVET modestly increased across most countries (**Figure 10.4**). In Armenia, participation increased from 2% in 2010 to 12% in 2022, likely the result of the country's prioritization of vocational education in its legislative agenda, aiming to strengthen the link between education and the labour market. A new education strategy emphasizes the importance of TVET, particularly work-based learning, as essential in facilitating the transition from school to work and reducing youth unemployment (ETF, 2022).

In 8 out of 31 countries with available data, vocational education enrolment declined. Uzbekistan stands out with a particularly sharp drop, from 26% in 2010 to 7% in 2023. This drastic change can mainly be attributed to significant reforms introduced in 2019, which shifted vocational education from a compulsory component of upper secondary education to an optional, fee-based system. Previously, vocational training was an integral part of the 11-year education track. With the reform, it became an elective choice (Damian-Timosenco, 2023).

FIGURE 10.4:
Vocational education participation rates have seen only marginal growth in the past 10 years
Youth participation rate (15- to 24-year-olds) in technical and vocational programmes, 2010–23



GEM StatLink: https://bit.ly/GEM2024_fig10_4
Source: UIS database.

TERTIARY EDUCATION

Globally, participation in tertiary education has been on the rise (**Figure 10.5**), in the context of great complexity, especially for the leaders of institutions who are called upon to oversee difficult transformations (**Focus 10.1**). Between 2010 and 2022, the tertiary education gross enrolment ratio considerably increased in most regions, except Oceania, where it decreased, and sub-Saharan Africa, where average enrolment rose by only two percentage points during this period. In contrast, there was a 17-percentage point increase in Latin America and the Caribbean and a 34-percentage point increase in Eastern and South-eastern Asia. Across all regions, gender gaps in enrolment remained stable during the period. In most regions, except for sub-Saharan Africa, the gap is in favour of women. In Europe and Northern America, Latin America and the Caribbean, and Oceania, the gross enrolment ratio for women is at least 20 percentage points higher than that for men.

An interesting pattern emerges when comparing the gender parity index of the gross enrolment ratio in tertiary education to participation in TVET among 15- to 24-year-olds. In most countries with available data, women considerably outnumber men in higher education, while the opposite is true in TVET (**Figure 10.6**). In Bahrain, for every 100 young men, there are over 140 young women in tertiary education but only 10 in TVET.

Only in 8 countries are men more likely than women to participate in both tertiary and TVET and only in 6 countries do women outnumber men in both.

> In most countries, women considerably outnumber men in higher education, while the opposite is true in technical and vocational education and training (TVET)

Vocational education is often associated with manual labour, technical skills and trade professions such as construction and engineering. Historically male-dominated, these fields are frequently perceived as less prestigious compared to academic careers, which may contribute to higher male participation in vocational programmes. In contrast, women are more likely to pursue university degrees, which are often seen as pathways to professional, white-collar careers (EFT, 2024).

FOCUS 10.1. HIGHER EDUCATION LEADERS FACE MAJOR CHALLENGES

Higher education leadership is vital for guiding institutions to fulfil their missions, as well as for promoting adaptability, driving innovation and protecting academic freedom.[1] This is especially the case as higher education faces not only growing expectations about its potential contribution to socioeconomic development but also major challenges: rapid technological change, political instability, pressures on public spending, higher student diversity and more scrutiny. All these factors exert pressure on higher education leaders. Support mechanisms need to be designed. The process of leaders' and governing body members' selection is crucial for increasing the impact of higher education.

> Higher education faces major challenges: rapid technological change, political instability, pressures on public spending, higher student diversity and more scrutiny

Governments set rules and policies to fund higher education institutions, as well as to regulate relationships between system actors (including rules intended to regulate the market) and define objectives and expected outcomes, as well as the mechanisms of control and accountability (including indicators for these goals) (Alarcón and Brunner, 2023).

INSTITUTIONAL GOVERNANCE AND CULTURES VARY

Governance structures vary significantly between countries and types of institutions. There is no single model of governance, but effective and efficient systems aim for institutional autonomy to determine internal structure and decision-making processes (organizational), manage funding and allocate budgets (financial), recruit and manage staff (staffing), and arrange teaching and research (academic) (EUA, 2017). However, almost 40% of countries do not recognize institutional autonomy by law. Only one quarter of the Arab states grant autonomy in contrast with Central and Eastern Europe, where all countries do so (Higher Education Policy Observatory, 2024). Even so, having such legislation does not mean that autonomy is fully respected, as the concept may be understood differently in different countries at different times (Galán-Muros et al., 2024).

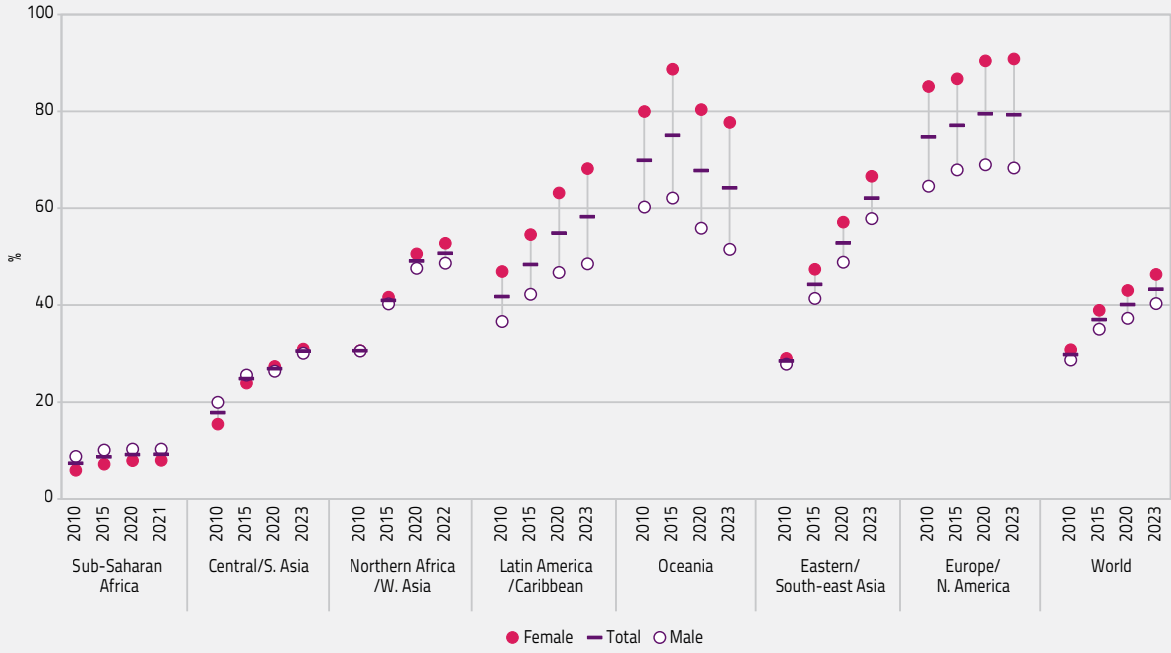
In some countries, including the United States, institutions' administrative and academic responsibilities are divided between two individuals. Presidents (or chancellors) are chief executive officers, leading strategic planning, policy implementation and operational oversight. They represent the institution externally and work with a board of trustees or governing council which appoints them, although in many cases the education ministry is responsible for appointment. They can come from elsewhere in the academic community or from other sectors. Provosts (or vice presidents for academic affairs) are chief academic officers, overseeing faculty affairs, academic support services, curriculum design and development, and managing academic budgets and ensuring academic standards. They oversee deans and vice-provosts and report directly to the president. They are usually elected by presidents within senior faculty members and approved by the board of trustees. It is critical that these two leaders have clearly differentiated competencies and responsibilities, well-aligned visions, and open communication channels. European countries tend to combine the administrative and academic roles in one role (rectors or vice-chancellors), usually elected by the university community (and re-elected for a maximum of terms).

Higher education institution governance also relies on collective structures that are usually responsible for key legal, academic and financial decisions. A board of trustees (or governing board or board of regents) is composed of external individuals which could include business leaders, community representatives and alumni. It guides strategy

FIGURE 10.5:

Gender disparity in tertiary education enrolment has continued unabated

Gross enrolment rate tertiary education, 2010–2021/23



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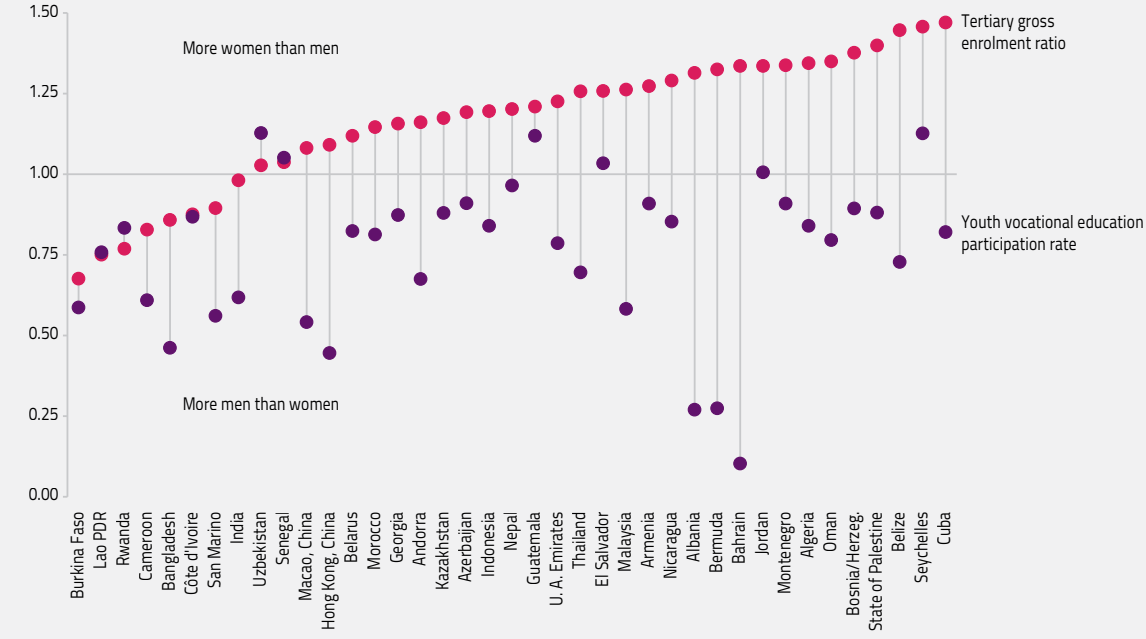
Source: UIS database.

FIGURE 10.6:

Gender gaps favour women in tertiary education but men in TVET

Adjusted gender parity index of the tertiary education gross enrolment ratio and of the youth (15- to 24-year-olds) participation rate in technical and vocational programmes, 2023



GEM StatLink: https://bit.ly/GEM2024_fig10_6

Source: UIS database.

and oversees performance, including financial, to ensure the institution meets its goals. Office terms and election mechanisms vary. At the National University of Singapore, members are elected by the Ministry of Education, while at the National Autonomous University of Mexico they are appointed by the Governing Board. Some universities have university councils, usually led by the academic head of the institution and mainly made up of academic and student representatives as well as of administrative staff. Another type of body is the senate. At the University of Cape Town in South Africa and the University of the South Pacific, the senates have responsibilities for teaching and learning while at the University of Bologna in Italy, the senate fulfils functions akin to those of a university council. Finally, other structures involve external actors as university advisors. In Spain, the law requires that all universities establish social councils, an external body that links the universities with society, which have become an advisory and oversight mechanism (CCS, 2023).

The way in which governance is organized, including the number and type of governance structures, members, competencies, appointment timings and relationships, sets the internal context within which leaders work. But like any organization, institutions have beliefs and values that define their culture. Organizational culture and leadership are interdependent. Culture influences decision making, shaping expectations and leaders' ability to achieve goals. Culture can be enhanced through leadership (Drew, 2010; Hassan et al., 2018) but can also limit the exercise of leadership (Gómez, 2023). Sometimes an institution's culture is rooted in its foundational objectives. In Mexico, the intercultural university system established in 2003 (Dietz et al., 2019) and the Benito Juárez Welfare Universities (González et al., 2021) champion diversity and social change while Tecnológico de Monterrey, created by businesspeople, serves the industrial sector of its region and prioritizes leaders with strong industry connections, industrial experience and commitment to economic impact. Culture can also impact other areas. Institutions where academic freedom is promoted are more likely to engage teachers in developing teaching processes while those that are student-focused will expect leaders to dedicate resources to student academic support, employability and mental health.

LEADERS MUST ADJUST TO COMPLEX EXTERNAL CONTEXTS

While leaders can significantly drive higher education transformation, their leadership is often influenced by political, economic, social, technological and other factors (Bunescu et al., 2023; Hassan, et al., 2018). The political environment directly influences the work of higher education leaders. The government's vision has a major impact on higher education. In Singapore, the Ministry of Education works with the national agencies responsible for planning to draft labour outlook reports, which higher education institutions use to design their programmes and government to implement its higher education strategy and allocate resources (OECD, 2011; Mackay and Barker, 2022). Latin American governments, including those of Argentina, Chile, Colombia and Uruguay, have promoted free access to higher education (UNESCO IESALC, 2023; Garcia de Fanelli, 2021). Australia, Canada and the Netherlands have introduced legislation and proposals to limit the number of international students (Greenfield, 2024; Myklebust, 2024a; Saif, 2024).

Higher education leaders can also influence policy by maintaining feedback channels with policy makers through informal networking; in forums and conferences; or formal collaboration channels, such as commissioned research or consultancy services (IESALC, 2023). For example, leaders and their faculty members participate in permanent scientific advisory bodies or higher education advisory councils, such as Australia's Prime Minister's Science, Engineering and Innovation Council; the European Union's Scientific Advice Mechanism; and India's Scientific Advisory Committee to the Prime Minister.

Political instability affects the operation of higher education and leaders' work, where governments and higher education institutions clash for political reasons. For example, the political crisis in Bangladesh in 2023–24, fuelled by a strong student movement (**Chapter 6**), led to boycotts and protests, which also resulted in class cancellations and calendar modifications (Al Manzur, 2023). Since 2018, the government of Nicaragua has closed 26 universities, including the Central American University whose material and financial assets were confiscated (Altbach and Blanco, 2024). In Türkiye, the closure of 15 universities was ordered for alleged links to a failed coup in 2016, while 4 university rectors were suspended and all deans were asked to resign (O'Malley, 2016). In the US state of Florida, the governor introduced a bill prohibiting colleges and universities from funding diversity, equity and inclusion programmes on their campuses and from including identity politics in their curricula (Kelly, 2022). Another conflict in the United States is related to the elimination of the tax exemption for universities and the reduction of college and university budgets for financial aid and research (Knot, 2024).

Higher education institutions and their leaders are influenced by the **economic** context. Ensuring financial sustainability and diversification of funding sources has become a priority for leaders. Leaders need to manage

the impact of economic cycles on government budgets (Skrbinjek et al., 2018) and the number of student applicants (Long, 2014; Kim, 2021). They can adjust their tuition policy, where they have the power to set fees, as well as their scholarship programmes, quotas or other benefits. Leaders need to negotiate with the government for public funding (Gómez González, 2023). In some countries, universities have a big influence on the economy. For example, in 2021/22, the prestigious universities of the Russell Group alone generated nearly GBP 38 billion for the British economy and supported more than a quarter of a million jobs through their research and commercialization activities (Knuth et al., 2024). Higher education leaders may engage with businesses to co-design and co-deliver curricula in response to labour market needs, offer contract research projects and commercialize research results (Galán-Muros and Davey, 2019). Universities co-locating next to industry can support the economic development of some regions (Galán-Muros et al., 2021).

Leaders need to adhere to **regulatory** frameworks, which cover issues such as the recognition of higher education degrees and the registration and accreditation of educational programmes. Other legal issues include budget allocation for research, legislation on intellectual property and ethical standards in management. Leaders need to stay informed about these frameworks and inform their communities, not only to ensure compliance but also to influence their direction.

Social factors influence higher education leadership. In many Arab states, religious and social norms affect the role of women. In Saudi Arabia, women are less likely to be considered for higher education leadership positions (Alghofaily, 2019) (**Focus 10.2**). In some cases, decisions made by women leaders in administrative positions in universities are subject to approval by their male peers. Decisions made by vice deans in women's sections of universities may need to be approved by vice deans in the men's section (Alqahtani, 2021). Demographic changes affect demand, from the ageing population in Europe and Northern America to rapid population growth in Africa. Diversity of student populations, including working and international students, also play a role. Higher education leaders can make universities agents of social change and engage with staff and students from social groups that have been traditionally under-represented. For example, the University of Johannesburg in South Africa and the University of Aswan in Egypt have strong programmes to support their surrounding communities (Blancas et al., 2023).

Constant **technological** changes have put pressure on higher education leaders to keep their institutions at the forefront of technology adoption for pedagogical, research and administrative functions. Leaders need to ensure that technological development does not compromise quality assurance or data privacy or increase educational inequalities. At the same time, universities can change the pace of technological development in their countries through teaching relevant courses, providing digital skills to all graduates, and channelling research and innovation to the economy and society (Al-Youbi, et. al., 2021; Galán-Muros et al., 2023).

Growing awareness of sustainability has pressured leaders to integrate **environmental** considerations into institutional strategy and operations. More leaders seek an impact with more environment-related courses, including green skills among all graduates, and more research on environment-related topics. Campaigns to reduce solid waste, adopt sustainable energy sources, develop green campuses and promote sustainable mobility within campuses are other examples. The United Nations' Race to Zero campaign has inspired leaders to set measurable goals for achieving net-zero emissions on their campuses (UNFCCC, 2023).

LEADERS' PROFILES ARE EVOLVING BUT THEY NEED SUPPORT IN THEIR ROLES

A good higher education leader has been identified as someone who excels in communication; has a visionary outlook; is able to work under pressure; can resolve conflicts; and demonstrates empathy, assertiveness, inspiration and the ability to create networks (Bunescu and Esterman, 2021). Integrity, credibility and trustworthiness are important attributes (Dopson et al., 2016).

> "In most countries, higher education leaders still tend to be academics promoted with little to no management training"

In most countries, leaders still tend to be academics promoted with little to no management training (Perez-Ortega et al., 2017). In Ireland, a 2019 survey revealed that only 22% of leaders felt they had the necessary skills to meet the challenges of their position (Hazelkorn and Boland, 2020). Overall, though, the role of leaders has been evolving and becoming more professionalized (Selingo et al., 2017). In Anglo-Saxon countries, leaders are professionals who have held managerial roles in several institutions during their careers. In the United States, presidents tend to be professionals who have previously held other leadership

positions, such as provost or dean. Although there is no established training programme, leaders often rely on mentors or advisors for the development of their functions during their tenure (Selingo et al, 2017).

There is a consensus that leadership must evolve through a change in mindset, structure, practices, and management of authority and power (Mackay et al., 2022). They need to encourage innovation, creativity and continuous improvement. This requires collective leadership and feedback from and the participation of all stakeholders in decision making, including the academic and student community, as well as other with businesses, government and community stakeholders (Acosta, 2021).

Around the world, various initiatives are developing higher education leaders' skills. Australia has prioritized leadership development among First Nations leaders and their participation in key governance positions (Australia Department of Education, 2024). The Centre for Leadership Development at the government Academy of Leadership in Higher Education in Malaysia, established in 2008, offers training on administrative and academic management and leadership. The National Academy of Higher Education in Pakistan has capacity-building programmes that focus on research management, academic governance, leadership and financial management. In Saudi Arabia, the government, through the Ministry of Education and the Center for the Preparation of University Leaders, developed the Academic Leaders Forum in 2021 to develop university leaders' skills. King Saud University and the King Abdullah University of Science and Technology also launched the first Academic Leadership Enhancement Program in 2022. In South Africa, the Higher Education Leadership and Management Programme is an initiative of the Department of Higher Education and Training, implemented by Universities South Africa. It helps emerging leaders, middle managers and senior administrators improve their skills. Since 2002, it has been strengthening institution leadership and facilitating decision making through both a foundational programme and specific programmes, for example focused on women or faculty leaders.

Several universities train leaders as part of lifelong learning programmes, such as the Higher Education Leadership Academy of the Tata Institute of Social Sciences in India and the Harvard Institutes for Higher Education in the United States. Two Erasmus+ projects funded by the European Commission were the NEWLEAD project, which analysed key challenges and developed a framework for leadership programme design; and the LOTUS project, which focused on leadership development to promote innovation in teaching and learning. Established by the Western Interstate Commission for Higher Education in the United States, the Western Academic Leadership Academy is a year-long professional development programme for aspiring leaders, which consists of a three-day face-to-face seminar followed by interaction with faculty mentors and cohort colleagues to develop career paths.

Finally, many programmes are run by university associations and non-governmental organizations. In the United Kingdom, the Aurora programme was developed by Advance HE in 2013 and delivered in collaboration with partner institutions to promote women's leadership in higher education governance, focusing on four strategic areas: identity, impact and voice; core leadership; politics and influence; and adaptive leadership. More than 10,000 women have taken part in the programme, which offers skills and competency development, mentoring, and networking sessions.

FOCUS 10.2. WOMEN ARE UNDER-REPRESENTED IN HIGHER EDUCATION LEADERSHIP

Although there are more women higher education students than men, women are under-represented in senior leadership positions, with many women remaining in middle leadership roles and rarely appointed as vice-chancellors (Gandhi and Sen, 2021). Family responsibilities; a lack of role models, mentoring and network opportunities; insufficient preparation; societal and cultural values; and stereotypes and negative cultural beliefs are some of the factors behind gender inequality in leadership positions (Bush et al., 2022).

Across OECD countries, women make up 45% of academic staff, ranging from 30% in Japan to 59% in Lithuania. But in 2023, only about 25% of the top 200 higher education institutions were led by women worldwide (Times Higher Education, 2024). In the United States, only 30% of presidents are women and about 40% of all universities have never had a woman president. Only 39% of the provosts are women, while fewer than 30% of board chairs are women. Among female presidents, only one in five is Asian, Black or Latina (Women's Power Gap, 2023). In the countries affiliated with the European University Association, fewer than one in five rectors and one in three vice-rectors are women, despite a 73% increase in the share of female rectors between 2014 and 2022 (European University Association, 2022). In Italy, just 12 out of 99 rectors were women in 2022 (Ferrario, 2024). In Australia, 37% of academic leaders were women in 2021 (Calderon, 2022).

In sub-Saharan Africa, women are still very under-represented in academia, let alone in leadership positions. In Ghana, only 8% of professors at public universities are women (Mulwa, 2021). In Ethiopia, women accounted for 15% of associate professors and 10% of assistant professors in 2021/22 (Ethiopia Federal Ministry of Education, 2022). They only made up 11% of senior leadership positions in 2021, while only 2 of 46 universities had a woman president (Adamu, 2023). In South Africa, only 6 out of 26 higher education institutions are led by women and they represent only 15% of vice-chancellors (Wauru, 2023). In the United Republic of Tanzania, only 2 of 60 universities had a female vice-chancellor. Uganda only had three in 2017 (Kuagbedzi et al., 2022).

> “In Ethiopia, only 2 of 46 universities had a woman president; in the United Republic of Tanzania, only 2 of 60 universities had a female vice-chancellor”

In Asia, women are also scarce in leadership positions. In Hong Kong, China, where gender mainstreaming in public services was introduced in 2002, women still accounted for fewer than one in four senior administrative positions (i.e. departmental headships, faculty deanships and top management) at 8 public universities 20 years later. Moreover, most of these women occupy the lower ranks of these senior positions. For example, among the 13% of women in the highest senior management roles, none was a provost or president. Rather, the vast majority are associate deans. They represented only 11% of chaired professors and fewer than 25% of full professors across the 8 universities (Li and Kam, 2021). In India, the share of women who were vice chancellors in 2022 was 13% in central, 12% in state, 8% in deemed and 6% in private universities (Shyam, 2022).

Political appointments often prevent women from getting senior leadership positions in higher education (Adamu, 2019, 2023). In Kazakhstan, one of the main priorities in the Conception for Family and Gender Policy for 2017–2030 is enhancing the leadership of women in social and political life, setting a target of 30% women leaders by 2030. But rectorship is often seen as a step in a political career (Kuzhabekova, 2021). In the Republic of Korea, none of the top national or public universities are led by female presidents (Cheung, 2021). In Malaysia, where the posts of vice-chancellor, deputy vice-chancellor, governance board member and the chairs of 20 public universities are political appointments, only 10% of chancellors, 6% of vice-chancellors, 5% of board of governors leaders and 21% of board members nominated by the government were women in 2020. In Latin America and the Caribbean, fewer than one in four universities had a female president. In Mexico, fewer than one in four institutions belonging to the National Association of Universities and Higher Education Institutions had a female president. Among those, 17% are president in public universities and 26% in private universities (IESALC, 2024).

Some countries have tried to advance gender equality in their strategies, policies and legislation. Austria amended the Universities Act 2002 to include a quota for female senior leadership positions which came into effect in 2009. Initially set at 40%, the quota was raised to 50% in 2015. Since 2021, the University of Applied Sciences Act and the Private University Act have mandated these institutions to develop and adopt gender equality plans. Out of 22 university rector positions, the number of women occupying them increased from 1 in 2008 to 7 in 2018 (Wroblewski, 2019). In Norway, the 2002 Gender Equality Act mandates that at least 40% of the members of executive boards of universities and university colleges be women. The share of women full professors increased from 8% to 25% between 2002 and 2020 and there is now gender balance in rectorship (Klenk et al., 2022).

In Egypt, the Tamkeen project, funded by the British Council’s Going Global Partnerships programme, was launched in 2022 to address the under-representation of women in senior leadership roles in higher and further education by establishing female academic networks (Ayoubi et al., 2024). But these efforts may not be enough if no mechanisms are in place to redress causes which are deeply rooted in cultural and societal values. In Saudi Arabia, the Vision 2030 programmes emphasize women’s empowerment and the need to support women in leadership positions (Shura Council, 2021). Although only the 3 women-only universities are led by women, there are 12 female vice-presidents (Alotaibi, 2020), 61 female deans and 228 female deputy deans (Alghofaily, 2019).

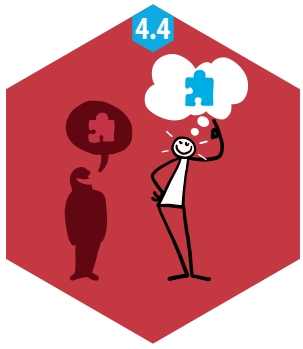
A female student attending TVET course Bangladesh.

Credit: UNESCO/Save the Children/Jeff Holt*

KEY MESSAGES

- There are large divides in information and communication technology (ICT) skills. About 80% of adult in high-income and 32% in middle-income countries can send an email with an attachment; 7% and 2%, respectively, can write a program in a computer language.
- New skills are being monitored related to the use of smartphones. About 45% of adults in high-income and 7% in middle-income countries can set up security measures on digital devices; 23% and 10%, respectively, can verify the reliability of online information.
- There are wide gender gaps in ICT skills: 84 women for every 100 men can work with spreadsheet formulas, while 83 women for every 100 men can verify the reliability of information online.
- Formal education is important for teaching digital skills. In the European Union, the share of adults with basic digital skills rises from 34% among those with lower secondary education to 51% for those with upper secondary education and 80% for those with post-secondary education.
- In the past 10 years, the share of the population with at least secondary education increased by 5 percentage points. Among countries whose starting point was below 20% in 2012–13, India increased by 18 percentage points in 10 years but Guatemala, Niger and Senegal have almost stagnated.
- Leadership skills such as decision making, working with groups and negotiating can be taught and learned. Voicing one's opinions can foster leadership, but a study across multiple countries and cities found disadvantaged students were less likely to be assertive than others.

CHAPTER 11



TARGET 4.4

Skills for work

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

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 and level of education*

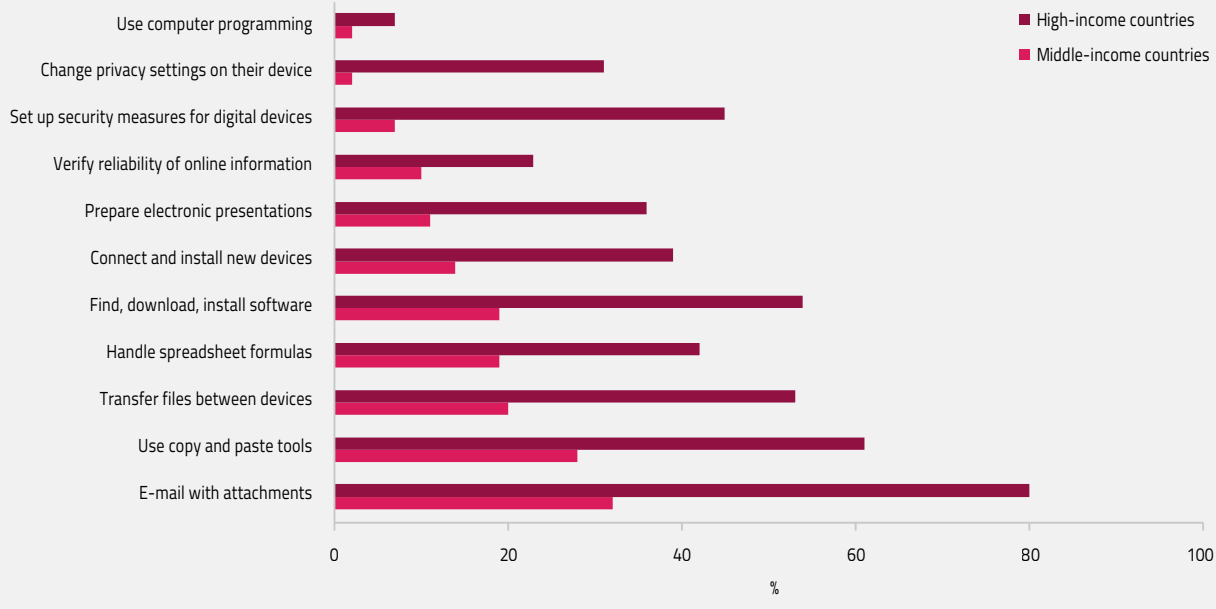
While SDG target 4.3 focuses on ensuring access to vocational, tertiary and adult education, SDG target 4.4 complements it, focusing on one of the core outcomes of such education: the acquisition of skills for employment, decent work and entrepreneurship. While there is an enormous range of potential general and specific skills for work, the target by convention primarily monitors information and communication technology (ICT) skills. This is not only because technological progress and digitalization are rapidly affecting the world of work globally, but also because these skills can be monitored in a comparable way.

SDG global indicator 4.4.1 aims to measure the percentage of youth and adults with ICT skills. Inspired by a Eurostat household survey introduced in the early 2000s for European Union (EU) member states, the indicator consists of self-reporting on a list of nine ICT-related activities carried out in the three months preceding the survey. These activities relate to computer use, for example sending emails with attachments, installing software and handling spreadsheet formulas. In recent years, under the Expert Group on ICT Household Indicators, the International Telecommunication Union has attempted to further develop the indicator (ITU, 2024).

Globally, data on ICT skills are unevenly collected, with much higher coverage of rich countries. Among those countries that reported such data in 2021, the acquisition of ICT skills is unevenly distributed. In the case of a simple skill, 80% of adults in the median high-income country could send an email with an attachment compared to 32% in middle-income countries. In the case of a more complex skill, 7% of adults in high-income countries vs 2% in middle-income countries could write a programme using a computer language (**Figure 11.1**).

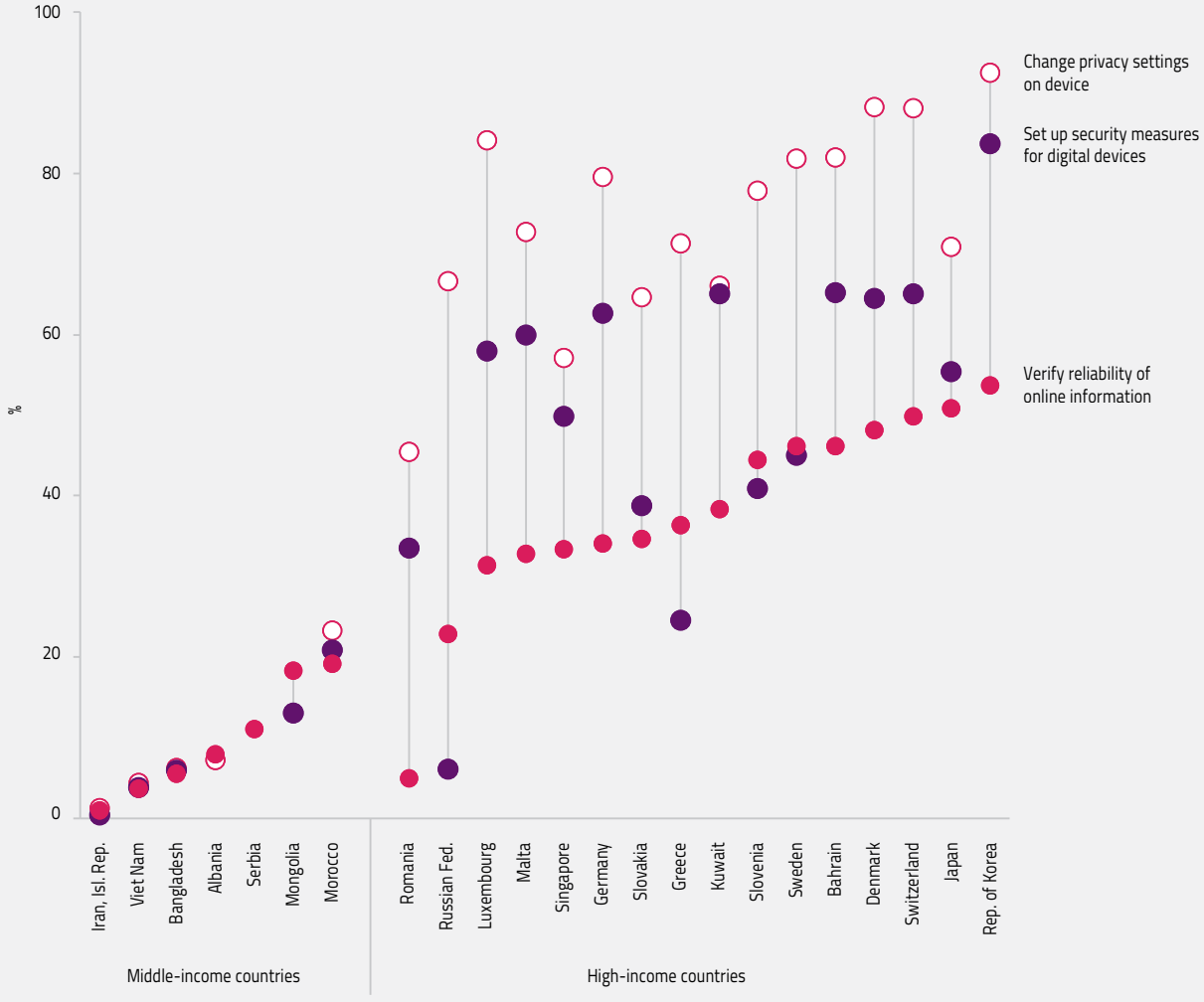
The dual challenge of monitoring is to maintain comparability over time and across contexts, while also limiting the number of survey questions. A recent revision of the list has seen two innovations. First, there has been an attempt to embed these activities in a broader conceptual framework: the European Union's Digital Competence Framework for Citizens (Digcomp) (European Commission, 2024), which consists of five major areas – information and data literacy, communication and collaboration, digital content creation, safety, and problem solving – and has also been adopted by UNESCO as the Digital Literacy Global Framework (UIS, 2018). Second, new activities have been added, notably related to smartphone use. For example, given the global concern about the indiscriminate consumption of information and

FIGURE 11.1:
In high-income countries, adults have much higher levels of ICT skills than in middle-income countries
Median percentage of youth and adults with ICT skills, by country income group, 2021 or latest year



GEM StatLink: https://bit.ly/GEM2024_fig11_1
Source: UIS database.

FIGURE 11.2:
No more than 1 in 20 Bangladeshi, Iranian and Vietnamese youth and adults can verify the reliability of online information
Percentage of youth and adults with selected smartphone-related ICT skills, by country income group, 2021 or latest year



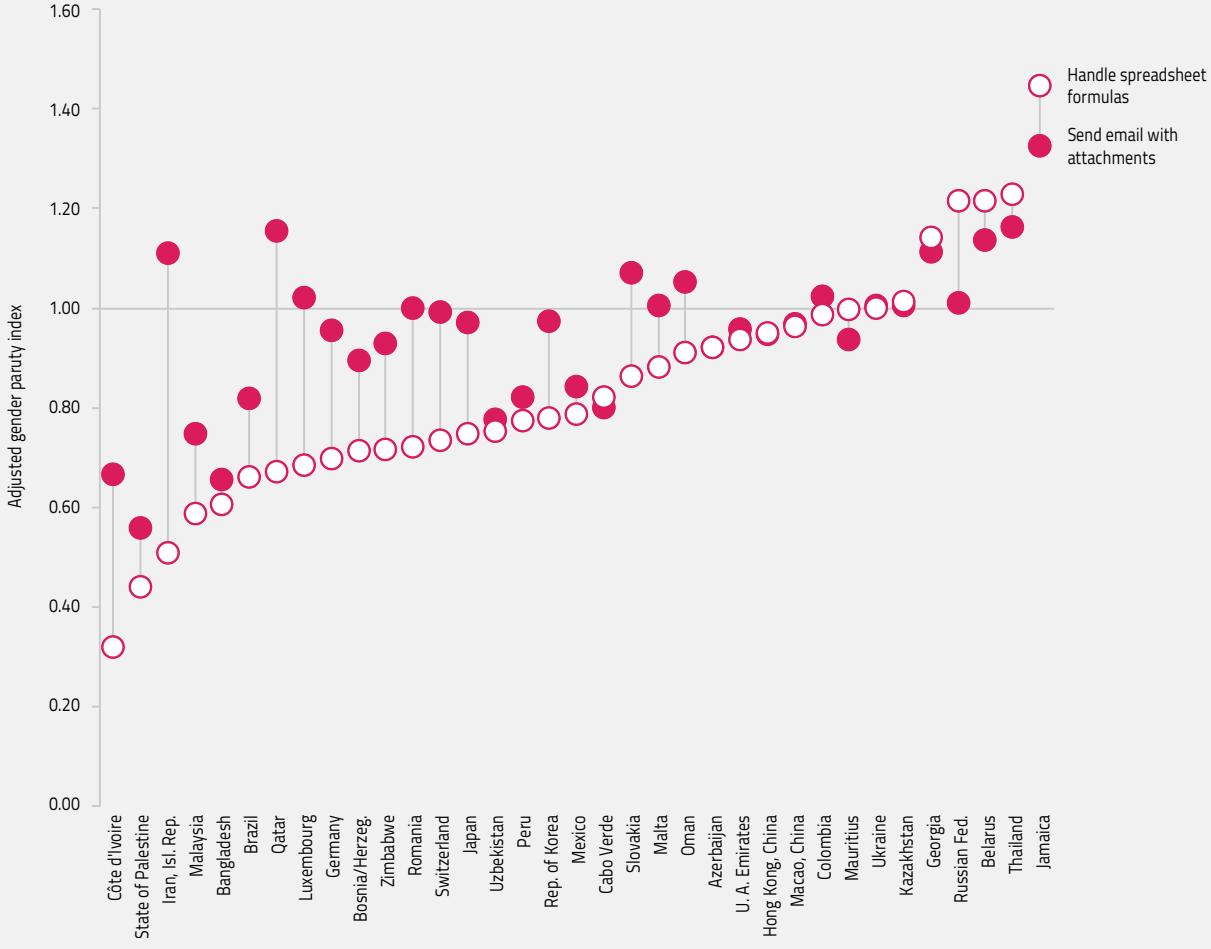
GEM StatLink: https://bit.ly/GEM2024_fig11_2
Source: UIS database.

the dissemination of fake news, a new activity under the information and data literacy area is to verify the reliability of information. Two new activities under the safety area are changing privacy settings and setting up effective security measures, for example strong passwords and log-in attempt notifications.

As these activities were added recently, relatively few countries have started reporting on them. Among 16 high-income countries, 51% of youth and adults could set up security measures for digital devices, compared to 9% in a small sample of 5 middle-income countries. About 10% of youth and adults in middle-income countries – and no more than 5% in Bangladesh, the Islamic Republic of Iran and Viet Nam – could verify the reliability of online information. In high-income countries, 38% of adults could verify the reliability of online information, ranging from 5% in Romania to 54% in the Republic of Korea (**Figure 11.2**).

ICT skills are not only unequally distributed between countries but also within countries. For example, there are significant variations by age, sex and location in the verification of the reliability of online information. First, there is an average 12 percentage point gap between youth (15 to 24 years) and adults (25 to 74 years), which rises to over 20 points in Croatia and Norway. This generational gap partly explains why older adults tend to share fake news more often than youth (Guess et al., 2019). Second,

FIGURE 11.3:
Men are even more likely than women to have ICT skills as the skill level rises
Adjusted gender parity index for the share of adults who have sent an email with attachments and have used basic arithmetic formulas in a spreadsheet, selected countries, 2021 or latest year



GEM StatLink: https://bit.ly/GEM2024_fig11_3
Source: UIS database.

> 83 women for every 100 men could verify the reliability of information online; the largest gaps were in the Islamic Republic of Iran and Switzerland, with 59 and 65 females for 100 males

83 women for every 100 men could verify the reliability of information online. The countries with the largest gender gap are the Islamic Republic of Iran and Switzerland, with 59 and 65 females for 100 males, respectively. Countries such as Latvia and the United Arab Emirates have achieved parity while in Kuwait there are 80 men for every 100 women who verify information online. Third, only 72 rural residents for every 100 urban residents reported being able to verify the reliability of information online, a gap inevitably linked to lower access to ICT in rural areas.

Gaps tend to increase with the complexity of the task. For example, 95 women for every 100 men are able to send an email with attachments, but only 84 women for every 100 men can work with spreadsheet formulas (**Figure 11.3**). Even so, there are some notable exceptions. In Thailand, only 77 men for every 100 women can work

with spreadsheet formulas. In Jamaica, where there are only 55 men for every 100 women who can work with spreadsheet formulas, girls perform better than boys on secondary school information technology examinations but there are many more men than women enrolled and graduating in technology programmes in tertiary education (Jamaica Government, 2018).

The acquisition of ICT skills takes place through several modalities, in many places and at various points in time. But the role of formal education remains crucial, both in preparing students in how to be lifelong learners and because it directly imparts digital skills, which is why it is important for education institutions to have teachers who can lead this and the needed infrastructure. For example, in 2023, among the 27 EU countries, a measure of 'basic digital skills' was developed, which is defined as having performed at least one activity from each of the DigComp areas. The share of adults with basic digital skills ranged from 34% among those who had at most completed lower secondary education to 51% among those who had completed upper secondary education and 80% among those who had some post-secondary education (Eurostat, 2024). As the percentage of adults who have attained at least secondary school rises, digital skills will also increase (**Box 11.1**).

The presence of computers in schools is an important factor for exposing students and teachers to technology. Among 60 countries that have taken part in successive rounds of the Programme for International Student Assessment (PISA) of 15-year-old students, there were 61 computers available for education purposes for every 100 students in 2012 and the ratio increased to 68 in 2018 and 73 in 2022. But this ratio did not increase for the 16 middle-income countries in the sample, staying at 32 in 2022, and it only increased for the 44 high-income countries, from 66 in 2012 to 86 in 2022. Between 2012 and 2022, the ratio fell from 49 to 33 in Argentina but increased from 48 to 70 in Colombia among middle-income countries. Among high-income countries, it fell from 65 to 55 in Germany; stayed the same in Greece at 24, the lowest level in this group; and almost doubled in the United States, from 95 to 174, the highest level among all countries (OECD, 2023).

The COVID-19 pandemic was a watershed for raising awareness of the importance of ICT skills in formal education systems, especially among teachers. Between 2018 and 2022, the proportion of students in schools whose principals agreed there were effective professional resources for teachers to learn how to use digital devices increased from 65% in 2018 to 80% in 2022 in the countries participating in PISA. The proportion of students in schools whose principals agreed that teachers had the necessary technical and pedagogical skills to integrate digital devices in instruction increased from 67% in 2018 to 90% in 2022. They increased by more than 40 percentage points in Finland (from 50% to 93%), Japan (from 27% to 71%) and Morocco (from 41% to 82%) (OECD, 2023) (**Figure 11.4**).

“The COVID-19 pandemic was a watershed for raising awareness of the importance of information and communication technology (ICT) skills in formal education systems, especially among teachers”

Even the presence of the right teachers and infrastructure is not enough to ensure that students acquire digital skills. According to the International Computer and Information Literacy Study, which evaluated computer and information literacy skills in 2018, there was considerable variation. Among 12 participating education systems, 54% of grade 8 students achieved minimum digital literacy proficiency levels, but this ranged from 19% in Kazakhstan to 81% in Denmark (Fraillon et al., 2020).

FOCUS 11.1. CAN LEADERSHIP BE TAUGHT?

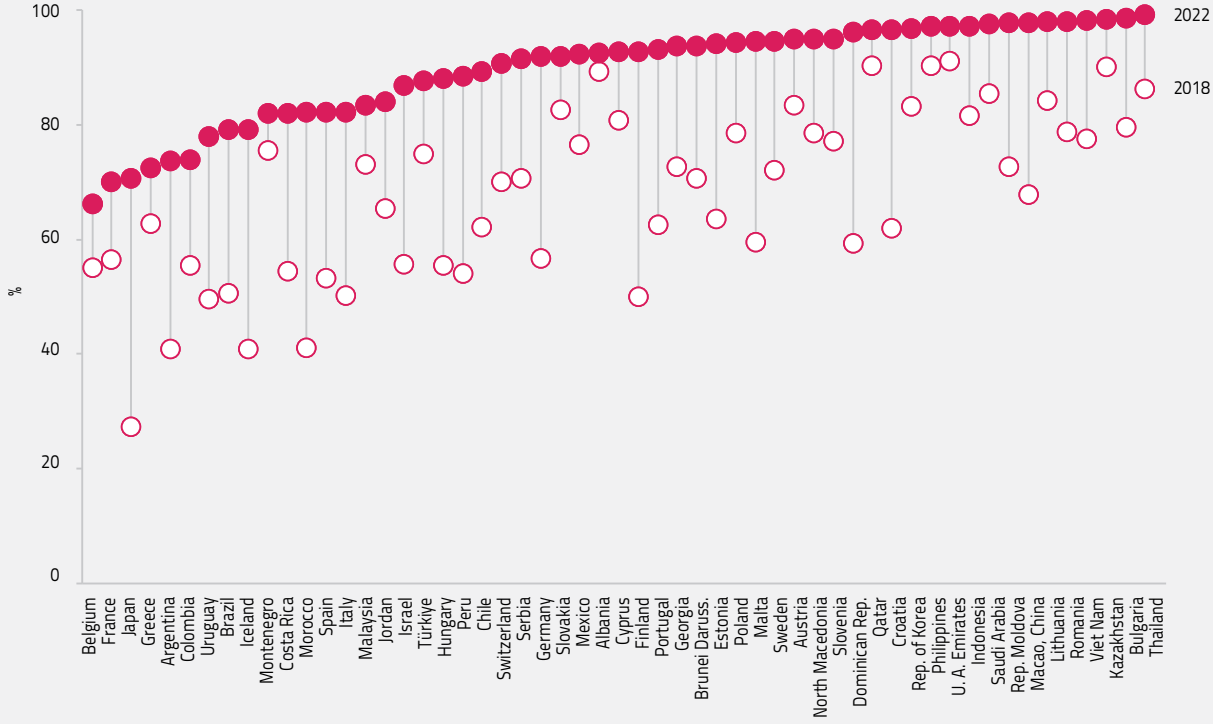
Whether leadership can be taught is an old debate (Brooks et al., 2019; Channing, 2020; Doh, 2003), reflecting the question of nature vs nature: are leaders born or made? Some argue that skills commonly associated with leadership, such as initiative, assertiveness and charisma, are innate qualities that cannot be acquired through formal education. They are impacted by factors such as social context, parental socioeconomic status and parenting behaviour (Duan et al., 2022; Murphy and Johnson, 2011).

But leadership skills and behaviours can indeed be taught (Channing, 2020). They can change and grow as a function of particular developmental activities and experiences (Murphy and Johnson, 2011; Zaccaro et al., 2018). Practical skills such as clear argument, oral expression and good communication can successfully and effectively be taught through formal education. Even personality traits, such as conscientiousness, emotional stability, extraversion, agreeableness and openness to experience (Chioda et al., 2023; Kankaraš and Suarez-Alvarez, 2019), which have shown to have a strong and consistent correlation with leadership (Bono and Judge, 2004), have proved to be malleable and responsive to interventions.

FIGURE 11.4:

Secondary school teachers' skills in using devices increased rapidly during COVID-19

Percentage of 15-year-old students in schools whose principals agreed or strongly agreed that teachers had the necessary technical and pedagogical skills to integrate digital devices in instruction, selected middle- and high-income countries, 2018 and 2022



GEM StatLink: https://bit.ly/GEM2024_fig11_4
Source: OECD (2023).

BOX 11.1:

Education attainment levels are rising but slowly

SDG indicator 4.4.3 focuses on adult education attainment as a proxy indicator of actual skills for work. The variation across countries reflects countries' education development while comparisons over time show differences in the pace by which these systems have expanded.

Some general observations can be made. According to the latest UIS data, in the average country, the share of the population increased by 0.5 percentage points per year between 2012–13 and 2022–23. At this pace, it would take 80 years to achieve universal secondary completion (**Figure 11.5**).

> The share of the population with secondary education increased by 0.5 percentage points per year; at this pace, it would take 80 years to achieve universal secondary completion

Countries whose starting points were below 20% and above 80% in terms of the share of the adult population with at least secondary school attainment expanded at half the rate than countries with starting points in between (4 percentage points vs 8 percentage points, respectively, in 10 years). But there is also significant variation within each group of countries. For example, among countries whose starting point was below 20% in 2012–13, India increased by 18 percentage points in 10 years whereas Guatemala, Niger and Senegal almost stagnated. Among countries whose starting point was between 20% and 40% in 2012–13, Malta increased by 21 points and Portugal by 16 points in 10 years while the Dominican Republic and Honduras stagnated. This means that despite some clear average trends, no country's trajectory is predetermined.

There are also cases of countries where it appears the trajectory has reversed, either considerably, such as Latvia and Poland, reflecting the potential long-term impact of the political transition in the 1990s, or more slowly, such as Germany and Switzerland, reflecting the potential impact of immigration.

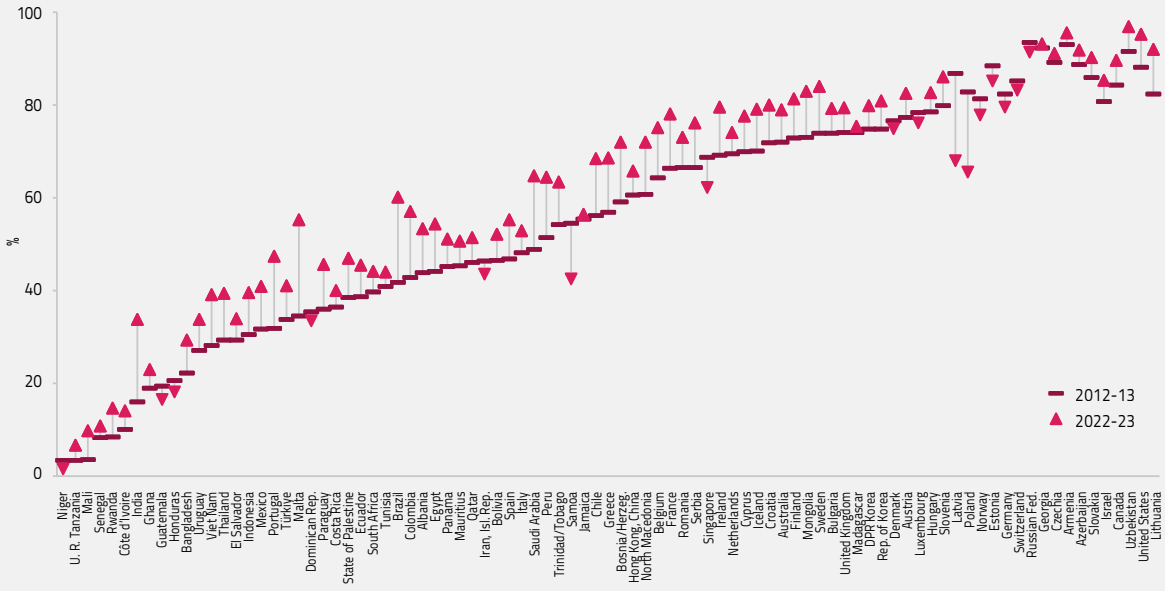
Continued on next page...

BOX 11.1 CONTINUED:

FIGURE 11.5:

The share of the population with at least secondary education increased by 5 percentage points in 10 years

Proportion of adults with at least upper secondary education attainment, 2012–13 and 2022–23



GEM StatLink: https://bit.ly/GEM2024_fig11_5

Source: UIS database.

It has often been assumed that teaching leadership is more effective for those that have already acquired some experience in organizational settings (Grint, 2007). As leadership skills have a practical hands-on orientation, it may be appropriate for learners to already have some experience in work settings or group dynamics. But leadership skills training, which originated from such on-the-job managerial training, gradually became part of formal programmes in higher education institutions, particularly in business education programmes (Brooks et al., 2019; Colombo and Piva, 2020). Some of the skills developed by these programmes are decision making, goal setting, empathy, self-awareness and interpersonal communication (Lee and Chan, 2023).

Entrepreneurship programmes that incorporate the development of leadership skills have been shown to foster entrepreneurship intentions and behaviours (Colombo and Piva, 2020; von Graevenitz et al., 2010). A study of higher education students in Jordan who took entrepreneurship classes showed that their knowledge and orientation towards entrepreneurship increased significantly (Alakaleek et al., 2023). However, traditional business education is critiqued in that a rigorous conceptual and analytical approach to training may be needed but not at the cost of practical orientation such as internships, on-the-job training, coaching and mentoring. There is consensus that traditional leadership programmes have struggled to prepare leaders for work environments (Elmuti et al., 2005).

> “School settings are a good location to build leadership skills, as they are the primary and most important organizational experience throughout childhood”

As well as leadership training for adults, there have been efforts to develop leadership skills among children and youth (Dempster and Lizzio, 2007; Wright et al., 2023). From a lifelong perspective, fostering leadership skills is a process that starts during the early years, in which formal education can play a pivotal role (Elmuti et al., 2005; Lee and Chan, 2023). School settings are a good location to build leadership skills, as they are the primary and most

FIGURE 11.6:
Disadvantaged students are less assertive than their more privileged peers
Standardized differences between the scores of 15-year-old students from low and high socioeconomic backgrounds, 2019 and 2023

Notes: The target population includes only public schools in Delhi, Houston, Ottawa and Sobral and only private schools in Dubai. Differences by socioeconomic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution, as the full range of student backgrounds in the respective locations is unlikely to have been represented.
GEM StatLink: https://bit.ly/GEM2024_fig11_6
Source: Adapted from OECD (2024).

important organizational experience throughout childhood. Leadership skills can be fostered through decision making, getting along with others, self-awareness and working with groups (Karagianni and Montgomery, 2018). Students can be exposed to leadership skills beyond the narrow confines of any specific subject. Participation in any kind of organized group activity, such as choirs, musical groups, theatre groups, scouts and sports clubs, may provide invaluable opportunities for learning and practising leadership skills (Duan et al., 2022).

Displays of leadership at the school level have been linked to positive subsequent outcomes. In Zambia, school girls that participated in negotiation training had better outcomes three years after the intervention, such as participating in national examination, scoring at the top 25% of these examinations, and avoiding pregnancy until after grade 11 (Ashraf et al., 2020). Adolescent leaders are more likely to end up in managerial positions as adults, while leadership skills developed early have been found to have a positive impact on future wages (Kuhn and Weinberger, 2005).

Investment in leadership training in schools goes beyond just preparing students to be business leaders. Programmes, especially those promoted by non-governmental organizations, seek to prepare students to be civic engagement leaders, climate education advocates and minority rights defenders. Interventions in Uganda seeking to empower school girls through vocational training and information on sex, marriage and reproduction found that four years after the intervention they were more likely to be self-employed and delay family formation (Bandiera et al., 2020). A study of global citizenship education curricula in Central America found that half of the beneficiaries had increased their participation in volunteering and social entrepreneurship activities and had been able to create civic awareness through developing networks, groups and communities of practice (UNESCO et al., 2021).

An issue that is often absent from programme design is that leadership skills may be unequally distributed in the population. For example, assertiveness – the capacity to take the lead and voice opinions – can boost leadership skills. While measuring assertiveness presents technical challenges, one such attempt in 5 countries and 17 cities found considerable differences between students from less and more socioeconomically disadvantaged households (OECD, 2024) (**Figure 11.6**). The findings corroborate findings from prior research pointing out the strong association between socioeconomic status and the development of leadership skills (Duan et al., 2022), with social class being critical for the emergence and recognition of leadership (Loignon and Kodydek, 2021).

In summary, leadership training has expanded from an exclusive activity for a few adult students to being more comprehensive and expanding its objectives to prepare the future generation, not just for business but also for social advocacy. It is important to acknowledge the social factors that shape leadership skills and provide equal opportunities for all youth to develop these skills. Finally, more efforts should be invested in analysing the effectiveness of leadership programmes and the different approaches needed at different levels of instruction.

Girls of the mixed school of the indigenous community of Chicoy, Todos Santos Cuchumatánin, Huehuetenango, Guatemala are enjoying their last day in the school yard on October 16, 2019, World Food Day.

Credit: © UNICEF/UN0490984/Willocq*

KEY MESSAGES

- Globally, gender parity has almost been achieved in out-of-school rates. In three regions, there are more boys than girls out of school: Eastern and South-eastern Asia, Europe and Northern America, and Latin America and the Caribbean (where the number of boys out of school increased since 2015 from 107 to 113 in 2023 for every 100 girls out of school). In contrast, there are more girls than boys out of school in Northern Africa and Western Asia, Oceania and sub-Saharan Africa, although the gaps have narrowed significantly since 2015.
- Gender parity has been globally broadly achieved in completion rates at all levels. But in sub-Saharan Africa, 88 young women complete upper secondary school 'on time' and only 79 young women complete it ultimately for every 100 young men.
- Wealth gaps in completion rates remain wide. Richer children are still five times as likely to complete upper secondary education as are poor children.
- Boys are behind girls in reading. At the end of lower secondary education, they are further behind in middle-income countries, where 72 boys are proficient for every 100 girls, than in higher-income countries where 88 boys are proficient for every 100 girls. There are no substantial average gender differences in mathematics.
- Fewer than 20% of children in francophone Africa are taught in their home language at the end of primary; in a few countries where the share has increased, this may be due to more children being raised to speak French at home.

CHAPTER 12

TARGET 4.5

Equity

By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

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*

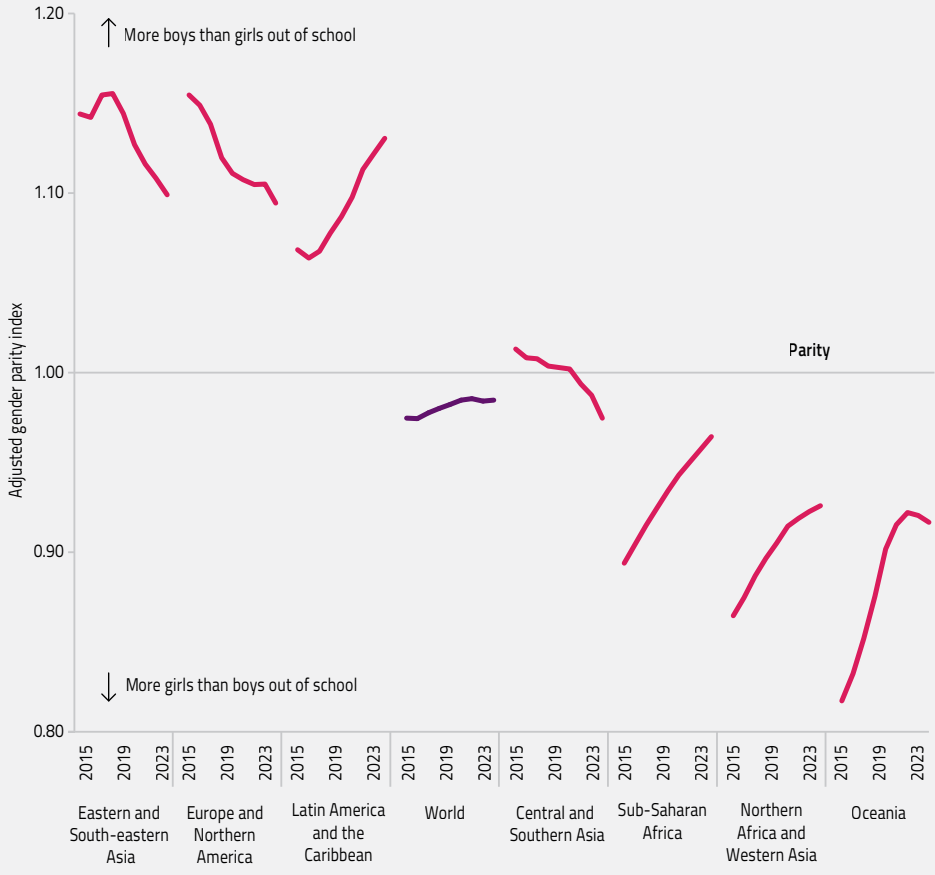
4.5.5 – *Percentage of total aid to education allocated to least developed countries*

Equity is inherent in the formulation of SDG 4, given its reference to education and lifelong opportunities 'for all'. Several SDG 4 targets also include universality, such as target 4.1 which calls on countries to ensure that 'all boys and girls' complete primary and secondary education. The aim of SDG target 4.5 is to put further emphasis on the fundamental right to education for all, regardless of background – making explicit references to gender, disability, indigeneity and vulnerability. It reminds governments of the need to take the necessary steps to dismantle barriers to equality in education opportunities, from access to formal education to the quality offered across education institutions.

Evidence suggests that global inequality has been declining in terms of years of education (Morrisson and Murtin, 2013). However, some argue that this mainly reflects a process by which countries' education systems increasingly resemble each other and that within-country inequalities are becoming more prominent (Permanyer and Boertien, 2021).

SDG global indicator 4.5.1 is the parity index, i.e. the ratio of two values of an education indicator: the one achieved by a disadvantaged group relative to a privileged group. It aims to track disparities in the seven SDG 4 global indicators that can be disaggregated by sociodemographic groups: minimum proficiency level in reading and mathematics (4.1.1), the out-of-school or the completion rate (4.1.2), child development (4.2.1), early childhood education participation rate (4.2.2), adult education participation rate

FIGURE 12.1:
Globally, gender disparity in out-of-school rates has significantly decreased in recent years
Adjusted gender parity index for total out-of-school rates, 2015–23



Note: The out-of-school rate is a negative indicator (i.e. the higher its level, the worse the level of educational development). The parity index has, therefore, been reversed to conform with the convention that the parity index is below 1 for the disadvantaged group.
GEM StatLink: https://bit.ly/GEM2024_fig12_1
Source: VIEW database.

(4.3.1), information and communication technology skills (4.4.1), and the literacy rate (4.6.1).

It is important to note the limitations of the parity index as an inequality measure: when applied to these indicators, which all range from 0% to 100%, disparity almost by definition begins to increase at low values of the indicator, reaching a maximum at around 50% then falling the closer a country comes to achieving universal outcomes for its population. In other words, the parity index may not exactly capture how unequal a country is in general; it is instead more useful for showing whether a country is more unequal than others at similar levels of education development.

Even with a simple indicator such as the parity index, comparing inequality between countries and over time is not straightforward. Analysis of education inequality at the national level can examine a range of characteristics that are relevant to a country's context, such as language and ethnicity, but these are not comparable between countries. Even characteristics such as location and wealth can be challenging because their definitions vary by country. The most straightforward comparisons are by sex and, since the development of international definitions, by disability, although small sample sizes make robust conclusions on disability hard to draw.

> There is near gender parity in the out-of-school rate

In the case of the out-of-school rate, defined over all children, adolescents and youth of school age (roughly aged 6 to 17 years), there is near gender parity , an achievement observed even in Central and Southern Asia, despite the fact that the region includes Afghanistan, which officially bans girls from secondary education. In three regions there are more boys than girls out of school: Eastern and South-eastern Asia, Europe and Northern America, and Latin America and the Caribbean, where there has been a trend of growing disparity with the number of boys out of school rising from 107 to 113 for every 100 girls out of school. Boys in the region are expected to conform with certain masculinity norms, which increase their disengagement from school (UNESCO, 2022). In contrast, there are more girls than boys out of school in the other three regions: Northern Africa and Western Asia, Oceania, and sub-Saharan Africa, although the gaps have narrowed significantly since 2015. In Oceania, the number of girls out of school fell from 118 to 108 for every 100 boys out of school between 2015 and 2023 (**Figure 12.1**).

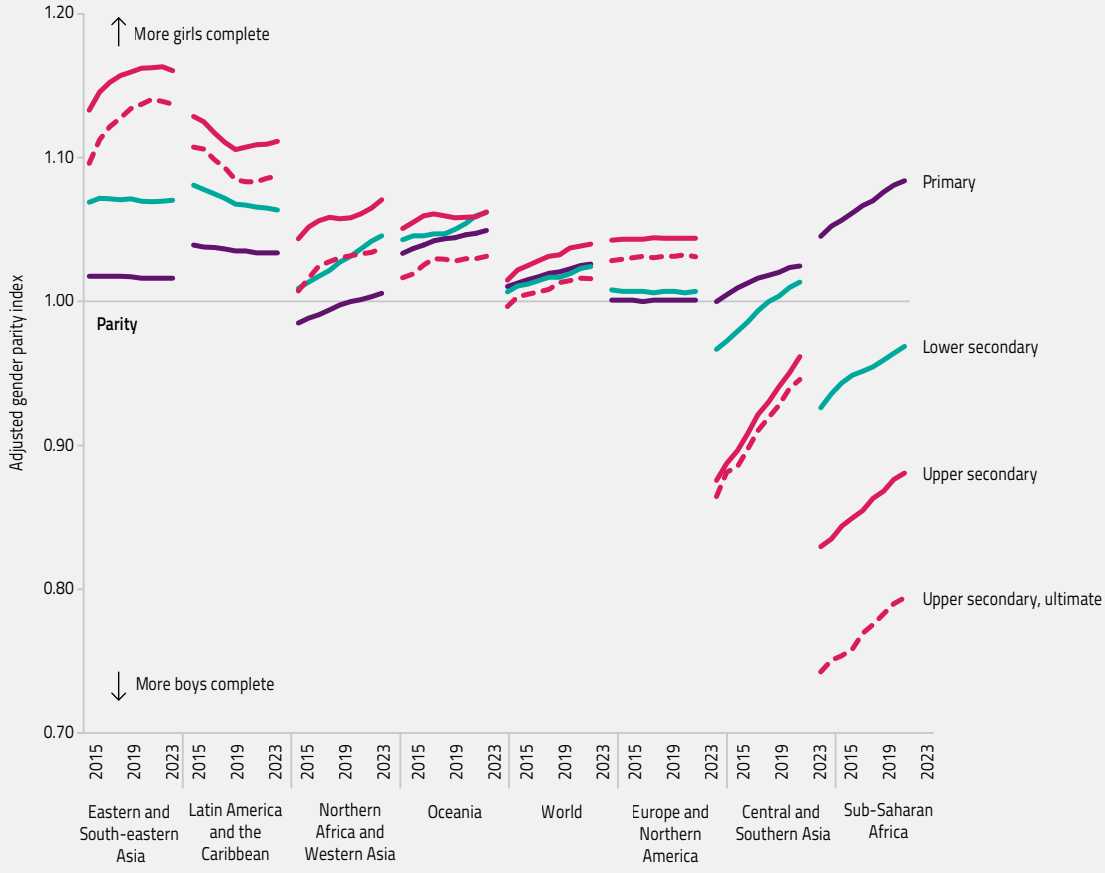
> There is gender parity in primary education completion rates globally, but disparity has been increasing in sub-Saharan Africa

In the case of the completion rate, disparity levels vary by education level and by region. In general, there is gender parity in primary education, which is consistent with the fact that all regions have near universal primary completion. Nevertheless, disparity has been increasing in sub-Saharan Africa with the number of girls completing primary school for every 100 boys rising from 105 to 108 since 2015. To explain this, which might seem counterintuitive, it is important to remember that the completion rate is defined over the age group of children three to five years older than graduation age and that sub-Saharan Africa has the largest rate of over-age children. Growing disparity reflects the fact that more and more girls are progressing through grades without repeating grades, which means that more of them tend to finish primary school 'on time' compared to boys. In fact, girls have almost achieved parity in lower secondary completion in sub-Saharan Africa, with the ratio rising from 93 to 97 girls completing lower secondary school for every 100 boys from 2015 to 2023 (**Figure 12.2**).

The fact that girls are more likely to complete secondary education 'on time' compared to boys can also be observed in the respective gender parity indices of the official completion rate and the completion rate as defined over young people even five years older than the official graduation age. In sub-Saharan Africa, 88 young women complete upper secondary school 'on time' but ultimately only 79 young women complete upper secondary school for every 100 young men. Young women are under pressure to finish school early to comply with the cultural norms that expect them to marry and have children young. The discrepancy described here is not observed, for example, in Central and Southern Asia, where there has been rapid progress towards parity: within eight years, the number of young women completing upper secondary school for every 100 young men increased from 88 to 96.

Further analysis of 35 low- and middle-income countries, which represent more than half of the global school-age population, focuses on the evolution of parity indices by location and wealth at three points in time: 2012, 2017 and 2022. Given the heterogeneous nature of the data, the median values of the parity indices offer a more accurate representation of inequality trends. There has been significant progress in closing the urban–rural gap.

FIGURE 12.2:
Central and Southern Asia has made faster progress in achieving gender parity secondary completion compared to sub-Saharan Africa
Adjusted gender parity index of the completion rate, by region, 2015–23



Note: Countries are considered to have achieved parity if the parity index is between 0.97 and 1.03.
GEM StatLink: https://bit.ly/GEM2024_fig12_2
Source: VIEW database.

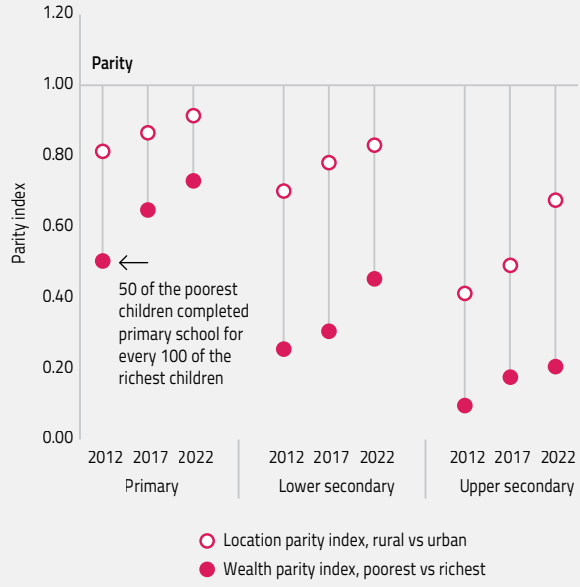
In primary education, there were only 81 rural youth completing for every 100 urban youth in 2012; by 2022, this ratio had improved to 92 rural students completing their grade for every 100 urban students. In upper secondary education, there were only 41 rural youth completing for every 100 urban youth in 2012; by 2022, this ratio had improved to 67 rural students completing their grade for every 100 urban students.

In contrast, the gap between the richest 20% and the poorest 20% of children remains significant across all levels of education. Much improvement has been observed in primary education. The number of poorest children completing primary school for every 100 of the richest children has increased from 50 in 2012 to 73 in 2022.

But in upper secondary education, richer children are still five times as likely to complete this level of education as are poor children (**Figure 12.3**).

In the case of learning outcomes, the results of the 2022 Programme for International Student Assessment (PISA) showed disparity by sex and socioeconomic status in the percentage of adolescents of lower secondary school age that achieve a minimum level of proficiency in reading and mathematics. For the median country that took part in the assessment, there are only 87 males for every 100 females reaching the minimum proficiency level in reading. In mathematics, however, there is virtual parity.

FIGURE 12.3:
Disadvantaged populations have been catching up with their peers in completing each education level
Parity index of the completion rate, low- and middle-income countries, 2012, 2017 and 2022



Note: The analysis includes 35 countries with obervations in or around those years.
GEM StatLink: https://bit.ly/GEM2024_fig12_3
Source: WIDE database.

Gender disparity appears higher in middle-income countries, where only 72 boys achieve minimum proficiency for every 100 girls, than in high-income countries, where the median value is 88 boys for every 100 girls (**Figure 12.4a**). In mathematics, while on average there is parity in both middle- and high-income countries, parity is generally the norm in high-income countries, while situations vary in middle-income countries, ranging from disparity at the expense of girls in Latin American countries, such as Costa Rica, Guatemala and Paraguay, to disparity at the expense of boys in a range of countries, including Albania, Jamaica, the State of Palestine and the Philippines. Girls generally outperform boys in Arab countries. One significant factor contributing to this disparity is generally lower expectations of academic achievement for boys (UNESCO, 2022). Moreover, the high prevalence of single-sex schools in the region has been noted as conducive for learning (Almasri et al., 2023). Indeed, the composition of schools and classrooms can influence student achievement and learning outcomes (**Focus 12.1**).

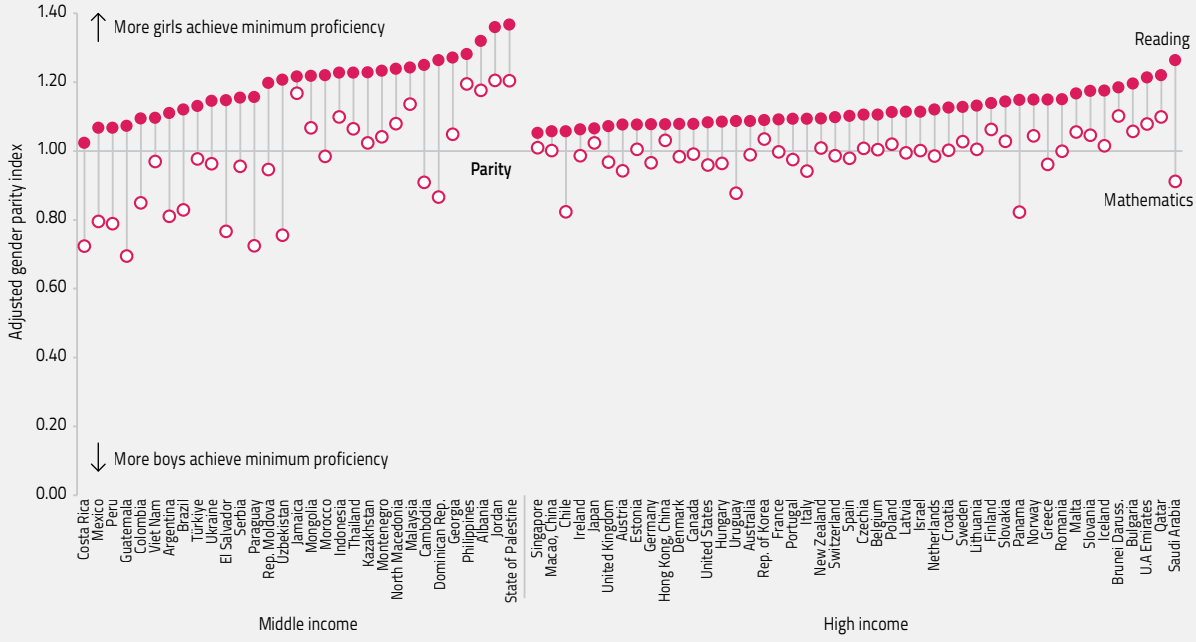
Socioeconomic status has a more significant impact on academic disparity than gender. In reading, only 54 students from the lowest quintile reach the minimum proficiency level for every 100 students from the highest quintile; in mathematics, the ratio is 47 to every 100 students. These gaps by wealth in mathematics are particularly pronounced in middle-income countries, where only 32 students from the bottom quintile reach the minimum proficiency level for every 100 students from the top quintile that do so. In contrast, in high-income countries, 55 of the poorest students achieve minimum proficiency for every 100 of their wealthiest peers (**Figure 12.4b**).

> “Socioeconomic status has a more significant impact on academic disparity than gender”

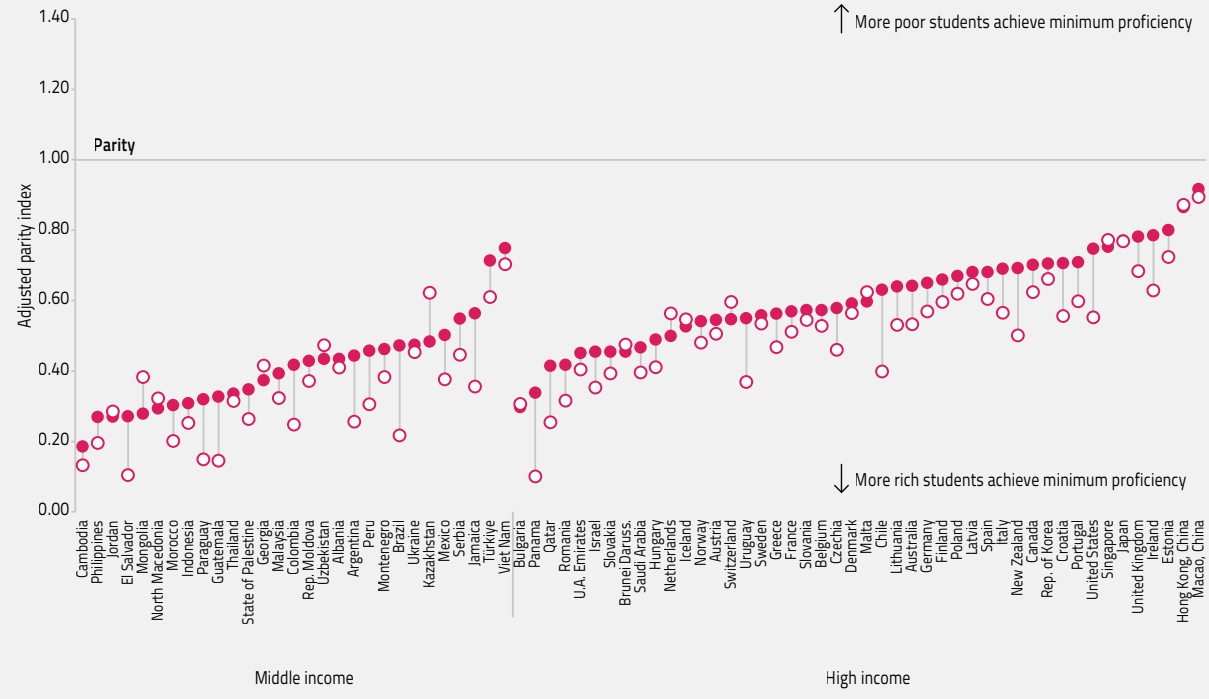
Disparities by wealth are particularly wide in literacy rates, including in low-income countries. In a sample of 30 low- and middle-income countries, there are 53 adult males from the poorest 20% of households that could read a simple sentence for every 100 males from the richest 20% of households who could do so. In the case of women , the ratio was 38 for every 100. In the Central African Republic, 37 adult males from the poorest 20% of households were literate for every 100 males from the richest 20% of households, while the ratio among women was just 5 for every 100. This is echoed in Benin, Burkina Faso, Chad, Côte d’Ivoire, Nigeria, Senegal and Sierra Leone, where no more than 15 females from the poorest quintile could read for every 100 of the richest women who could. A major challenge in these western African countries is that of linguistic diversity and language of instruction (**Box 12.1**).

FIGURE 12.4:
Gender differences in reading, which disadvantage boys, are more pronounced in middle-income countries than in higher-income countries
Adjusted gender parity index for 15-year-olds who reach minimum proficiency levels in mathematics and reading, 2022

a. Gender, girls vs boys



b. Wealth, poorest vs richest



GEM StatLink: https://bit.ly/GEM2024_fig12_4
Source: UIS data set based on the results of the 2022 PISA.

BOX 12.1:

There is a huge variety globally in the extent to which children are educated in their home language

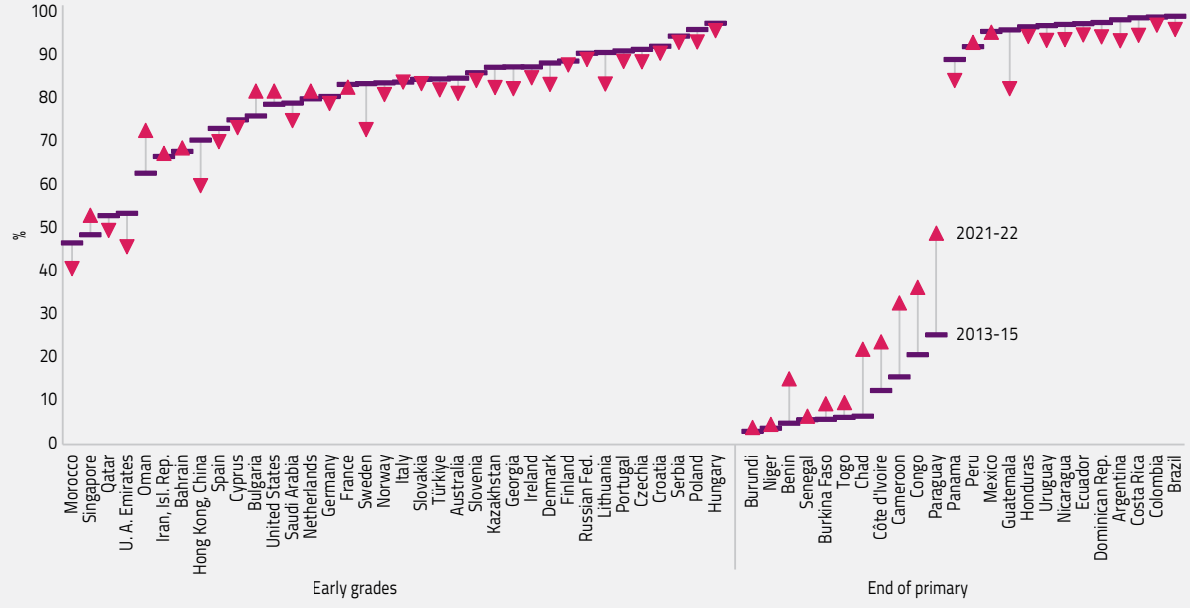
Creating inclusive classroom and school environments requires a strong connection with students' home environments. A key factor in this process is aligning the language of instruction with students' home language (Nag et al., 2019). This alignment is particularly vital in linguistically diverse regions such as sub-Saharan Africa, Southern Asia, South-eastern Asia and Oceania (UNESCO, 2024).

Teaching children in their home language during the early years is particularly beneficial for developing cognitive skills in numeracy and problem-solving. In recognition of the importance of this issue, SDG thematic indicator 4.5.2 monitors the percentage of students in early grades and at the end of primary school who have their first or home language as the language of instruction. These data mostly come from learning assessments. Most countries reporting data on the language of instruction in early grades are wealthy countries and are, therefore, not globally representative. Among those countries with data, the median percentage of children receiving instruction in their home language was 84% around 2015, with the number dropping slightly to 82% by around 2022, which probably reflects the impact of immigration (**Figure 12.5**). Sweden, which saw an 11-percentage-point drop, has had a significant influx of immigrants in recent years. While Sweden is often cited as an international model for developing early childhood programmes that accommodate diversity, there is scope to do more to pursue individualized language learning plans (Cerna et al., 2019).

FIGURE 12.5:

In recent years, there has been a slight decline in the proportion of early-grade students receiving instruction in their home language

Percentage of students whose first or home language is the language of instruction, 2013/15–2021/22



GEM StatLink: https://bit.ly/GEM2024_fig12_5
Source: UIS database.

Fewer countries report data at the end of primary education, and these are split largely between francophone African countries and Latin American countries, drawing on two regional assessments. Fewer than 20% of children in Africa are taught in their home language, compared more than 90% in most Latin American countries except Guatemala, Paraguay and Peru (World Bank, 2021). Sub-Saharan African countries including Cameroon, Chad, Congo and Côte d'Ivoire have shown the most significant increases in the percentage of students at the end of primary school receiving instruction in their home language. However, this may not reflect the success of introducing students' languages into the curriculum. Rather, continuing migration from rural to urban areas and intermarriage between different ethnic groups means that it is becoming more likely that children grow up speaking French.

FOCUS 12.1. PEERS AFFECT INDIVIDUAL EDUCATION OUTCOMES

Individual merit is an ideal at the core of educational achievement. However, achievement does not rely solely on a student's performance, but also on the characteristics and behaviour of the social group surrounding them. Students have little power to decide on the composition of their classrooms. However, the composition of social groups can have a major impact on student achievement, educational trajectories and other relevant outcomes. Education planners need to understand how the configuration of these social groups affects student outcomes and what actions can be taken to mitigate any detrimental impact.

The term 'peer effect' addresses the linkage between any given individual outcome and the characteristics and behaviours of others in that individual's reference group (Kline and Tamer, 2012). In education policy, peer effects refer to the extent to which learning or other relevant education outcomes are related to the student's classroom or school peers, family, or neighbourhood (Barrios-Fernandez, 2023). Peer effects might have an impact on academic performance (Sacerdote, 2011), educational trajectories (Bursztyn et al., 2019), socioemotional skills (Shure, 2021), and behavioural components such as misconduct and truancy (Bennett and Bergman, 2021) and adult crime (Eren et al., 2022).

Studies have shown that peer characteristics (e.g. ability, gender, immigration status, race and socioeconomic status) have an impact on students' academic achievement (Barrios-Fernandez, 2023). A study in the Netherlands showed an increase in students' scores for low- and medium-ability students allocated to tutorial groups with similar ability peers (Booij et al., 2017). Peer effects have also been identified in higher education levels (Barrios-Fernandez, 2023). A study of economic science faculties in Greece found that a high concentration of low-achieving students lowers the academic performance of both high- and low-achieving students (Genakos and Kyrkopoulou, 2023). Regarding non-academic outcomes, a study in El Salvador found that heterogenous peer groups help reduce school violence (Dinarte, 2024). A study in lower secondary schools in two provinces in China found that ability grouping reduced mathematics anxiety for high-performing students (Gupta et al., 2023).

It is important to note that peer effects are highly context-specific (Paloyo, 2020). A student's response to their peers' characteristics may vary by the type of characteristic. Peer effects may also vary by an individual's characteristics, such as gender and race (Patacchini et al., 2017). A study conducted among English secondary schools found that girls benefited more from being with academically advanced students than boys (Lavy et al., 2012). In the US state of Texas, it was found that in grades 5 and 7, a higher classroom concentration of Black students worsened the academic results of Black students but did not have an effect on the academic outcome of white students (Hanushek et al., 2009). Results are not conclusive for immigrant students, as some studies have suggested that a high concentration of immigrant students may impact negatively both immigrants and non-immigrants, while other studies have found no such effect or that it only affects immigrant students (OECD, 2023).

> "Peer effects are highly context-specific"

Peer effects may involve multiple grouping factors (e.g. by ability, gender, immigration status, race and socioeconomic status) affecting multiple outcomes (e.g. achievement, educational trajectories and truancy). Thus, despite the fact that peer effects have been widely studied, the size of the impact varies substantially depending on the context, outcomes, characteristics and behaviours measured (Barrios-Fernandez, 2023).

Despite the heterogeneity of these results, the general consensus is that peer effects do have an impact on student outcomes and that this is, therefore, a policy challenge. If peer effects have a positive impact on student outcomes, they could be incorporated into the policy design to amplify the impact of educational programmes. On the contrary, if peer effects are having a negative association with student outcomes, it is necessary to address them to disentangle inequalities of educational trajectories across different social groups (Barrios-Fernandez, 2023).

Thus, school policy mechanisms impacting student grouping and classroom concentration have a pivotal role in shaping this effect. The concentration can take shape in a vertical manner as students of the same age are assigned to different grade levels due mainly to grade repetition or differential access to pre-primary education. A horizontal concentration refers to students of different abilities, behaviour and interest being assigned to different schools, programmes or classes to better tailor instruction to their particular needs. The concentration and separation of students according to an observed characteristic, behaviour or ability carries the name 'segregation' when it takes place at the school level. When the same operation takes place between programmes (e.g. vocational and academic programmes), it is usually referred to as

'tracking', while concentration within the same class is labelled 'ability grouping' (OECD, 2023b).

The grouping and concentration of students by ability also implies the separation and concentration of students by other characteristics (e.g. socioeconomic, immigration status and gender). Indeed, evidence has shown that the more stratified a school system is, the more likely disadvantaged students are placed in the least academically orientated and demanding learning environments (OECD, 2023b).

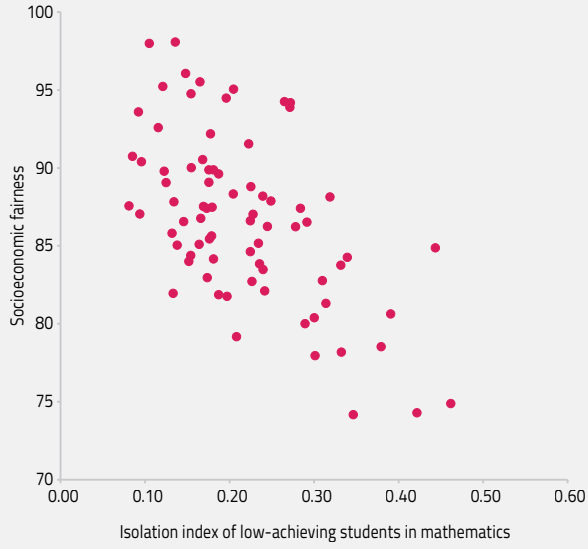
Analysis of the 2022 PISA data shows that student concentration and grouping does not seem to have a direct correlation with mean scores in mathematics, but it does correlate with overall socioeconomic fairness (i.e. the impact that socioeconomic factors have on achievement). There is a negative correlation between socioeconomic fairness and the 2022 PISA isolation index of low-achieving students, which measures the degree to which low-achieving students in mathematics are separated from other groups: the higher the value, the higher the degree of isolation. The higher the value of the isolation index, the lower the socioeconomic fairness and thus the stronger the association between student socioeconomic background and their achievement (**Figure 12.6**).

Many educational systems have grown more aware of the dangers that tracking might have for educational fairness and equality. New Zealand has shown consistently high levels of tracking in its educational system, which has had a negative effect on the educational trajectories for the Māori population. The Ministry of Education, along with the civil society organization Tokona te Raki, developed Kōkirihia, a plan to end tracking with three components: growing awareness, showcasing alternatives to tracking and asking organizations across the education sector to take action. One of the concrete measures taken was the integration of inclusive practices to the Core Practice Curriculum and the New Zealand Curriculum. The purpose is to develop an inclusive curriculum that will eliminate the need to separate students by ability. Since the implementation of these initiatives began, the percentage of 15-year-old students attending school where students are grouped by ability declined by 23 percentage points. The goal is for tracking to end by 2030 in the New Zealand education system (OECD, 2023b).

A survey in Swedish municipalities showed how school superintendents develop different strategies to counteract the negative effects of school segregation (Trumberg et al., 2024). One of these strategies consists of *reinforcements*, which is additional support for schools in disadvantaged areas. A second strategy consists of dispersal initiatives, which is dispersing students to different schools to create more heterogenous student bodies. In Sweden, concrete dispersal initiatives are the redrawing of catchment areas or busing students to other schools than those closest to them. Finally, a third albeit less common strategy is merging, where a municipality closes two or more schools and creates a new one to ensure a more heterogenous student composition.

Will all types of student groupings or concentrations inevitably present negative and unequal outcomes? Not necessarily, since it is also important to take into consideration just how effective the quality of the classes is. Grouping students with the same level of abilities should allow teachers to tailor the instruction to their needs and potentially benefit low-achieving students. A study among 121 primary schools in Kenya found that, even though all students benefited from high-achieving

FIGURE 12.6:
Socioeconomic background has a higher influence in schools with high concentrations of low-achieving students
Isolation index of low-achieving students and socioeconomic fairness, 2022



Note: The isolation index measures the extent to which a group of students (e.g. disadvantaged) is isolated from all other students (e.g. not disadvantaged) based on the schools they attend. It ranges from 0 (full exposure to other groups) to 1 (full isolation). Socioeconomic fairness in learning is measured by the share of variation in student performance that is not accounted for by differences in students' socioeconomic status. A higher percentage indicates more fairness.
GEM StatLink: https://bit.ly/GEM2024_fig12_6
Source: OECD (2023b).

peers, tracking benefited low-achieving pupils by allowing teachers to teach at their level (Duflo et al., 2011).

The mechanisms of peer effects and their relationship with teaching effectiveness merit attention (Barrios-Fernandez, 2023). It is also important to acknowledge that the causes of stratification, segregation and concentration might be structural. Income inequality, residential segregation, long-standing school policies on choice and selection, and the size of the private school sector can underpin student allocation and concentration as structural forces. Thus, policymakers will need to be much more radical on policy recommendations in this area (Gutiérrez et al., 2020) to promote equity and more.

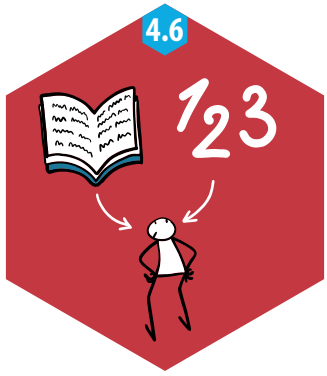
Every year in China, millions of rural residents migrate to cities for work. Most of them lack the skills needed to make a decent living. Chongqing, China.

Credit: Li Wenyong / World Bank*

KEY MESSAGES

- Available data clearly show progress over time, with higher literacy rates among the younger generation worldwide. In Mozambique, where data for all age groups come from the Household Budget Survey, the literacy rate of the adult population (56%) is nearly double that of the elderly population (29%).
- Disparities across gender, income and location are closing as literacy rates rise. In Nepal, only 24 elderly women are literate for every 100 elderly men. The figure is 73 for those aged 25 to 64 and has reached parity among those aged 15 to 24.
- Yet pockets of disadvantage remain even in countries with overall high levels of literacy. In Peru, while 95% of adults are literate, only 78% of women are in rural areas.
- Family literacy programmes involving children and their parents within homes and communities are as relevant as ever and can have multiple benefits. Programmes can target immigrant families with language support or groups such as women or mothers with specific needs.
- Effective family literacy programmes need to address distinct design and implementation issues, such as motivating participation, resourcing and ensuring relevance of content. In Ethiopia, e-books were created for multilingual rural areas to promote reading among families through community libraries with librarians facilitating take-home tasks.

CHAPTER 13



TARGET 4.6

Youth and adult literacy

By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve 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*

SDG target 4.6 calls for the achievement of literacy and numeracy among youth and adults. Global indicator 4.6.1 monitors the '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'. This indicator reflects the evolving understanding that literacy and numeracy skills should be measured along a continuum that recognizes multiple levels of proficiency. Monitoring this indicator is challenging and costly, as it requires direct skills assessment surveys of the population. The main source of data for this indicator has been the Programme for International Assessment of Adult Skills (PIAAC) survey, which covered 39 high-income and upper-middle-income countries between 2011 and 2017. The collection of data for a new cycle took place in 2022–23 for 31 countries. But even with the latest data, which will be released in December 2024, coverage will remain low; this is what triggered the request for the replacement of the indicator at the 2025 Comprehensive Review of the SDG monitoring framework.

The only alternative for replacing global indicator 4.6.1 is thematic indicator 4.6.2, the youth and adult literacy rate, which has considerably higher coverage and an established data collection process. Literacy in this indicator is defined as 'the ability to read and write, with understanding, a short, simple sentence about one's everyday life', a definition that emphasizes 'basic literacy, focusing on two core skills: reading and writing' (UNESCO, 2024). Literacy monitoring reverts to the traditional binary distinction of literate vs non-literate and drops the numeracy domain.

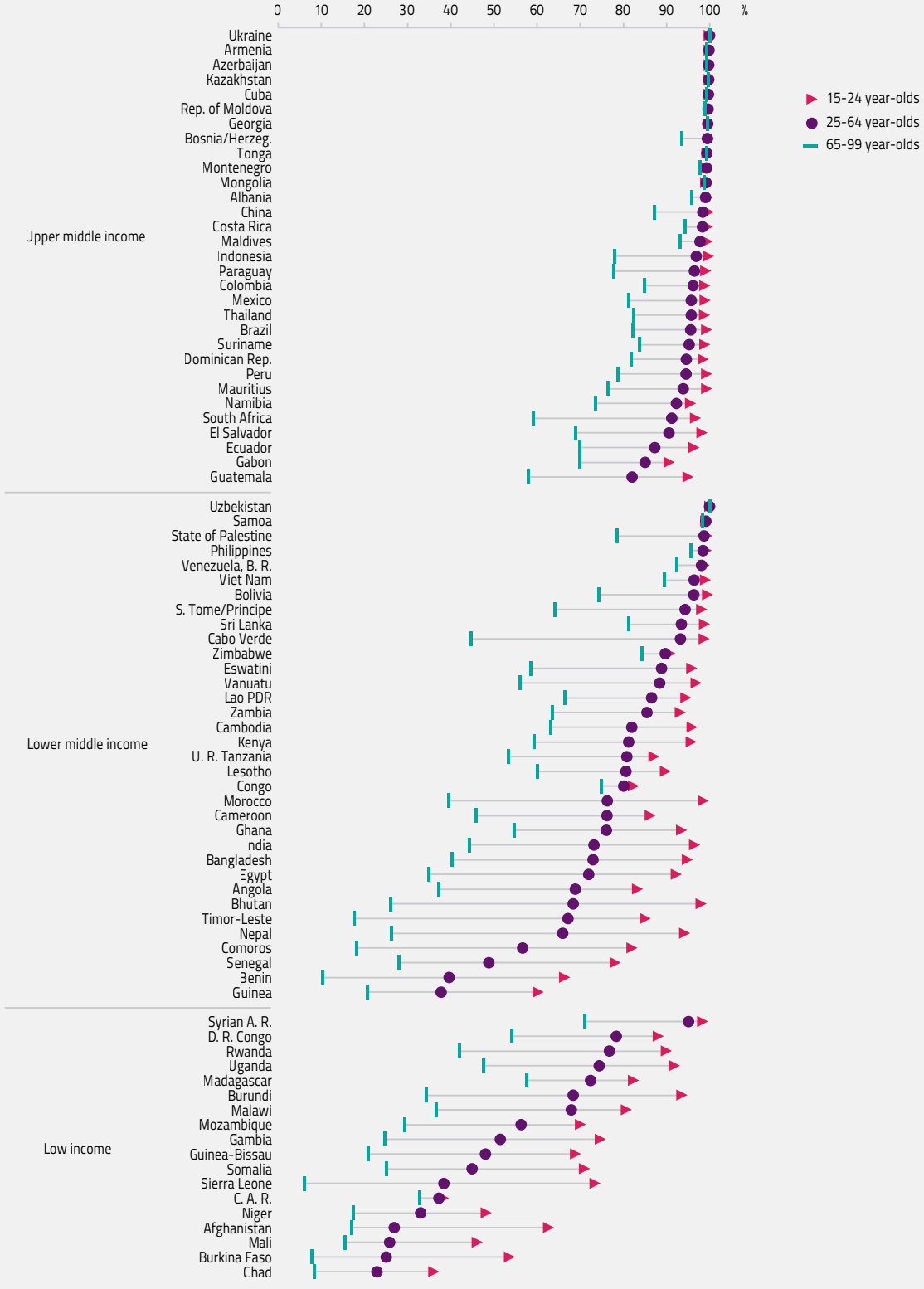
The UIS collects data from several sources to report on indicator 4.6.2, including population censuses, household surveys and labour force surveys. Although typically collected through self-declaration or household declaration (e.g. Are you literate? Are you able to read and write a simple sentence?), some surveys like the Demographic and Health Surveys and the Multiple Indicators Cluster Surveys have included simple direct assessments that ask respondents to read and write a simple sentence. Data from these sources are reported in their respective reference year, but also used to estimate literacy rates in other years using the Global Age-specific Literacy Projections model. To project literacy rates, this model uses age- and sex-specific patterns and the assumption that literacy remains stable after age 15 (Lutz and Scherbov, 2006).

Comparability across these different sources is limited for several reasons. First, literacy rates based on assessments are likely to be lower than those based on self-declaration. Second, literacy assessments from national surveys have different degrees of difficulty. For example, in the Democratic Republic of the Congo, respondents are asked to read a small text and write just one letter; in Cambodia, they must read and write a simple message. Moreover, some surveys allow respondents to read or write in any language while others impose a single language. Finally, there are differences in how self-declaration surveys approach the relationship between schooling and literacy. In Chile, the national survey considers the population with at least two years of schooling as literate. In Eritrea, the threshold is completion of grade 4 while in Peru it is completion of primary education (UIS, 2021).

Nevertheless, these disparate data highlight some clear patterns. Literacy rates have progressed over the past decades through generational shifts. In countries at all income levels, younger people enjoy considerably higher literacy rates than older generations (**Figure 13.1**). As the younger, more educated population grows older, adult literacy rates also improve. Low- and lower-middle income countries display the greatest difference in literacy rates across generations, reflecting sharply increasing trends in education participation. In India and Somalia, where data come from national household or labour force surveys, the difference in literacy rates between the younger (aged 15 to 24) and the older (65 or above) cohorts is above 45 percentage points. In Mozambique, where data for all age groups come from the Household Budget Survey, the literacy rate of the adult population (56%) is nearly double that of the elderly population (29%).

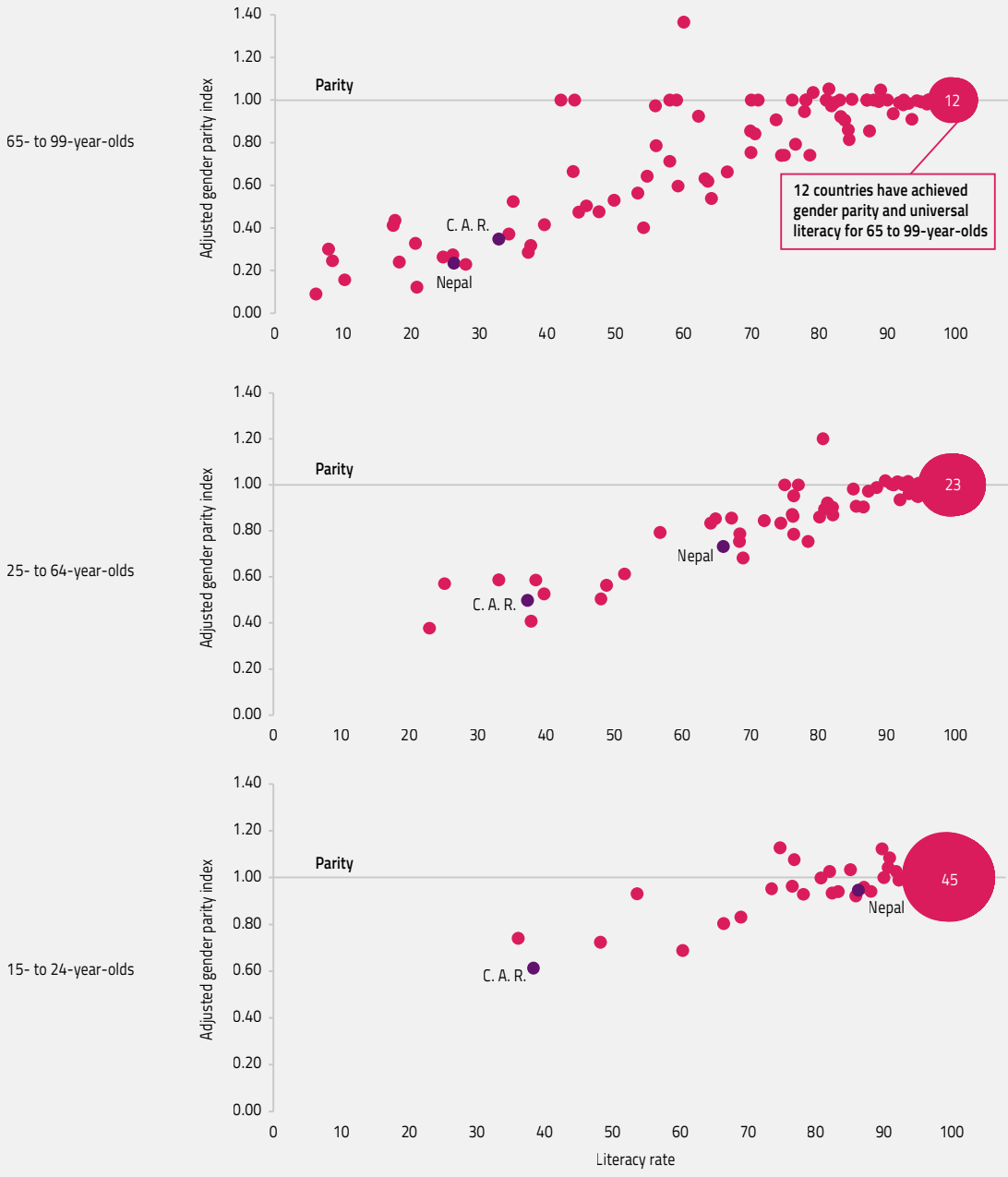
As many countries achieve close to universal literacy for the young population, disparities across gender, income and location disappear. In the same way, most countries only achieve parity after reaching very high levels of literacy (**Figure 13.2**). In Nepal, only 24 elderly women are literate for every 100 elderly men, while there are 73 literate adult women aged 25 to 64 for every 100 adult men and 98 literate young women aged 15 to 24 for every 100 young men, which means that parity has been achieved. Nevertheless, among countries where literacy is not yet universal, wide disparities remain. In the Central African Republic, where the adult literacy rate is only 38%, the gender gap in literacy remains very wide even among the youngest cohort: only about 61 young women are literate for every 100 young men. A similar pattern is observed for the gap between rural and urban populations. In Cambodia, the literacy rate of elders in rural areas is only half of that in urban areas. The gap is considerably lower for adults (0.79) and there is nearly no difference among the younger cohort (0.96).

FIGURE 13.1:
Literacy rates have increased in two generations
Literacy rate, by age group, 2020–23



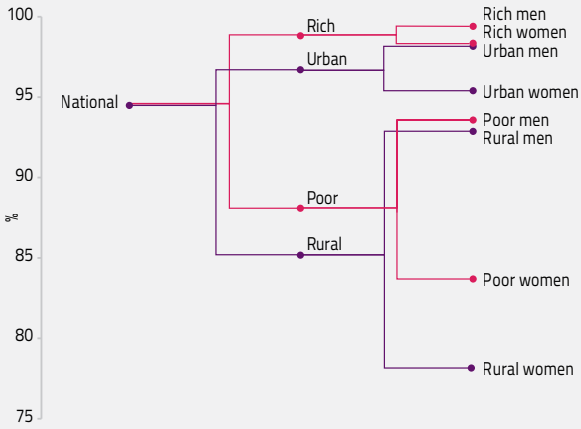
GEM StatLink: https://bit.ly/GEM2024_fig13_1
Source: UIS database.

FIGURE 13.2:
Gender disparities disappear at high literacy rate levels
Literacy rate and gender parity index, by age group, 2020–23



Note: Countries are considered to have achieved gender parity if the parity index is between 0.97 and 1.03.
GEM StatLink: https://bit.ly/GEM2024_fig13_2
Source: UIS database.

FIGURE 13.3:
In Peru, wide disparities remain despite overall high levels of literacy
Adult literacy rate, by wealth quintile, location and gender, Peru, 2022



Note: Adults are defined as those aged 25 to 64.
GEM StatLink: https://bit.ly/GEM2024_fig13_3
Source: UIS database, based on the National Household Survey on Living Conditions and Poverty.

> Pockets of disadvantaged groups with low literacy rates can be found even in countries with overall high levels of literacy

Pockets of disadvantaged groups with low literacy rates can be found even in countries with overall high levels of literacy. In Peru, for example, according to a national household survey, 95% of adults are literate, but the share is considerably lower for some groups. Only 78% of women in rural areas and 84% of women from the poorest wealth quintile are literate. Gender gaps are not significantly pronounced among urban and rich households but become wide among disadvantaged adults, reaching nearly 15 percentage points in rural areas (**Figure 13.3**). The gap in literacy between populations of different socioeconomic backgrounds was even wider in the more detailed direct assessment of adult literacy proficiency conducted through the PIAAC survey. Overall, only 29% of adults in Peru achieved the minimum proficiency level of literacy in PIAAC, with the share ranging from 17% among those whose parents had not attained upper secondary education to 57% among those with at least one tertiary-educated parent (OECD, 2019).

> Governments often rely on non-governmental organizations and civil society organizations to deliver adult literacy programmes

Improving the literacy skills of those who have already left the formal education system is challenging (**Focus 13.1**). Target 4.6 recognized the importance of this undertaking through thematic indicator 4.6.3, the 'participation rate of illiterate youth/adults in literacy programmes', which was dropped from the monitoring framework in 2023 due to a lack of data availability. Literacy trend data show that literacy programmes rarely reach the scale required to have a visible impact at the population level. Governments often rely on non-governmental organizations and civil society organizations to deliver adult literacy programmes, which are often small and very localized. Morocco, for example, contracted 1,200 non-governmental organizations to work in collaboration with local leaders to identify community needs and provide literacy instruction. In some countries, literacy programmes are delivered by faith-based institutions. In Afghanistan, religious organizations have the longest tradition of adult literacy provision, with many mosques engaged in education (UNESCO, 2023).

FOCUS 13.1. FAMILY LITERACY PROGRAMMES ARE AS RELEVANT AS EVER

Programmes that use intergenerational approaches to literacy and learning emerged in the 1980s.[1] The term 'family literacy' was coined to describe literacy learning activities involving children and their parents within homes and communities. The 1994 World Symposium on Family Literacy, organized by UNESCO, emphasized that adult literacy should be enhanced to enable parents to be more involved in their children's educational experiences (UNESCO, 1995). As there is a great diversity of programme objectives, settings, target group emphasis and design, it is at times difficult to distinguish family literacy and learning programmes from parent training (or support) programmes, which educate parents to develop or improve skills that will help them to address child behavioural issues and foster desirable parent–child relationships (**Chapter 9**).

1 This section is based on Hanemann (2024).

Most family literacy programmes provide services to both adults and children, together and/or separately ('whole family' approach), to tackle literacy and other educational challenges that disadvantaged families and communities face. Typically, they aim to improve children's literacy skills by increasing the ability of parents and caregivers to support their children's learning. However, a small number of programmes, such as the Family Literacy Programme in Nepal and Integral Family Literacy in Guatemala, encourage school children to assist their parents (mainly mothers) with literacy learning at home.

These programmes are generally designed with multiple components which are integrated. They can include separate activities for children and for adults, as well as joint activities for children and adults. For example, participants may be guided in an adult literacy programme by the facilitator to prepare a joint play-based reading activity with their children. However, running integrated programmes with multiple components is complex and costly, and requires much coordination between different service providers, institutions and teams. As a result, children's early literacy development has become more central in recent years while adult literacy has been disappearing and the parents' role is being reduced to supporting their children's development and education (Hanemann, 2019).

> "The desire to help their children with school readiness and academic achievement very often motivates parents with low levels of literacy and education to engage and persist in learning"

The desire to help their children with school readiness and academic achievement very often motivates parents with low levels of literacy and education to engage and persist in learning (Windisch 2015). Learning together as a family is a practice rooted in all cultures. The added value of an intergenerational approach to learning is that it ensures that family members are involved in one another's learning activities. Successful joint learning activities create an environment of mutual encouragement and aspiration that can have a long-term positive impact on the culture, habits, motivation, attitudes and patterns of learning (Cara and Brooks, 2012).

A synthesis of meta-analyses concluded that average programme effects are generally positive (van Steensel et al., 2012), albeit small. But conclusions differ for families of low socioeconomic status. Most studies have focused on children's literacy (e.g. Fikrat-Wevers et al., 2021; National Adult Literacy Agency, 2016), with hardly any evidence from studies on wider family learning. Parents participating in 27 school-based family literacy programmes in England, United Kingdom, were able to make changes in and to the home setting by being able to translate and transfer the schools' ways of teaching literacy into the home and beyond. The reading experience had become more relaxed, more pleasurable and more meaningful for both parent and child (Swain and Cara, 2019). Analysis of the impact of the German Family Literacy programme indicated that parents of children in the programme's schools felt more involved in their children's learning and were offered more opportunities to take part in school activities (Rabkin et al., 2018).

There are very few studies outside Europe and Northern America (e.g. Lyu et al., 2021; Nshimbi and Serpell, 2023). In Chile, a study of more than 700 adults from low-income families examined the development of children's reading interest (as reported by their parents) and parents' literacy practices. The results suggested that interventions designed to improve the home literacy environment could be successful by improving parents' perceptions of children's reading interest rather than seeking only to directly change parents' practices (Pezoa et al., 2019).

Many examples of programmes using an intergenerational approach to literacy learning are located in the Global North, often with a strong emphasis on family involvement in schools and with a focus on (preschool) children's early literacy development (e.g. Help My Kid Learn in Ireland, the Parent Empowerment for Family Literacy Project in Romania and the Briya Family Literacy Programme in the United States). Related programmes in the Global South include We Love Reading in Jordan, the Family Literacy Programme in Mexico, the Family Literacy Programme in Namibia and Hametin Família (Strengthening Families) in Timor-Leste.

Several programmes target immigrant families to assist their children with language and literacy acquisition (e.g. the Family Literacy Project in Hamburg, Germany, and the FLAME project in Chicago, United States). Some of them (e.g. Reading Together in Australia, VorleesExpress in the Netherlands and Tell Me a Story in Switzerland) work through book sharing and promoting early reading while building on existing narrative cultural practices from immigrant families.

Some programmes use bilingual or multilingual approaches based on the mother tongue (e.g. the Ħilti Family Literacy Programme in Malta and the Family Learning Programme in Mozambique), emphasizing the cultural rights of ethnic minorities or indigenous peoples (e.g. the Manukau Family Literacy Project in New Zealand and Family Literacy Programmes, Training, and Services in Canada).

Other programmes work with specific target groups such as women or mothers (e.g. the Mother Support Programme in Türkiye and the Intergenerational and Family Literacy Programme in Egypt), imprisoned mothers (e.g. the Reading and Writing in Unit 33 initiative of the University of La Plata in Argentina) and grandparents (e.g. My Grandparents' Stories, My Pictures in Nepal and Promoting Digital Literacy through Intergenerational Learning in Rural Areas in China).

Programmes also respond to adults' literacy and education needs by integrating an adult education component into their programme model, linking up with other adult literacy and basic education programmes, or by becoming part of a comprehensive family service package (e.g. the Family Literacy Project in KwaZulu-Natal, South Africa and the Clare Family Learning Project in Ireland). In Liberia, after a child literacy programme had been implemented for two years, a survey showed that more than half of parents wanted literacy classes, which led to the development and implementation of the Family Literacy Initiative Adult Literacy Programme (Manswell Butty et al., 2024).

In general, these programmes are small. The Canadian Centre for Family Literacy focuses on province of Alberta but is also working through nationwide collaborations, covering almost 2,500 adults and children, who participated in 69 programmes in 2023. In 2021, the Ugandan Family Basic Education programmes in 4 districts in the Northern region covered 2,700 preschool children, 3,600 primary school children, and 1,400 youth and adults.

The **Clare Family Learning Project** in Ireland began in 1994 when parents attending literacy classes requested help with their children's homework. As courses were piloted and research was carried out, more resources were developed, including the publication of *Family Learning in Action* in 2010 with 20 course outlines. Since 2014, Clare Family Learning is part of and delivered by the local public education and training authority. In 2023, the project served 600 participants with about 100 courses, ranging from computer skills to family health and learning Irish. Depending on the type of course – standard, accredited or intensive – courses run on a weekly basis for 2 to 3 hours for a total duration of 6 to 10 weeks, and even up to 20 weeks. The priority target group are parents and carers who have left school at upper secondary education certificate level or before. The courses take place in schools, community centres, libraries and adult education centres.

The **Family Literacy Project** in KwaZulu-Natal province, South Africa was set up in 2000 to help young rural children learn to love reading and writing by strengthening the support that families provided in the development of early literacy skills. It currently works in 15 villages, serving about 1,800 children under age 5, 2,500 children in early primary grades, 250 teenagers and up to 100 adult learners. The project is also running seven community libraries and box libraries. Family literacy groups meet twice a week to improve language and literacy skills and discuss issues relating to their development and well-being, a methodology inspired by the Freirean approach which respects what people know and can do and encourages discussion. Many group members are part of the home-visiting programme and visit families with young children, acting as community support.

Tostan, a non-governmental organization established in 1991 in Senegal, targets adults and adolescents, primarily in rural areas, who have had little or no access to formal schooling. Its Community Empowerment Programme is carried out over a 30-month period and contains both a structured curriculum and a set of practical applications to reinforce the sessions. While originally focused on women and girls, it now offers intergenerational learning with a whole-community approach in five more countries: the Gambia, Guinea, Guinea-Bissau, Mali and Nigeria. Each community runs 2 classes of 25 to 30 participants, one for adults and one for adolescents, that meet 3 times per week. The provision of literacy and numeracy skills, including mobile phone skills, aims to empower communities to identify and solve problems relevant to them. The programme has two phases. The first phase (social empowerment element) is called the Kobi (Prepare the Field for Planting) and information is shared orally. The second phase (literacy and economic empowerment element) is called the Aawde (Plant the Seed) and consists of literacy lessons and project management training.

Effective family literacy programmes need to address distinct **design** and implementation issues. The four-component programme design developed by the National Center for Family Literacy in the United States has been described as 'the most well-known comprehensive family literacy model' (Prins et al., 2020, p. 206). It consists of adult education (supporting parents to achieve their own goals), children's education, parent and child together time (where adults join children in their educational setting and learn alongside them), and parent time (where facilitators prepare parents to engage in activities with their children) (NCFL, 2023). Over the years, a broad range of different approaches to family literacy programmes have developed, including courses which provide parents with ideas of literacy activities they can carry out at home together with their children; family eLearning clubs where adults and children learn to use computers thereby engaging them in family literacy; and practical and creative activities such as cooking, arts and craft, drama, and video production, with related or embedded literacy and numeracy learning (Elfert and Hanemann, 2011).

> "Effective family literacy programmes consist of adult education, children's education, parent and child together time and parent time"

Finally, family literacy programmes have three common **implementation** challenges, for which corresponding promising strategies have been developed to tackle them. First, it is important to motivate adult learners to engage in family literacy programmes and ensure their regular participation, notably through 'hook' strategies that can attract and retain them, such as income-generating or game-based activities and computer courses. Provision of childcare services, well-prepared teaching staff and progression routes to further learning and training for interested participants have also been proposed (Windisch, 2019).

Second, adequate funding needs to be guaranteed to ensure programme sustainability. This is complicated as these programmes cross the traditional boundaries of education funding. A positive example of a long-standing experience with intergenerational programmes can be found in Türkiye, where the Mother-Child Education Programme, which started as a university research project in 1982, developed into the non-governmental Mother Child Education Foundation, or AÇEV, in 1993; family literacy eventually became state policy in 2009.

Third, the quality of the learning environment and the relevance of content need to be ensured. The use and creation of e-books in the eBooks and Family Literacy Programme run by CODE-Ethiopia is a promising approach to address the lack of reading materials in multilingual rural areas. Local writers and illustrators were contracted to develop the e-books. These digital versions of books can be accessed online, offline or in print form. The programme aims to promote reading among families in rural Ethiopia working through community libraries with librarians as facilitators. During a typical session, the librarian might read an e-book aloud to participants and incorporate activities that parents can use when reading with their children at home. At the end of each session, the librarian gives the families a printed copy of the book and asks them to complete a task at home before the following session. The intergenerational approach has helped fulfil the aim of community libraries to be a shared space where people can gather, learn together and develop networks to improve their personal lives and strengthen the community (Hanemann and Krolak, 2017).

Looking forward, family literacy policies should involve a long-term approach to changing cultures of learning, particularly among disadvantaged families and communities; be comprehensive and well-resourced to allow for sustainability; work towards greater inclusion and thereby closing social, gender, ethnic and digital gaps; promote partnership and collaboration by reaching across departments, ministries and institutions; and use a lifelong learning perspective to motivate disadvantaged learners to engage and remain engaged in literacy learning.

A group of students using polybags from waste and fill them with field soil to grow the saplings for school nursery during environmental activities session at ZP school, Taps colony in Phalghar district of Maharashtra, India.

Credit: © UNICEF/UN0828751/UNICEF India*

KEY MESSAGES

- A new indicator measures the prevalence of green content in national curriculum frameworks and science and social science syllabi in grades 3, 6 and 9. Syllabi have more green content in grade 9 than in grade 3 and in science rather than in social science subjects. There is no consistent correlation between a country's wealth or vulnerability to climate change and the emphasis of its curriculum on green issues.
- Providing age-appropriate comprehensive sexuality education is five times more likely to be successful in preventing unintended pregnancies and sexually transmitted infections than none at all.
- One third of countries with data report that all schools provide life skills–based HIV and sexuality education, but one tenth of countries do not provide it at all. The subject is more likely to feature in secondary than in primary education.
- Civic education programmes must address two particular challenges. First, by one global estimate, voter turnout in presidential and legislative elections has fallen from 77% in the 1960s to 67% after 2010 despite growing levels of education. Second, there are gender gaps in political aspirations – risking democracies not being representative – with girls less likely to run for political office.
- Girls often grow up convinced that political leadership is predominantly a male activity. In the United States, in an experiment in which children were asked to draw a political leader, the likelihood that girls would draw a man increased with age, from 47% among 6-year-olds to 75% among 12-year-olds, while the percentage of boys who drew a man was stable at just above 70% at both ages.

CHAPTER 14

TARGET 4.7

Sustainable development and global citizenship

By 2030, ensure that all learners acquire the 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

GLOBAL INDICATOR

4.7.1 – *Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed 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 students in the final grade of lower secondary education showing proficiency in knowledge of environmental science and geoscience*

4.7.6 - *Extent to which national education policies and education sector plans recognize a breadth of skills that needs to be enhanced in national education systems*

SDG target 4.7 describes what children and young people need to learn in a constantly changing and complex global context. It embraces the social, humanistic and moral purposes of an education that promote human rights, gender equality, peace and non-violence, global citizenship, and cultural diversity and culture's contribution to sustainable development. The downside of this ambitious target is that is it very difficult to monitor progress.

The current monitoring process relies on a self-reporting mechanism: the consultation on the implementation of UNESCO's 1974 Recommendation concerning Education for International Understanding, Cooperation and Peace and Education relating to Human Rights and Fundamental Freedoms. SDG global indicator 4.7.1 measures how well global citizenship education and education for sustainable development are integrated into four domains: national education policies, curricula, teacher education and student assessment. For each domain, the inclusion of eight themes (cultural diversity and tolerance, gender equality, human rights, peace and non-violence, climate change, environmental sustainability, human survival and well-being, and sustainable consumption and production) was evaluated on a scale from 0 to 1. According to the latest available consultation, which covers 2017 to 2020, most countries reported a score above 0.8 in each domain, meaning that at least six of the eight themes were mainstreamed into each domain.

As part of the revision of the Recommendation in 2023 (UNESCO, 2023a), it is intended to update the reporting process and improve data quality, coverage and availability. But so far there has been no change in data collection. Assessing progress is challenging. It is imperative to develop and adopt a more objective measurement of countries' efforts to improve education for sustainable development and global citizenship education.

GREENING EDUCATION

In the absence of clear indicators to help policy makers and the general public understand countries' progress in climate change education, UNESCO initiated a series of curriculum document analyses (UNESCO, 2021a, 2021b, 2022). The *Global Education Monitoring Report* team, the Monitoring and Evaluating Climate Communication and Education (MECCE) project, and UNESCO have collaborated to analyse the prevalence of green content in national curriculum frameworks and the syllabi of science and social science subjects in grades 3, 6 and 9. Some 35 keywords covering 3 topics (environment and sustainability, climate change, and biodiversity) were counted in nearly 1,500 curriculum documents from a globally representative sample of 76 countries and in 30 languages.

> References to green content in the curriculum are more common in grade 9 than in grade 3 and in science than in social sciences

The proportion of countries not referring at all to green content decreases ascending the grades. For instance, 34% of countries did not include green concepts in their grade 3 social science syllabi, compared to 21% in grade 6 and 16% in grade 9 (**Figure 14.1a**). When looking at a standardized measure of references[1] to green content, it is more common to find such references in the syllabi than in the national curriculum framework. The measure is higher in higher grades and higher in science than in social sciences (**Figure 14.1b**). The Plurinational State of Bolivia, Mauritius and the Republic of Korea in grade 6 and the Marshall Islands, Mauritius and Switzerland in grade 9 have the highest density of green content references in their syllabi.

Enriching the curriculum analysis with macro-level factors to group countries sharing similar characteristics did not reveal any significant patterns. Richer countries' curricula are not consistently greener than those of lower income counties. Moreover, countries which are deemed the most vulnerable to the effects of climate change according to the Notre Dame Climate Vulnerability Index (University of Notre Dame, 2024) and could be expected to be more sensitive to the issue do not necessarily include more green content in their syllabi (MECCE, 2024).

To make the curriculum analysis easier to interpret, the GEM Report, the MECCE project and UNESCO have aggregated these various measurements into a single indicator, which synthesizes information across different types of documents (national curriculum frameworks and syllabi), knowledge domains (science and social sciences), topic areas (environment and sustainability, climate

1 The number of references to environment and sustainability climate change, and biodiversity was standardized according to the following formula, as used in previous studies: total references to 'green' keywords divided by the total words in the document(s) multiplied by 1,000,000. This can be interpreted as the number of green references per million words.

FIGURE 14.1:
Syllabi are more likely to include green content in lower secondary than in primary education

a. Share of countries which do not include any green content, by document type, grade and domain

b. Number of standardized references to green content, by document type, grade and domain

GEM StatLink: https://bit.ly/GEM2024_fig14_1
Source: GEM Report, MECCE project and UNESCO database.

change, and biodiversity) and grades (3, 6 and 9).[2] This indicator was developed following an SDG 4 High-level Steering Committee decision in December 2022 to design a benchmark indicator on greening education, one of the areas prioritized at the Transforming Education Summit. It was adopted as SDG thematic indicator 4.7.3 in 2024.

Constructed along a scale from 0 to 100, the greening education indicator is meant to be easily interpreted to help countries identify whether they need to accelerate their efforts. Among the 76 countries with sufficient data to compute the indicator, only 19 (25%) reached the value of 50 on the indicator scale, a tentative benchmark suggested for the greening education process. This group of countries is heterogenous, with countries from all continents and income levels, such as Australia, Estonia and the United Kingdom (high income); Cameroon, Costa Rica and Papua New Guinea (middle income); and South Sudan (low income), suggesting that an emphasis on greening curricula can take place in very different contexts.

Countries willing to mainstream green content in education can further delve into the various components of the indicator to identify where they can improve. For each domain, grade and document type, the measure of density indicates countries' references to each of the three topics. For example, Lithuania, the Philippines and Peru are ranked in the bottom, middle and top third of the greening education indicator distribution, respectively. While Lithuania needs to increase the density and diversity of green content across grades and learning domains, the Philippines should increase references to the climate change and biodiversity domains, while Peru could focus on increasing references to climate change (**Table 14.1**).

2 For each country, references to the three keyword clusters (environment and sustainability, climate change, and biodiversity) in seven document types (the national curriculum framework and science and social science syllabi at grades 3, 6 and 9) are counted and standardized. Following a logarithmic transformation, the resulting scores are weighted: 25% for the national curriculum framework and 12.5% for each learning domain per grade (in other words 25% per grade). Within each document type, the environment and sustainability keyword cluster is weighted by 70%, and the climate change and biodiversity keyword clusters are weighted by 15% each. The maximum total score possible for a country after applying the weights is 100.

EARTH SCIENCE

SDG target 4.7 includes thematic indicators that aim to enrich reporting and ensure a well-rounded approach to the development agenda. Indicator 4.7.5 measures the percentage of students at the end of lower secondary education who achieve minimum proficiency in knowledge of environmental science and geoscience. It aims to monitor if students have a basic scientific understanding of environmental issues.

As part of its science assessment, the Trends in International Mathematics and Science Study (TIMSS) evaluates grade 8 students' proficiency in earth science. The 2019 TIMSS Science Framework specifies that the assessment covers the earth's structure and physical features and the earth's resources, their use and conservation (Mullis and Martin, 2017). The share of grade 8 students achieving the minimum proficiency level in the TIMSS earth science assessment can therefore be a proxy for SDG indicator 4.7.5. New data will only be available in early 2025.

According to the 2019 survey, 85% of grade 8 students from mostly upper-middle- and high-income countries achieved the minimum proficiency level in earth science. Yet in 13 of the 36 education systems, more than 25% of students had not mastered basic earth science knowledge. In the Arab States, including Bahrain, Jordan and Oman, more girls than boys are proficient in earth science (Mullis et al., 2020; OECD, 2023). In two countries, Chile and Hungary, boys are more likely than girls to acquire earth science knowledge (**Figure 14.2**), and to score higher than girls in mathematics and science in grade 8 (Mullis et al., 2020).

TABLE 14.1:
Density of greening keywords, by domain, area and grade, selected countries, 2023

	Grade 3		Grade 6		Grade 9		National curriculum framework
	Science	Social sciences	Science	Social sciences	Science	Social sciences	
a. Lithuania							
Environment	0%	0%	59%	51%	57%	33%	0%
Climate	0%	0%	0%	0%	0%	27%	0%
Biodiversity	0%	0%	0%	0%	0%	0%	0%
b. Philippines							
Environment	62%	73%	74%	73%	70%	67%	0%
Climate	0%	0%	0%	0%	58%	0%	0%
Biodiversity	48%	0%	50%	0%	51%	0%	0%
c. Peru							
Environment	74%	61%	78%	60%	78%	71%	66%
Climate	0%	0%	0%	0%	0%	65%	52%
Biodiversity	71%	0%	70%	0%	78%	49%	51%

Source: GEM Report, MECCE project and UNESCO database.

> Gender stereotypes transmitted at home and school can undermine girls' self-belief in terms of their science aptitude and curb girls' and women's aspirations in science

Gender stereotypes transmitted at home and school (Kibirige et al., 2022; Lavy and Megalokonomou, 2019; Lavy and Sand, 2018; Xie and Liu, 2023) can undermine girls' self-belief in terms of their science aptitude and curb girls' and women's aspirations in science, technology, engineering and mathematics (STEM) (Sheldrake, 2016).

As women are still severely under-represented among STEM graduates and in STEM jobs (UNESCO, 2024), tackling the gender divide in science is crucial.

HIV AND SEXUALITY EDUCATION

Providing age-appropriate comprehensive sexuality education (CSE) has a strong positive impact. It increases young people's knowledge and improves their attitudes related to sexual and reproductive health and behaviours, and compared to programmes that promote abstinence as the only option, CSE is five times more likely to be successful in preventing unintended pregnancies and sexually transmitted infections (UNESCO, 2023a). Countries are encouraged to invest in CSE at every level

FIGURE 14.2:
A large majority of students achieve the minimum proficiency level in earth science
Percentage of grade 8 students reaching minimum proficiency level in earth science, 2019

GEM StatLink: https://bit.ly/GEM2024_fig14_2
Source: TIMSS database.

of education, following the *UN International Technical Guidance on Sexuality Education* to equip children from age 5 and young people with the knowledge, skills, attitudes and values that will empower them to realize their health, develop respectful social and sexual relationships, and consider how their choices affect their own well-being and that of others (UNESCO et al., 2018).

SDG thematic indicator 4.7.2 captures how education programmes can reduce risks associated with teenage pregnancies and sexually transmitted infections. It measures the percentage of schools that provide life skills-based HIV and sexuality education. Almost 80 countries report against the indicator, meaning that information is still missing for some 60% of countries. Among countries with available data, one third report that all schools at every level of education provide life skills-based HIV and sexuality education, including Burundi, Rwanda, Thailand and Uruguay. In contrast, in one tenth of countries, including Algeria, Mauritania and Uganda, there are no schools at any level which provide this type of knowledge. Life skills-based HIV and sexuality education tends to be more common in secondary than in primary schools. Only 9% of the countries studied have no upper secondary schools providing life skills-based HIV and sexuality education, compared to 25% of primary schools. Overall, indicator 4.7.2 has been relatively stable over time, meaning there is no significant upward trend in the share of schools providing such education.

> “There is no significant upward trend in the share of schools providing life skills-based HIV and sexuality education”

To address the need for additional data on CSE, the *Global Education Monitoring Report* team, in partnership with UNESCO's Section of Health and Education, has developed country profiles focusing on the topic. The profiles provide a comparative perspective of countries' progress on sexuality education. They cover all regions of the world and all income levels. To date, 50 country profiles are available, with 35 additional ones to be available soon (UNESCO, 2023b).

Available country profiles show that even though education legislation and policies refer to sexuality education, few countries have comprehensive legislative and policy frameworks on it. Of the 50 analysed countries, only 20% have a law and 39% a national policy that specifically addresses sexuality education. For instance, Argentina is one of the few countries with a specific law, the 2006 Comprehensive Sexuality Education Law, which recognizes such education as a right in both public and private establishments and at all levels. The Curricular Guidelines for Comprehensive Sexuality Education, approved in 2008, define a mandatory, common core approach to CSE in all schools. In Côte d'Ivoire, the 2020 National Policy on Sexual, Reproductive and Child Health highlights that sexuality education for adolescents and young people should be adapted to their specific context and needs. It supports counselling and the use of modern contraception, protection against forced marriage, and the prevention of sexual and other forms of violence (UNESCO, 2023b).

But there is often a gap between policies and their actual implementation in classrooms. Most countries providing some degree of sexuality education choose to teach it through a range of subjects. In Estonia, the sexuality education programme is taught both as a stand-alone subject and integrated into biology classes. In primary education, the stand-alone subject Personal, Social and Health Education includes 35 lessons per year in grades 2 to 3 and 5 to 8, and covers sexuality education along with communication skills, drug and alcohol prevention, and nutrition and physical activity. In the Central African Republic, the 2007 HIV and AIDS Training and Education Curriculum is integrated into several primary and secondary education subjects, including citizenship education, French, home economics, geography, life and earth sciences, and psychology (UNESCO, 2023b).

FOCUS 14.1. CIVIC EDUCATION CAN SHAPE YOUNG CITIZENS' POLITICAL BEHAVIOUR

Target 4.7 seeks to empower students so they can contribute to more peaceful, tolerant, inclusive and secure societies, in their countries and beyond. Civic education programmes have evolved from the concept of a 'citizenship of being', where young people are seen as passively responding to static rights, duties and institutions, to a 'citizenship of becoming', where they actively appreciate diversity and seek to develop their sense of belonging through collaboration and communication, including by using technology (Gifford et al., 2014).

Civic education programmes must address two particular challenges. First, overall political participation has been declining in electoral democracies. By one global estimate, voter turnout in presidential and legislative elections has fallen from 77% in the 1960s to 67% after 2010. This phenomenon presents a puzzle, as growing levels of education could have been expected to contribute to higher participation (Kostelka and Blais, 2021).

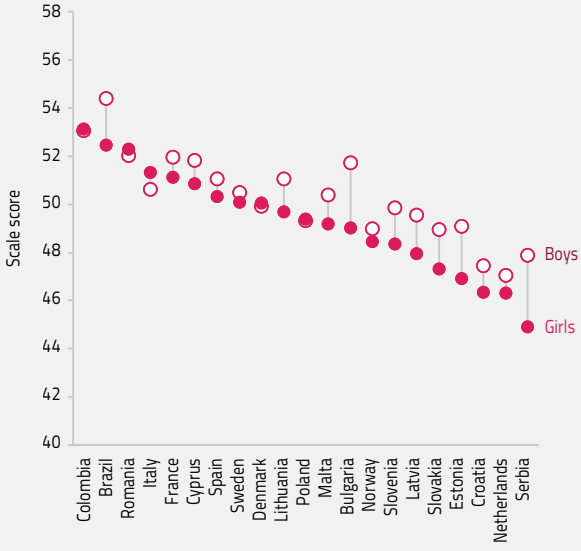
Second, there are gaps in political aspirations and intended participation, which risks democracies not being representative. Girls often grow up convinced that political leadership is predominantly a male activity. They are more likely to expect to vote while boys are more likely to expect to run for office (Barber and Torney-Purta, 2009; Hooghe and Stolle, 2004). The 2022 International Civic and Citizenship Education Study (ICCS), a large-scale learning assessment of grade 8 students in 24 education systems, mostly from high-income countries, found that girls are less likely than boys to expect to actively participate in politics (**Figure 14.3**).

In the United States, in an experiment in which children were asked to draw a political leader, the likelihood that girls would draw a man increased with age, from 47% among 6-year-olds to 75% among 12-year-olds, while the percentage of boys who did the same was stable at just above 70% (Bos et al., 2022). Girls are more drawn to social movement activities such as volunteering while boys are more likely to want to participate in violent protests (Hooghe and Stolle, 2004). A study of 14-year-olds in European countries showed that girls were much more likely to report they would vote in the future but less likely to want to be candidates themselves, with the effect persisting, even after controlling for factors such as socioeconomic status, immigrant background, school characteristic and political interest (Hooghe and Dassonneville, 2013). Gaps in expected political participation by socioeconomic status are even larger than those by sex and statistically significant across all countries that participated in the 2022 ICCS (**Figure 14.4**). Schools whose student populations have higher socioeconomic status are more likely to support citizenship norms such as voting, participating in debates and obeying the law (Treviño et al., 2021).

So can civic education bolster political participation? Studies that have tried to identify a causal link between education (measured in different ways, such as coursework, changes in compulsory education legislation or specific education programmes) and political participation (measured by voter turnout) have yielded results that are mostly inconclusive, no matter how

FIGURE 14.3:
Girls are less likely than boys to expect to actively participate in politics, but more likely to expect to vote and get informed about candidates
Index of expected electoral and active political participation, by sex, grade 8 students, selected upper-middle- and high-income education systems, 2022

a. Expected active political participation



b. Expected electoral participation

Notes: The expected electoral participation index components were: 'vote in local elections'; 'vote in national elections'; and 'get information about candidates before voting in an election'. The expected active political participation index components were: 'join a political party'; 'join a trade union'; 'stand as a candidate in local elections'; and 'join an organization for a political or social cause'.
GEM StatLink: https://bit.ly/GEM2024_fig14_3
Source: 2022 International Civic and Citizenship Education Study.

sophisticated the methodology (Willeck and Mendelberg, 2022). Recent studies that link civic education courses in secondary education and mandatory civic education examinations with adult voting patterns have also struggled to find a significant correlation between the two (Jung and Gopalan, 2023; Weinschenk and Dawes, 2022). A review of nine studies on civic education programmes found no significant effect on voting, although some positive effects were found among particular populations, such as the children of immigrant parents (Manning and Edwards, 2014).

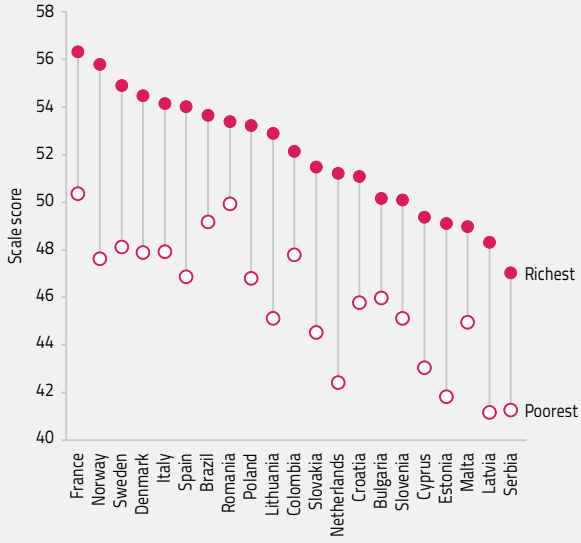
> In the United States, the likelihood that girls would draw a man when asked to draw a political leader increased with age, from 47% among 6-year-olds to 75% among 12-year-olds

However, the absence of a causal relationship is not definite. It is important to recognize that, beyond classroom instruction, extracurricular activities, service learning and the school's ethos can affect civic learning and engagement and compensate for a lack of civic resources at home and in the community (Campbell, 2019). It is also important to recognize that beyond traditional political participation measures, civic education helps to shape identity formation (ethnic, political or any other sort of self-image), agency and self-efficacy (Treviño et al., 2021).

Analyses based on ICCS data have shown the importance of an open classroom climate and positive interactions between teachers and students to temper the impact of socioeconomic status (Brese et al., 2015). A study of English secondary schools also found positive effects of an open classroom climate on expected political participation, especially for disadvantaged groups, although the cumulative effect of civic education had a positive impact on participation only for white students (Weinberg, 2022). A study on US students found similar effectiveness on Black and Latino participation for civic education courses that had been informed by critical pedagogy, in contrast to courses that were more traditional and less critical of the status quo. In Germany, expected political participation among young adults was positively influenced by parental education level, occupational status and income, but the effect was smaller for students that followed an academic track instead of a vocational track (Barsegyan et al., 2024).

Data from the 2022 ICCS also show some positive correlation between average civic knowledge scores and an index of expected political participation. Previous studies

FIGURE 14.4:
Intended electoral participation is significantly higher among richer students
Index of expected electoral participation, by socioeconomic status, grade 8 students, selected upper-middle- and high-income education systems, 2022



GEM StatLink: https://bit.ly/GEM2024_fig14_4
Source: 2022 International Civic and Citizenship Education Study.

that used 2009 and 2016 ICCS data had also found civic knowledge to be a good predictor of expected political participation, support for equal gender rights and support for equal rights for all ethnic groups (Lauglo, 2013; Schulz and Fraillon, 2019). Students in schools that provide opportunities to learn and discuss political and social issues are more likely to include citizenship norms such as participating in national elections, discussing politics, working hard, obeying the law, respecting authorities, protesting against unjust laws, promoting human rights and participating in local communities (Treviño et al., 2021).

There is less research on the impact of civic education in low- and middle-income countries. Examples include studies in Latin America that show the impact of civic knowledge on support for authoritarian regimes (Miranda et al., 2021) or on tolerance for corruption (Carrasco and Pavón Mediano, 2021). In Uganda, a randomized control trial evaluation showed the positive effect of civic education on shaping collective action towards demanding the satisfaction of basic common needs such as roads, medicine and food (Bananuka and Mugarra, 2023). But there is a clear need for more research to help guide effective policy in this area.

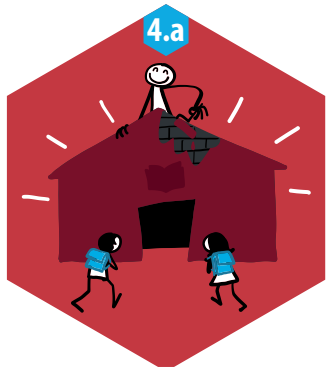
Pimchanok Buaklee, a student from Baan Som Dej School, is drinking water from a tank on the school premises. The extremely high temperatures not only cause drought but also contribute to water contamination from pathogens, a major source of concern.

Credit: © UNICEF/UNI419970/Preechapanich*

KEY MESSAGES

- Globally, 77% of primary schools and 87% of secondary schools had access to basic drinking water in 2023.
- One third of countries have set benchmarks for school internet connectivity in primary and secondary education, with 79% of schools currently connected and global progress currently only 3 percentage points off track. But low-income countries are much less likely than richer countries to achieve their targets.
- Bullying is most common among boys, immigrants and those from disadvantaged backgrounds, but prevalence is increasing faster for girls than boys. In Türkiye, the share of 15-year-old girls experiencing bullying increased by 11 points more than for boys.
- In 2022 and 2023, there were about 3,000 attacks on education, a significant increase from previous years. The increase in 2022 was largely due to the war in Ukraine. As of July 2024, 61% of schools in Gaza had been directly hit and all 12 universities were wholly or partly destroyed.
- A new thematic indicator has been proposed for nutrition and education, an important dimension of students' well-being in school. In 2022, 418 million children were receiving school meals globally. Programme coverage is higher if one considers that a significant share of students are enrolled in private schools.
- Schools need greater resilience to natural disasters and higher temperatures, particularly in the Pacific. Over the past two decades, at least three quarters of extreme weather events that impacted at least 5 million people have led to school closures.

CHAPTER 15



TARGET 4.a

Education facilities and learning environments

Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

GLOBAL INDICATOR

4.a.1 - *Proportion of schools offering basic services, by type of service*

THEMATIC INDICATORS

4.a.2 - *Percentage of students experiencing bullying in the last 12 months*

4.a.3 - *Number of attacks on students, personnel and institutions*

SDG target 4.a calls for "safe, non-violent, inclusive and effective learning environments for all". At the core of this target is the understanding that learning needs to take place in adequate facilities that ensure students' well-being. For example, there is growing concern over whether school buildings are prepared for – and, if not, how they can be protected from – the impact of climate change, which is being felt all over the world (**Focus 15.1**). SDG global indicator 4.a.1 is the 'proportion of schools offering basic services', including water, sanitation and hygiene (WASH); electricity; computers; internet (**Box 15.1**); and adapted infrastructure and materials for students with disabilities.

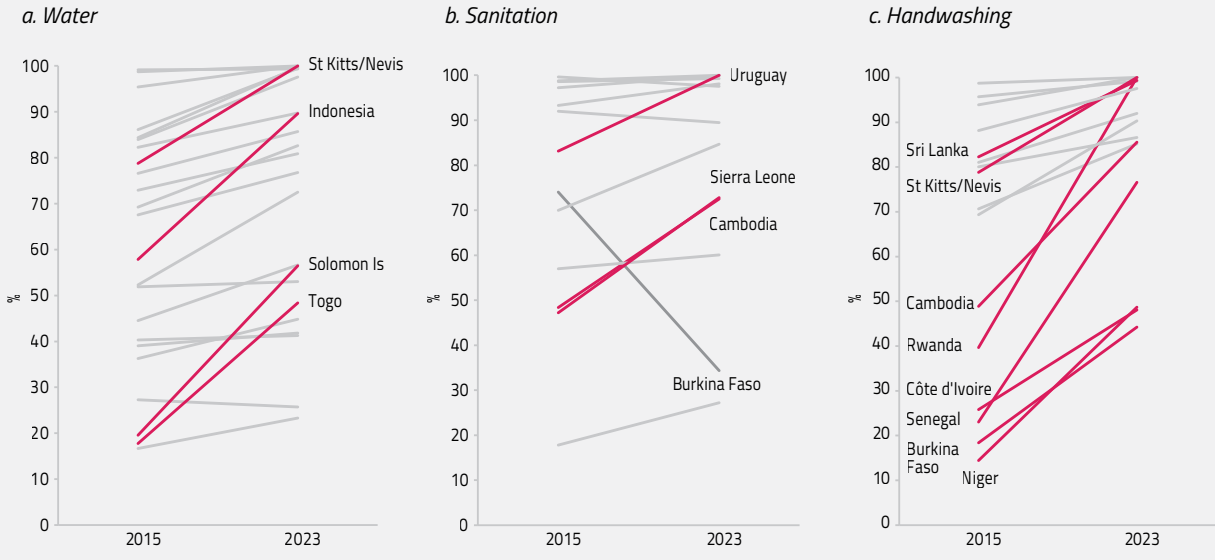
WATER, SANITATION AND HYGIENE

WASH services are an important dimension of schools' physical environment, essential both to students' health and welfare and to schools' resilience to crises. WASH services were vital during the COVID-19 pandemic. They can help mitigate the impact of natural hazards, for example by avoiding sewage contamination after floods. Global indicator 4.a.1 monitors the share of schools with access to basic drinking water, sanitation and handwashing facilities.

WASH facilities must meet a minimum set of requirements to be considered under the SDG monitoring framework. Access to basic drinking water requires an improved water source from which water is available at the time of survey. Basic sanitation facilities must be improved (where human waste is hygienically separate from human contact in a private setting), usable and single sex. Basic handwashing facilities must have soap and water available. The UNICEF/WHO Joint Monitoring Programme for WASH services also monitors how many schools provide a limited service that does not fully meet the SDG criteria. In Chad, 73% of schools have a handwashing facility but only 10% have both water and soap available. In Montenegro, all schools have a sanitation facility, but a detailed assessment in 2022 found that only 11% of toilet stalls could be locked from the inside and meet the privacy criteria (UNICEF and WHO, 2024).

In 2023, 77% of primary schools around the world had access to basic drinking water. Coverage levels were similar for basic sanitation and hygiene services. Levels are higher in lower and upper secondary schools, at around 87% for drinking water and sanitation and 80% for handwashing facilities. According to Joint Monitoring Programme estimates, current levels and progress rates mean that the world is unlikely to achieve universal coverage by 2030. This would require doubling the current rate of progress for

FIGURE 15.1:
Fast progress on access to WASH services is possible from all starting points
Primary schools with access to water and sanitation services, by type of service, 2015 and 2023



Notes: The baseline refers to 2014–16 and the endline to 2021–23, depending on data availability. Highlighted countries increased by over three percentage points per year over the period.
GEM StatLink: https://bit.ly/GEM2024_fig15_1
Source: UIS database.

BOX 15.1:

One third of countries have set benchmarks for school internet connectivity

The Education 2030 Framework for Action called on countries to establish benchmarks, or national targets, as a way of increasing a sense of national ownership over SDG 4 targets. Countries were first asked to provide national benchmarks on seven SDG 4 indicators that were deemed suitable, based on data availability, a clear target and policy relevance (UIS and GEM Report, 2023) (**Chapter 7**). In 2023, the proportion of schools with internet available for pedagogical purposes was added to the list as the eighth benchmark indicator in response to the priority assigned to digital technology at the UN Transforming Education Summit in 2022.

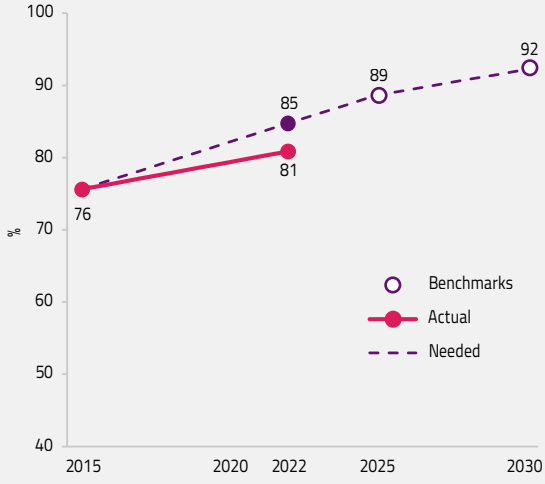
In total, 32% of countries had submitted national benchmarks by the end of 2023. Among countries with sufficient data, global progress is close to the target. In primary and lower secondary education, the share of schools with internet access increased from about 69% to 79%, only 3 percentage points from the collective target of 82%. Progress was somewhat slower in the case of upper secondary education, where the percentage of schools with internet access increased from 76% to 81% (**Figure 15.2a**).

Some 69% of countries with data have achieved fast progress on this indicator in upper secondary education. However, progress is uneven. Almost all high-income, two thirds of upper-middle-income, one half of lower-middle-income and one fifth of low-income countries have achieved fast progress (**Figure 15.2b**). No low-income country has achieved fast progress in primary and lower secondary education, although it should be noted that only three low-income countries report data (UIS and GEM Report, 2024).

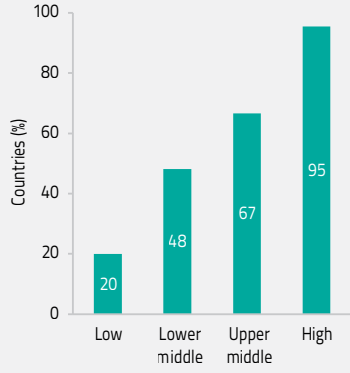
FIGURE 15.2:

Progress on school internet connectivity has been fast but uneven

a. Proportion of upper secondary schools with internet available for pedagogical purposes, 2015–22 and average national targets for 2025 and 2030



b. Share of countries with data that achieved fast progress, by country income group

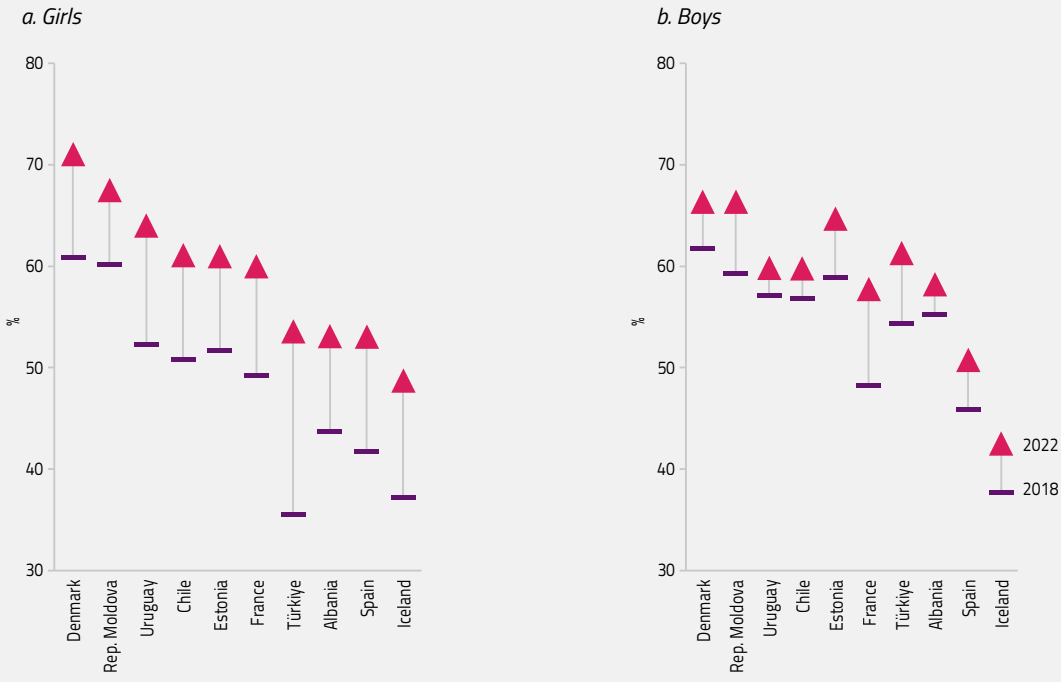


Note: 'Fast progress' means that a country has at least 75% probability of achieving its national target by 2025 (including when it has already achieved it) or at least 95% of schools are already connected.
GEM StatLink: https://bit.ly/GEM2024_fig15_2
Source: UIS and GEM Report (2024).

drinking water and sanitation and quadrupling the rate for basic hygiene services (UNICEF and WHO, 2024). Notable progress has been made in access to basic drinking water in sub-Saharan Africa – from 44% in 2016 to 53% in 2022 in primary schools and from 54% in 2015 to 63% in 2023 in upper secondary schools.

> In 2023, 77% of primary schools around the world had access to basic drinking water

FIGURE 15.3:
The prevalence of bullying has increased more for girls than for boys
Percentage of 15-year-old students experiencing bullying in last 12 months, by sex, 2018 and 2022



Note: The 10 countries in the figure are those where bullying prevalence increased the most between 2018 and 2022.
GEM StatLink: https://bit.ly/GEM2024_fig15_3
Source: 2018 and 2022 rounds of the Programme for International Student Assessment.

Fast progress is possible though uncommon (**Figure 15.1**). For each of the WASH dimensions, countries at very different starting points and from different regions have been able to increase coverage by at least three percentage points per year since 2015. In Rwanda, the share of primary schools with access to a handwashing facility increased from 40% in 2015 to 100% in 2021. The country had already launched its handwashing strategy in 2019 (Rwanda Ministry of Health, 2019) but accelerated its construction efforts with COVID-19 (Rwanda Ministry of Education, 2021). Saint Kitts and Nevis also achieved universal coverage of drinking water and handwashing facilities, both of which were at 79% in 2016. In Burkina Faso, despite improvements in handwashing and drinking water services, the share of primary schools with sanitation facilities decreased from 74% in 2016 to 45% in 2021 (**Figure 15.1b**). This decrease coincides with an increase in the share of schools with limited sanitation services (unimproved, not usable or not single sex), suggesting either that existing facilities had deteriorated or more careful inspections had updated their status (UNICEF and WHO, 2024). A study of Ecuador, India, Nigeria and the Philippines found that 1.2 million school toilets built since 2015 in these countries were 'lost' due to lack of maintenance, amounting to a loss of USD 1.9 billion (Economist Impact, 2023).

In Niger, despite modest improvement, the availability of drinking water and sanitation facilities in schools remains the lowest in the world at 23% and 27%, respectively. Fast progress was achieved, however, in the share of primary schools with access to handwashing facilities, which increased from 14% in 2016 to 49% in 2023. Part of this increase is due to targeted financial and technical support provided by a group of international organizations, which supported the construction of piped systems, standpipes and a sludge treatment plant as well as improved monitoring of water points and increased awareness campaigns (UNICEF, 2019). Nevertheless, coverage is still very unequal across Niger, with urban schools at least twice as likely to have handwashing and sanitation facilities as rural schools (UNICEF and WHO, 2024). In 2017, the government adopted a plan with improved WASH services as a national priority and set a target to reach universal coverage by 2030 (Niger Ministry of Water and Sanitation, 2016; UNICEF, 2024).

BOX 15.2:

Education is severely under attack in the State of Palestine

Israel's military invasion of the Gaza Strip in the State of Palestine, in response to the Hamas-led militant groups' attack on Israel on 7 October 2023, has led to the systematic destruction of Gaza's education system, described as a 'scholasticide' by the UN Special Rapporteurs, leaving over 625,000 students without access to education (United Nations, 2024). As of July 2024, 61% of schools in Gaza had been directly hit, including 110 of the 187 schools run by the UN Relief and Works Agency for Palestine Refugees (UNRWA) (Occupied Palestinian Territory Education Cluster, 2024). A study using satellite imagery found that 85% of schools would need either full reconstruction or major rehabilitation work to be functional again (Occupied Palestinian Territory Education Cluster, 2024). At least 320 schools have been used as shelters for displaced Gazans, over half of which were also hit by military strikes (Stack and Shbair, 2024). As of the end of August 2024, it was estimated that 9,839 students and 411 teachers had been killed, while another 15,394 students and 2,411 teachers had been injured (OCHA, 2024).

All 12 universities in Gaza have been bombed and either wholly or partly destroyed, halting studies for about 90,000 Palestinians (Desai, 2024). Campuses were occupied by military forces and used as shelters (Stack and Shbair, 2024). Numerous cultural and educational centres such as libraries, museums, publishing houses, bookstores, heritage sites and archival storage have been damaged or destroyed (OHCHR, 2024).

These attacks have harmed an education sector that was already suffering from a severe lack of resources. In 2023, over 70% of UNRWA schools in Gaza operated on double or triple shifts, and most classes had over 40 students. School buildings were often old and dilapidated, and ongoing conflict had already caused considerable damage to the education infrastructure. The blockade of Gaza had restricted the entry of construction materials, education supplies and learning materials (UNRWA, 2023).

The impact of these attacks on education will be long-lasting. Students have already experienced a long gap in their education. Over 1 million children in Gaza are in need of psychosocial support, as are teachers (Faculty of Education, University of Cambridge et al., 2024). Some children attempt to continue studying through homeschooling or thanks to makeshift schoolhouses in camps and volunteer teachers (Stack and Shbair, 2024). While the Palestinian Ministry of Education launched an e-learning initiative, lack of electricity and internet and constant displacement make it difficult to implement the model (Middle East Monitor, 2024).

BULLYING

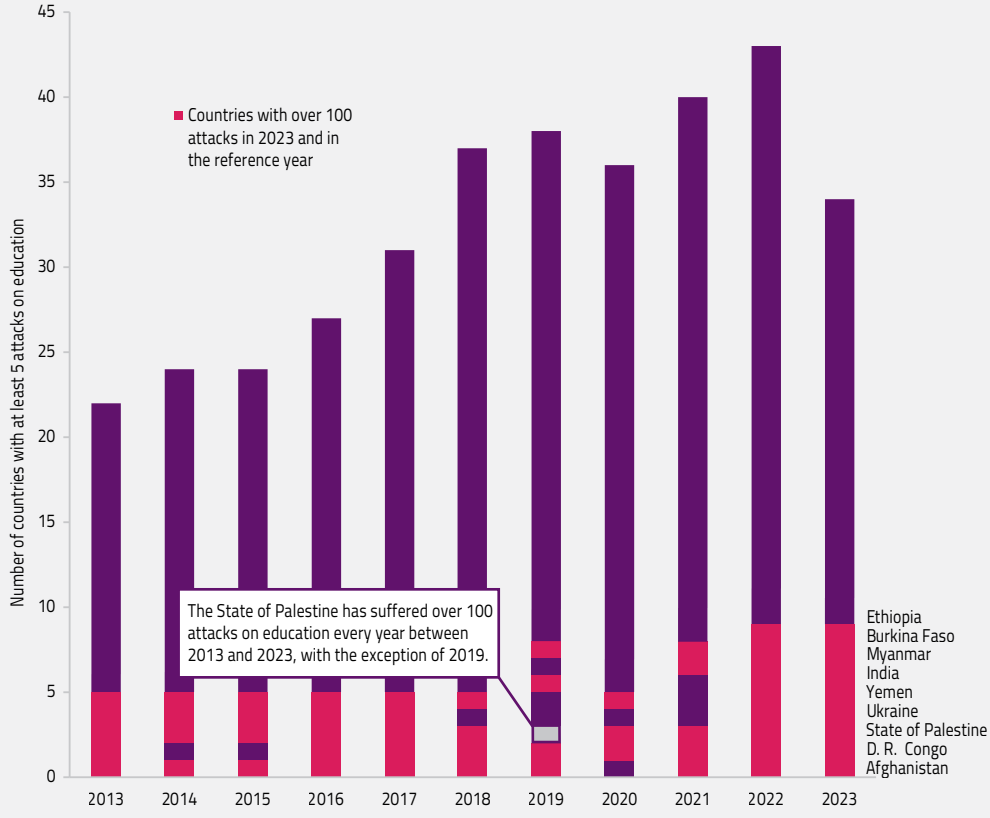
Students' welfare in school also requires freedom from abusive, hurtful and intimidating behaviours. SDG thematic indicator 4.a.2 measures the percentage of students who experienced bullying in the past 12 months. The latest addition to the UIS database comes from the 2022 round of the Programme for International Student Assessment (PISA) (OECD, 2023), which measures several types of bullying behaviour among 15-year-olds. The most common behaviour is verbal and relational where students reported 'Other students made fun of me' and 'Other students spread nasty rumours about me'.

> The faster increase in the prevalence of bullying for girls aligns with their higher vulnerability to cyberbullying

In most participating countries, the prevalence of bullying is higher for students that are from a disadvantaged socioeconomic background, immigrant and male. However, bullying has been increasing faster for girls than for boys. In 34 of the 66 countries with available data, bullying increased by at least 2 percentage points for girls between 2018 and 2022. The same was true for boys in only 22 countries. In the 10 countries where bullying increased the most between 2018 and 2022, the increase for girls was considerably higher than for boys (**Figure 15.3**). In Türkiye, the share of 15-year-old girls who experienced bullying increased by 18 percentage points, compared to an increase of 7 percentage points for boys.

The faster increase in the prevalence of bullying for girls aligns with their higher vulnerability to cyberbullying (UNESCO, 2024a). Girls often spend more time on social media than boys. A cross-country study of 31 high-income and 11 low- and middle-income countries found that the relationship between intense social media use and being a victim of cyberbullying was more common for girls than for boys, at least partly due to the greater

FIGURE 15.4:
More countries are suffering attacks on education, though most attacks remain concentrated in a few countries
Number of countries with at least five attacks per year on students, personnel or institutions, 2013–23



GEM StatLink: https://bit.ly/GEM2024_fig15_4
Source: UIS Database.

amount of time they spend online (Craig et al., 2020). In the United Kingdom, girls were more likely to report spending time on social media from the age of 10 and, at age 15, 43% of girls vs 31% of boys reported spending one to three hours a day on social media. Moreover, social media usage was more strongly associated with lower levels of well-being among girls than boys (Kelly et al., 2018). Girls are also more often targeted by specific types of cyberbullying. Algorithm-driven image-based content can expose girls to inappropriate material, ranging from sexual content to videos that glorify unhealthy behaviours or unrealistic body standards (Lin, 2023; UNESCO, 2024a).

ATTACKS ON SCHOOLS

Target 4.a also emphasizes that schools must be safe. The Global Coalition to Protect Education from Attack monitors the number of attacks on educational institutions, students, teachers and personnel inside and outside of classrooms (SDG thematic indicator 4.a.3).

In 2022 and 2023, there were about 3,000 attacks on education, a significant increase from about 2,500 in the two previous years. The increase in 2022 was largely due to the war in Ukraine, where 555 attacks on education were recorded that year. It is estimated that in the first two years of the war, over 360 schools were destroyed and 3,428 were damaged, mostly from aerial attacks, artillery shelling and rocket strikes. Schools have also often been used for military purposes and have had equipment pillaged by soldiers (Human Rights Watch, 2023). In 2023, the State of Palestine suffered 720 attacks on education, the highest number in the world, and the casualties continue to increase in 2024 as a result of the Israel–Palestine conflict (**Box 15.2**).

> “The top 10 countries in number of attacks were responsible for 68% of the global attacks on education in 2022 and 80% in 2023”

The number of countries subject to attacks on education has increased over the past decade. The number of countries with at least 5 attacks on education doubled between 2013 and 2022, from 22 to 43, before dropping to 34 in 2023 (**Figure 15.4**). The overall number of attacks remains highly concentrated in a few countries (UNESCO, 2023). The 9 countries with more than 100 attacks in 2023 also registered over 100 attacks in several years over the past decade. Since 2013, Afghanistan and the State of Palestine have each suffered over 100 attacks on education every year except for one. The top 10 countries in number of attacks were responsible for 68% of the global attacks on education in 2022 and 80% in 2023.

SCHOOL MEALS

A new thematic indicator has been proposed to highlight the link between nutrition and education, an important dimension of students' well-being in school. The World Food Programme (WFP) will provide data on the 'proportion of school-attending children receiving school meals' in its biennial publication, *State of School Feeding Worldwide* (WFP, 2022). The publication collects information on national school feeding programmes through the Global School Feeding Survey run by the Global Child Nutrition Foundation, a non-profit organization; the *WFP Annual Country Reports*; and secondary sources, such as official reports, publications and case studies (WFP, 2023). The indicator was explicitly mentioned in a 2022 declaration by the members of the School Meals Coalition, whose goal is that 'by 2030, every child receives a healthy, nutritious daily meal in school'.

The latest data from the WFP show that 418 million children were receiving school meals globally in 2022, 30 million more than in early 2020 just before the COVID-19 pandemic. While the share of children fed increased by 12% in lower-middle income countries and by 4% in upper-middle- and high-income countries, it fell by 4% in low-income countries (WFP, 2023), so recovery was slowest where it is most needed. Coverage of school meals for primary school children varies widely across countries, from less than 5% in Algeria, Cameroon, the Democratic Republic of the Congo and Mozambique to nearly 100% in several European and Latin American countries (**Figure 15.5**).

The proposed indicator measures coverage by the number of children in a level of education who receive school meals divided by total enrolment at that level. However, data for this indicator do not come from individual schools or students but from school meals programmes, which are mostly government-led and government-funded and tend to only target students in public institutions (WFP, 2023). The Gambia, for example, has a targeted school meals programme that provides a hot mid-morning meal to children enrolled in public schools in the country's most vulnerable regions. In 2022, about 180,000 children in primary education were fed, which corresponds to a coverage of 47% of total enrolment at that level. But one third of primary school students in the Gambia are enrolled in private institutions, and therefore not eligible for the school meals programme. If only public school students are considered, the corresponding coverage is 70% (**Figure 15.6**).

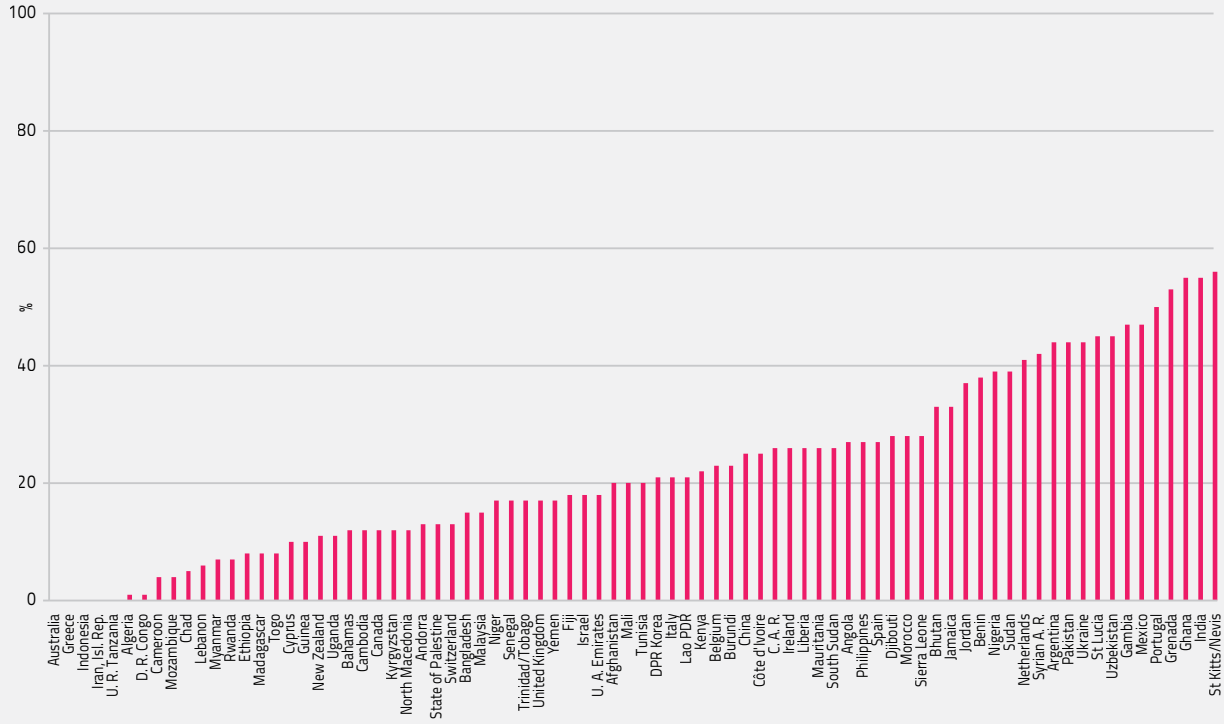
FOCUS 15.1. SCHOOL INFRASTRUCTURE MUST ADAPT TO CLIMATE CHANGE

Climate change and education are interlinked: climate change disrupts education while education is key to climate change mitigation and adaptation efforts (UNESCO and MECCE, 2024). An important dimension of this mutual relationship is the physical infrastructure of school buildings. Schools must limit their impact on the environment as well as the impact of the changing environment on them.

Schools are a major source of energy and water consumption. In France, schools top the list of energy-consuming municipal public buildings, accounting for 30% of all energy (France Ministry of National Education and Youth, 2023). In the United States, public schools alone occupy 2 million acres of land. They are responsible for 53,000 tons of food waste and operate 480,000 school buses (Bauld, 2021). UNESCO's Greening Every Learning Environment project provides a quality standard for greening schools that integrates sustainability principles and climate action across four core areas, one of which is facilities and operation. The publication sets out several examples of low to high resource-intensive steps that can help schools reduce energy and water consumption. These include the development of rainwater harvesting, composting systems, and the regular maintenance of heating and ventilation systems (UNESCO, 2024).

Minimizing the environmental impact of schools' infrastructure must go hand-in-hand with increasing their resilience to the consequences of climate change. Two types of climate-related hazards stand out and have been the object of school adaptations around the world: making buildings usable and comfortable during periods of high temperatures and making them more resilient to natural disasters such as storms and floods.

FIGURE 15.5:
Coverage of school meals varies widely between countries
Percentage of primary school children receiving school meals, 2020–22



GEM StatLink: https://bit.ly/GEM2024_fig15_5
Source: WFP (2023).

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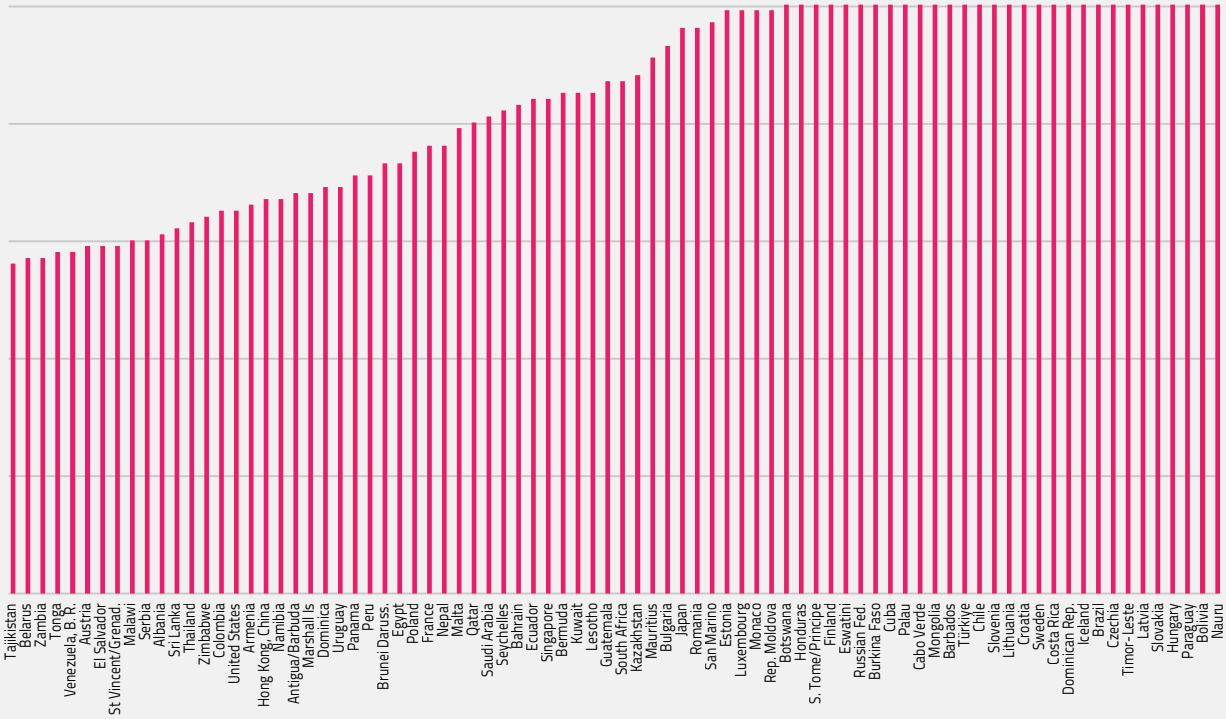
IMPROVING THERMAL COMFORT

Dealing with rising temperatures that hamper students' well-being and ability to focus has been a major concern in many countries. High temperatures negatively impact cognitive performance and decrease the rate of learning (Park et al., 2021). They also often lead to missed school days. In Bangladesh, school closures due to temperatures above 43 degrees Celsius (°C) left nearly 33 million children out of school for a few days in the first semester of 2024. Similar closures or shortening of school days took place during this period in Cambodia, India, the Philippines and South Sudan, where temperatures rose to 45°C (Aggarwal, 2024; Dickie et al., 2024). Increasing temperatures have also led many schools to close or function part-time during periods of extreme heat in the milder climate areas of the United States. It has been estimated that over 13,700 public schools would need air conditioning due to rising temperatures at a cost of USD 40 billion (Phillips and Penney, 2024).

School buildings can mitigate the effect of elevated temperatures. France's school renovation programme, launched in 2023, helps municipalities fund works aimed at making schools more resistant to the increasingly longer heatwaves (France Ministry of National Education and Youth, 2023). Solutions range from high-budget items, such as installing air conditioning in classrooms, to simpler steps such as white-coating exterior walls and using blinds and awnings that can be modulated according to the season. The government also encourages the installation of green recreational spaces and increased vegetation surrounding schools, as the simple presence of trees and plants can help filter sunlight and keep the air cooler (France Ministry of National Education and Youth, 2020).

In Indonesia, replacing dark roofs with a coating of white paint reduced inside temperatures by over 10°C. In Kenya, the government aims to plant 15 billion trees around schools by 2032, which can lower temperatures

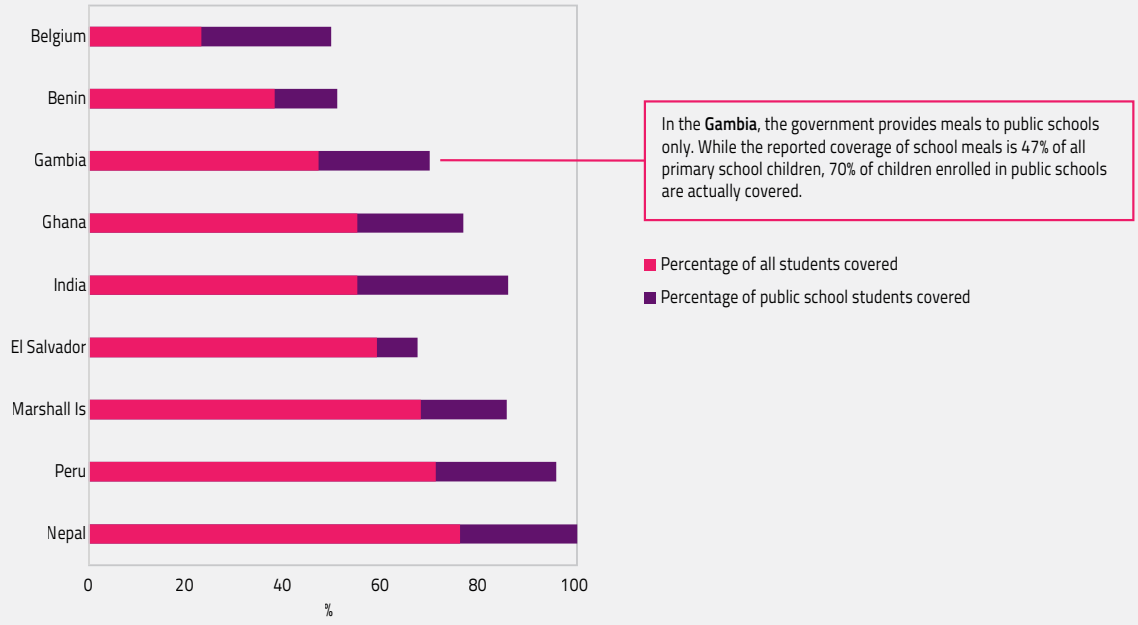


by 1°C to 5°C. When building new schools or classrooms, climate-responsive designs and materials can help keep temperatures lower at minimal costs. Integration of cross-ventilation, use of materials that offer thermal protection such as clay, and roof designs that help pull in cool air and release hot air can improve thermal comfort while reducing schools' ecological footprint (Venegas Marin et al., 2024).

> When building new schools or classrooms, climate-responsive designs and materials can help keep temperatures lower at minimal costs

Extreme heat disproportionally affects the poorest regions in the world; within countries, it disproportionally affects the poorest students who are more likely to attend schools with fewer resources (Venegas Marin et al., 2024). In Brazil, where temperatures can reach high levels in much of the country, only 35% of schools have any green areas, which are a common solution to filter sunlight and keep the air cooler (INEP, 2024). Often those without it are those which need it most. Schools in areas with the highest maximum temperatures, most of which are in the poorer North and Northeast regions of the country, are less likely to have green areas (**Figure 15.7**). It is not just a question of money, however. The state of São Paulo is the richest in the country and has the lowest share of schools with green areas (16%). In 2024, the city of São Paulo launched a project to increase green areas in schools to help regulate temperature, diminish pollution and flooding, and give students and communities opportunities to learn about sustainable development and climate resilience (CicloVivo, 2024).

FIGURE 15.6:
The actual coverage of school meals programmes is higher if private school students are excluded
Primary school children receiving school meals divided by (i) total enrolment in primary and (ii) enrolment in public primary schools only, 2020–22



Notes: In India, PM Poshan, the school meal programme, targets children studying in government, local body and government-aided primary and upper primary schools. Enrolment in government and government-aided primary schools was included in the calculation for the figure, based on UDISE+. All other enrolment data are from UIS and refer to public institutions only.
GEM StatLink: https://bit.ly/GEM2024_fig15_6
Sources: GEM Report analysis based on WFP (2023); UDISE+ (2022); GCNF (2024); and UIS.

IMPROVING RESILIENCE TO NATURAL DISASTERS

Climate-related hazards such as wildfires, storms, floods, droughts and rising sea levels can have devastating effects on societies and educational systems. Over the past two decades, at least three quarters of extreme weather events that impacted at least 5 million people led to school closures (Venegas Marin et al., 2024). In Pakistan, historical floods in 2022 interrupted the education of over 3.5 million students, with over 20,000 schools damaged or destroyed (UNESCO, 2022). In the Philippines, over 20% of schools flood at least once every year (Venegas Marin et al., 2024).

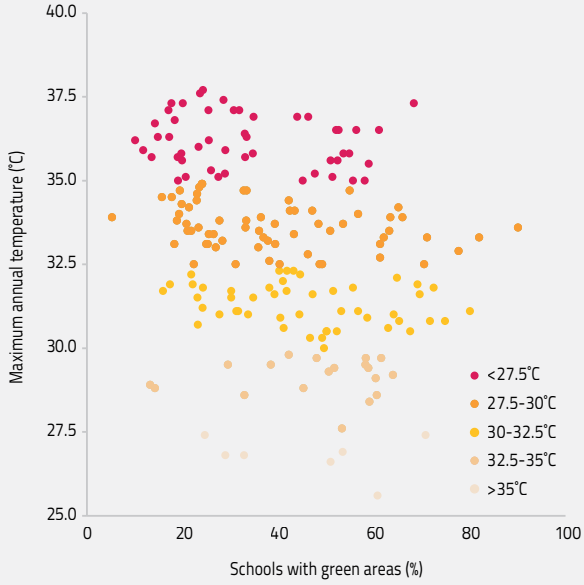
The impact of natural disasters on school infrastructure cannot be fully remedied, but factors such as poor building design and inadequate construction or materials can accentuate it. Lack of safe water, sanitation and hygiene facilities in schools can increase the risk of overlapping hazards after a disaster, such as contamination from ineffective sewage after a flood, thus making recovery harder and longer (UNICEF, 2021). Poor commuting infrastructure can also impact education. After two cyclones hit Tanna Island, Vanuatu, in February 2023, schools that survived were only able to function for half-days for several months because the muddy roads made the commute more difficult for students and teachers (Voloder, 2023) (**Box 15.3**).

Because schools face different types of climate risk, solutions must be context-specific. In Rwanda, over 1,300 schools are being equipped with retaining walls to alleviate the risk of landslides due to floods and rainstorms. In Viet Nam, the risk of floods has been reduced by building schools with elevated foundations, often constructed on stilts (Venegas Marin et al., 2024). At the same time, many organizations have long championed general guidelines to enforce compliance with building codes, conduct regular maintenance and make risk-informed decisions for new schools.

> In Rwanda, over 1,300 schools are being equipped with retaining walls to alleviate the risk of landslides due to floods and rainstorms

The Comprehensive School Safety Framework was developed by the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector, a multistakeholder platform co-chaired by UNESCO and UNICEF. The Framework provides a common model for ensuring school safety, with safer learning facilities as one of its three pillars (GADRRRES, 2022). The Framework also serves as the foundational document for the Worldwide Initiative for Safe Schools, a global partnership with 58 signatory countries for peer learning and promoting national actions on school safety (GADRRRES, 2021; Petal et al., 2017). In 2015, UN Member States adopted the Sendai Framework for Disaster Risk Reduction 2015–2030, which sets seven targets, one of which is to 'substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030' (UNDRR, 2021).

FIGURE 15.7:
In Brazil, schools in hotter regions are less likely to have green spaces
Meteorological regions in Brazil by percentage of schools with green spaces (2023) and maximum temperature registered between 1990 and 2020



Note: Meteorological regions were constructed based on the meteorological station closest to the school's municipality, microregion, mesoregion or state.
GEM StatLink: https://bit.ly/GEM2024_fig15_7
Sources: Brazil National Institute of Meteorology (2022); INEP (2023).

BOX 15.3:

Schools in the Pacific Islands are particularly threatened by climate hazards

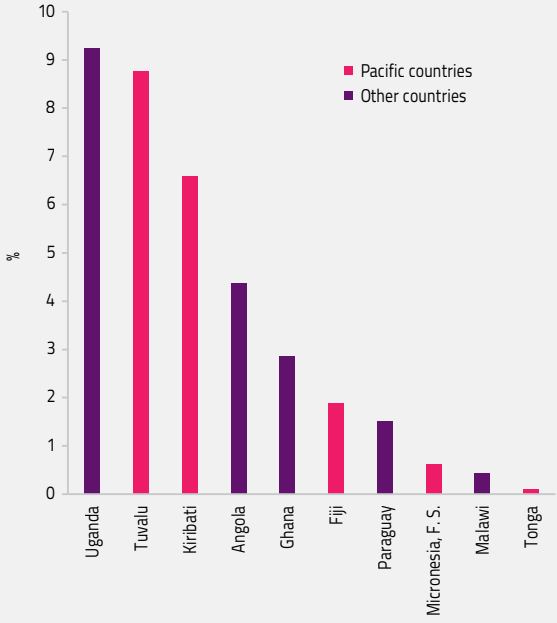
Pacific Island states deserve special attention from the international community because they are particularly at risk of climate-related emergencies. Between 2011 and 2020, there were over 90 major disasters in the region, of which 43% were tropical cyclones and 16% were floods (Mutha-Merennege et al., 2023). Damage to infrastructure takes an enormous toll on the region's economy. Pacific Island states make up 5 of the top 10 countries with the highest economic losses resulting from damaged or destroyed critical infrastructure, including schools, attributed to disasters as a percentage of gross domestic product (GDP) (**Figure 15.8**).

Schools in the region are particularly vulnerable to damages from such disasters. One assessment found that between 50% and 90% of schools in Samoa, Tonga and Vanuatu are not able to withstand a strong cyclone or earthquake due to construction shortcomings such as corrosion, insufficient roof strapping, inadequate steel reinforcement and the use of unwashed beach sand (World Bank, 2022). The cost of natural disasters in the education sector of Tonga is estimated to be USD 7.4 million per year, or 1.5% of the country's GDP. In 2018, Tropical Cyclone Gita damaged or destroyed 109 out of the 150 schools on the main island of Tongatapu (World Bank, 2022). In 2020, Tropical Cyclone Harold hit Vanuatu and damaged or destroyed 885 schools, affecting over 50,000 students (Global Partnership for Education, 2021). It also led to the loss of nearly all school resources and materials in Sanma province (Mutha-Merennege et al., 2023).

Continued on next page...

BOX 15.3 CONTINUED:

FIGURE 15.8:
Disasters have caused significant damage to critical infrastructure in Pacific Island countries
Direct economic loss resulting from damaged or destroyed critical infrastructure attributed to disasters as a percentage of gross domestic product, 2022



GEM StatLink: https://bit.ly/GEM2024_fig15_8
Sources: United Nations Office for Disaster Risk Reduction (2024); World Bank (2024).

International aid and green financing sources have helped governments in the Pacific Islands improve their educational infrastructure. In Kiribati, the Ministry of Education used climate financing from Australia to ensure that school facilities have raised floors and protective seawalls to reduce the damage of coastal floodings (Australia Department of Foreign Affairs and Trade, 2022). The World Bank's Pacific Safer Schools Program has partnered with construction companies and non-governmental organizations to help the governments of Samoa, Tonga and Vanuatu rebuild schools with stronger materials and provide more regular maintenance to existing buildings. It also developed checklists with clear steps for schools to better prepare for cyclone seasons, including annual roof repairs, monthly cleaning of gutters and downpipes, and maintenance of doors and windows (World Bank, 2020, 2022). Other initiatives focus on ensuring continued learning after disasters. A Global Partnership for Education grant to Vanuatu after a major cyclone was used to help produce and distribute teaching and learning materials and home-school packages (GPE, 2021).

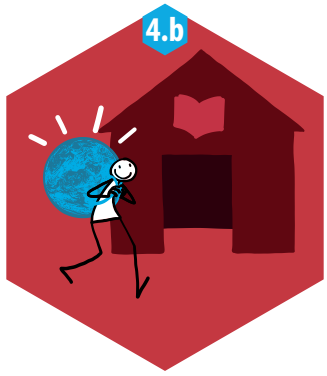
Makande C.D..S.S Form 1 girls under the UNICEF scholarship.

Credit: © UNICEF/UNI523931/PLUS CREATIONS*

KEY MESSAGES

- In 2022, total official development assistance allocated to scholarships and imputed student costs reached USD 4.6 billion, an increase by 31% since 2015. But COVID-19 affected scholarship spending, which declined by 26% between 2019 and 2021 and had not reached its 2019 levels by 2022.
- France and Germany are the top donors funding scholarships and imputed student costs. Germany accounted for 41% of total donor spending in scholarships and imputed student costs, in part due to the 2.5-fold increase in international student enrolment in German universities over the past 20 years.
- Although the number of outbound international students has tripled since 2000, the outbound mobility rate has remained roughly constant – though it fell in sub-Saharan Africa from 7.3% to 4.6% in 2021 as more students do tertiary education at home.
- There are new donors starting to fund scholarships. The share of aid for scholarships that originates in countries that are not members of the OECD Development Assistance Committee rose from 1% in 2014 to 9% in 2022, mainly due to contributions from Romania, Qatar, Saudi Arabia and Türkiye.
- Non-state actors are taking a larger role in funding international scholarships. In sub-Saharan Africa, for example, a small number of major providers accounts for most scholarships, including the ABSA Bank, Kulika, the Zawadi Africa Education Fund and the Mastercard Foundation.

CHAPTER 16



TARGET 4.b

Scholarships

By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing states and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries

GLOBAL INDICATOR

4.b.1 - *Volume of official development assistance flows for scholarships, by sector and type of study*

The proposal for a global target on scholarships goes back to the fourth UN Conference on the Least Developed Countries, which took place in 2011 in Istanbul. Its Programme of Action 2011–2020 included scholarships in its broader technical cooperation and capacity-building agenda: 'Continue providing, and encourage, as appropriate, higher education institutes to allocate places and scholarships for students and trainees from least developed countries, in particular in the fields of science, technology, business management and economics' (United Nations, 2011).

SDG target 4.b echoed this commitment, calling on countries 'to substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing states and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries'. As the target was linked to the Istanbul Programme of Action, it was one of the very few SDG targets set to be achieved by 2020.

But the commitment has been repeated during the fifth UN Conference, which took place in Doha. Its updated Programme of Action 2022–2031 also sets a scholarships target, which borrows back some of the language of SDG target 4.b: 'Substantially expand globally the number of places and scholarships for students and trainees from least developed countries, in particular in the fields of science, education technology, business management and economics, and encourage the full uptake of scholarships available to students of least developed countries' (United Nations, 2022; p.13).

Scholarship programmes can play a vital role in providing opportunities for those who would otherwise not be able to afford their education. However, target 4.b. is ambiguous. There is no precise target. The target does not specify where scholarship recipients should study. Moreover, no donors are clearly identified and, despite the call being 'global', the target is implicitly addressed at rich countries, especially the 32 members of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC), many of whom report how much of their official development assistance (ODA) is allocated for scholarships (UNESCO, 2016). In practice, new donors have been emerging since 2015 (**Focus 16.1**).

FINANCING FOR SCHOLARSHIPS

Monitoring scholarships is challenging because they are funded by various governmental and non-governmental organizations. There is no monitoring mechanism to respond to this variety of sources and no common standards for reporting on scholarship levels and numbers of recipients. Non-governmental providers have few incentives to report or to invest efforts in aligning their standards for reporting. In any case, they are not bound by the 2030 Agenda for Sustainable Development nor by the Programmes for Action, which describe relationships between states. It has, therefore, been understood that SDG target 4.b scholarships should only follow publicly funded scholarships; monitoring efforts have focused on ODA flows directed at scholarships and related uses (UNESCO, 2016).

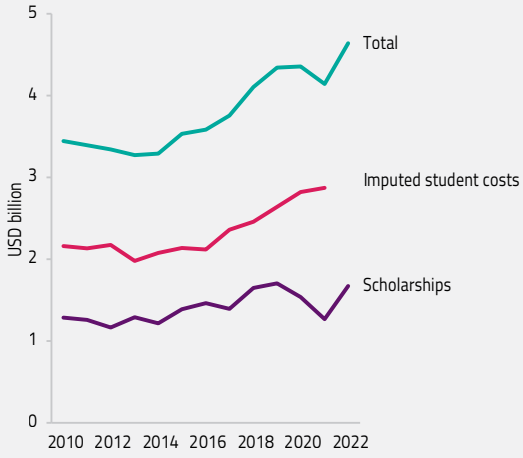
Another concern related to a target on scholarships within a development agenda is that the target may not contribute to its intended outcome if graduates do not return to their home countries. Instead, there is the risk that graduates will migrate in response to donor countries' need to attract skilled workers (Galán-Muros et al., 2022). Another problem is that such funds subsidize donor countries' own higher education institutions rather than the higher education systems of the beneficiaries' countries.

> "Scholarship levels declined sharply by 26% between 2019 and 2021 as a result of the COVID-19 pandemic"

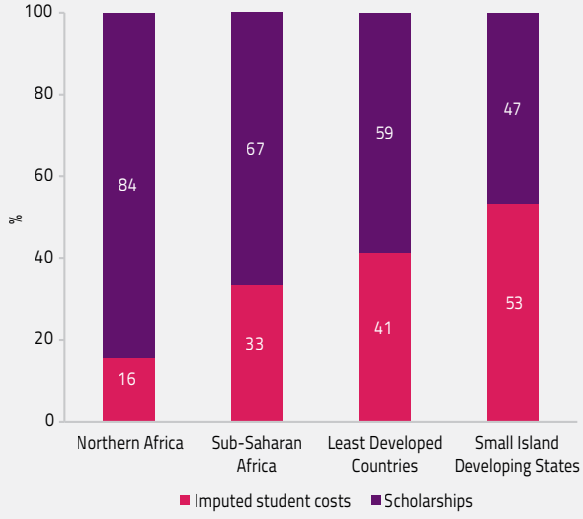
There are two categories of ODA flows: first, scholarships, which are financial aid awarded to individual students for full-time studies in higher education institutions that charge fees at the point of study; second, imputed student costs, which are costs borne by the donor country to support international students, especially countries whose higher education institutions do not charge fees. In 2022, total ODA for scholarships and imputed student costs reached USD 4.6 billion, an increase by 31% since 2015. Scholarship levels declined sharply by 26% between 2019 and 2021 as a result of the COVID-19 pandemic and, despite recovering, they were still slightly below the 2019 levels in 2022 (**Figure 16.1a**). Of that amount, 36% of this ODA funded scholarship programmes and 64% funded imputed student costs. Among the target 4.b regions of interest, the share of scholarships ranges from 16% to students from Northern Africa to 53% to students from small island developing states (**Figure 16.1b**).

FIGURE 16.1:
COVID-19 affected scholarship spending
Aid to education in the form of direct scholarships and imputed student costs

a. Developing countries, 2010–22

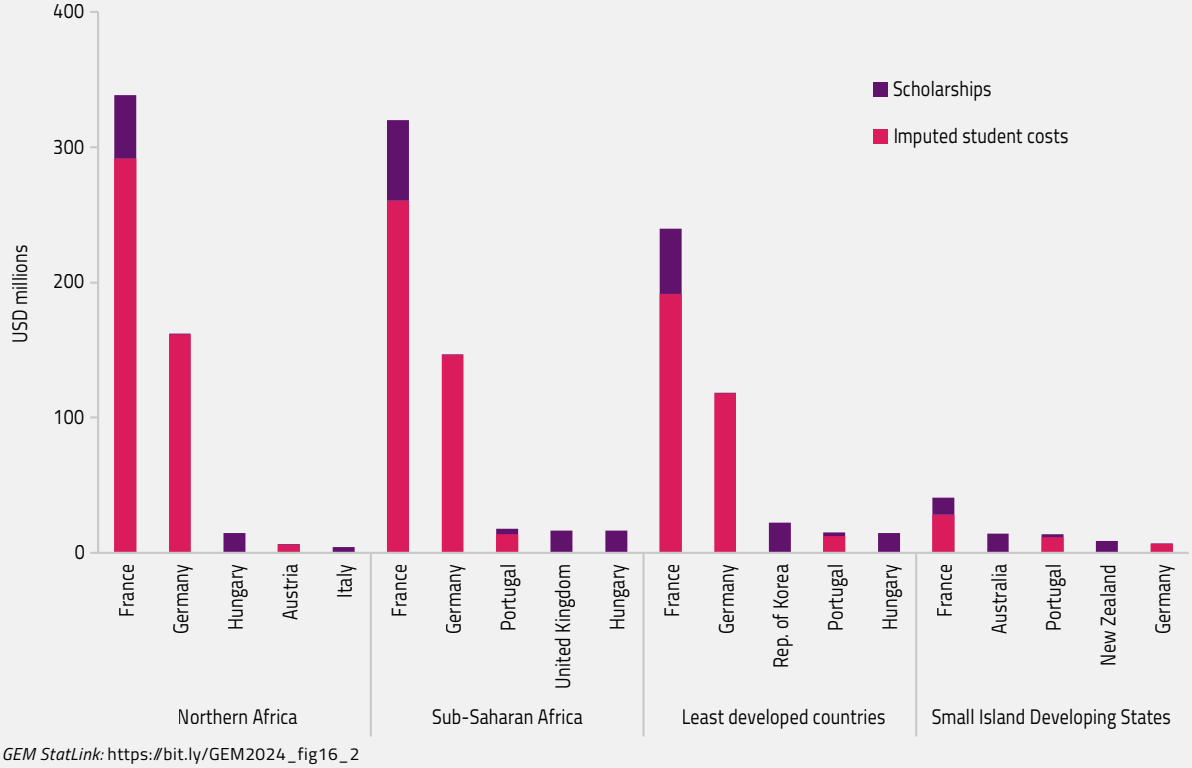


b. By type of aid and region, 2022



GEM StatLink: https://bit.ly/GEM2024_fig16_1
Source: OECD Creditor Reporting System database.

FIGURE 16.2:
France and Germany stand out among the country donors
Top five scholarship donors by region and type, 2022



GEM StatLink: https://bit.ly/GEM2024_fig16_2
Source: OECD Creditor Reporting System database.

France and Germany are the main donors who report scholarship and student imputed cost spending as ODA. In Northern and sub-Saharan Africa, France accounts for almost two thirds of the total and Germany for almost one third of the remainder (**Figure 16.2**). As both countries' education systems charge national and international students low tuition fees, imputed costs are the main flow (Kim, 2014) (**Box 16.1**). Other countries that allocate ODA for scholarships include Hungary (which spent USD 31 million for students from Africa), the Republic of Korea (which spent USD 22.5 million for students from Least Developed Countries), and Australia and New Zealand (which spent USD 23.5 million for students from small island developing states).

INTERNATIONAL STUDENT MOBILITY

Target 4.b encourages international student mobility for those from the 'least developed countries, small island developing states, and African countries'. Between 2000 and 2021, the number of outbound international students tripled; it increased more slowly for students from Northern Africa (by 2.3 times), sub-Saharan Africa (by 2.4 times) and small island developing states (by 1.5 times) (**Figure 16.4a**). Only the Least Developed Countries increased their number of international students at a significantly faster pace than the rest of the world (by 3.7 times).

> Between 2000 and 2021, only the Least Developed Countries increased their number of international students at a significantly faster pace than the rest of the world

At the same time, the number of students from some of these countries attending tertiary education at home also increased. As a result, the outbound mobility ratio, which expresses the number of students from a given country studying abroad as a percentage of total tertiary enrolment in that country, did not necessarily increase between 2000 and 2021. In Northern Africa, it remained the same at about 2.6%, tracking the global trend. The outbound mobility rate fell sharply in sub-Saharan Africa, from 7.3% in 2000 to 4.7% in 2021. It also fell overall but has bounced back since

BOX 16.1:

Germany leads in funding international students

Germany has been the largest ODA contributor of scholarships and imputed student costs to developing countries. In 2022, Germany accounted for 41% of total donor spending in this area, an increase of 10 percentage points compared to 2010. In contrast, France's share fell from 27% to 21% in this period.

The significant increase in Germany's financial support corresponds to the influx of international students into German universities, particularly from ODA-eligible countries. The number of international students has increased from 180,000 in 2000/01 to 312,000 in 2014/15 and 443,000 in 2022/23. According to the Federal Ministry of Education and Research, the share of students from low-income countries remained constant at just over 1% from 2000/01 to 2014/15 but increased to 6% by 2022/23. Together with lower-middle-income countries, they account for 35% of the total number of international students (**Figure 16.3a**). The latest German Academic Exchange Service report confirms a significant rise in international students from Egypt, India, the Islamic Republic of Iran and the Syrian Arab Republic (Heublein et al., 2023), the last fleeing a protracted crisis. Students from upper-middle-income countries such as China and Türkiye account for 28% of Germany's total international student population.

The increase in ODA allocations aligns with the increase in the number of international students from low- and lower-middle income countries. But the volume of scholarships, which was steadily declining in the 2010s, collapsed during COVID-19. In 2022, Germany was spending a fraction of what it spent on scholarships in 2010 (**Figure 16.3b**).

By legal mandate, Germany offers tuition-free education to international students from developing countries. But recent changes to the fee structure may influence the distribution of foreign students coming to Germany. In 2017, the state of Baden-Württemberg introduced a new law that allows charging EUR 1,500 per semester for students from outside the European Economic Area (EEA) studying at public institutions. Although about half of international students meet exemption criteria (e.g. they are students who graduated from a German secondary school; married to or are a child of an EEA citizen; or refugees), a recent evaluation of the reform estimated that the introduction of tuition fees reduced the enrolment rate of international students in the state by two percentage points. Enrolment rates in Baden-Württemberg of students from Africa and Asia dropped the most (Vortisch, 2024).

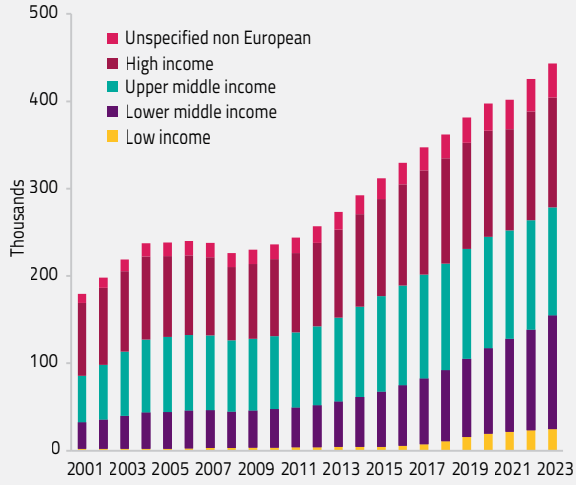
Continued on next page...

BOX 16.1 CONTINUED:

FIGURE 16.3:

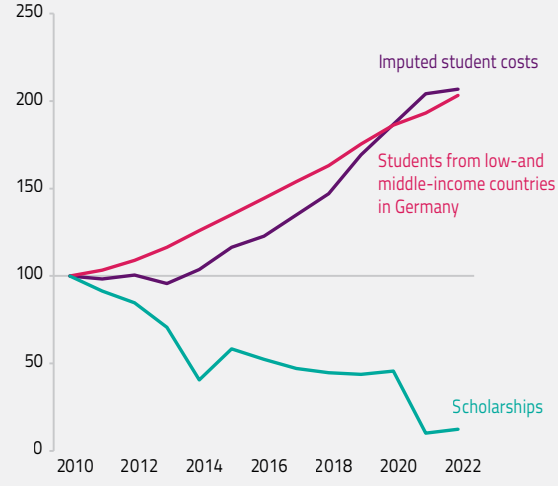
In Germany, the number of students from low- and lower-middle-income countries has increased almost fivefold in the past 20 years

a. Number of international students, by country income level, Germany, 2000–23



GEM StatLink: https://bit.ly/GEM2024_fig16_3
Source: Germany Ministry of Education and Research (2023).

b. Growth in the population of international students and ODA allocation by type, 2010–22 (2010=100)

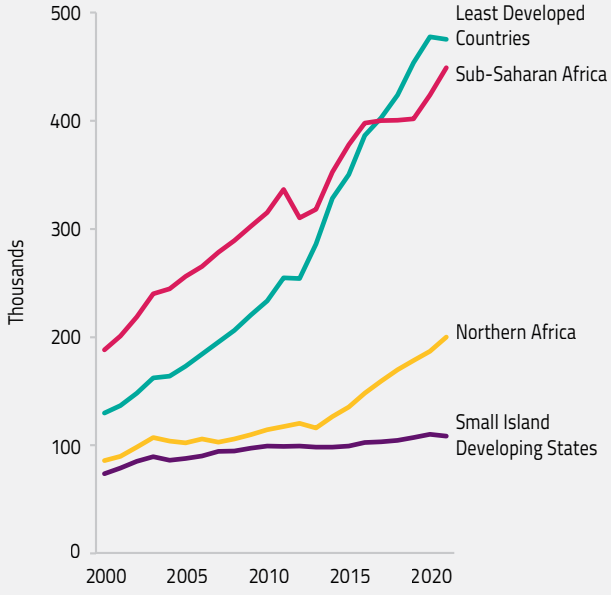


Source: Germany Ministry of Education and Research (2023) and OECD Creditor Reporting System database.

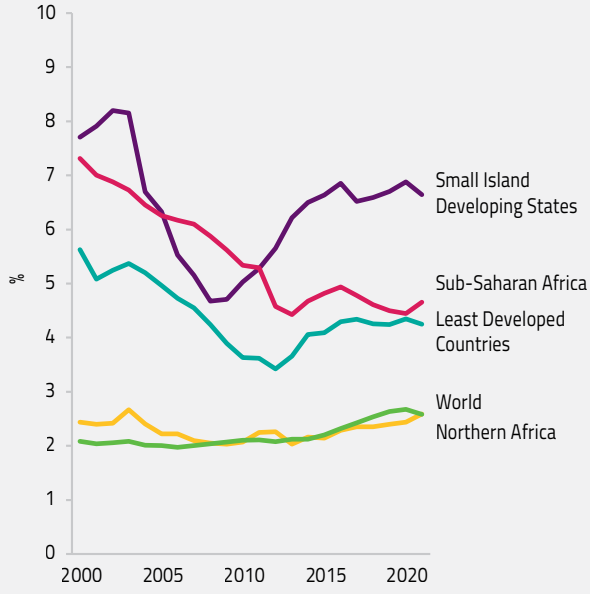
FIGURE 16.4:

The number of international students has been steadily rising since 2000

a. Number of outbound international students, by region, 2000–21



b. Outbound mobility ratio, by region, 2000–21



GEM StatLink: https://bit.ly/GEM2024_fig16_4
Source: UIS database.

reaching a low point in the Least Developed Countries (since 2012) and in the small island developing states (since 2008) (**Figure 16.4b**).

These average trends mask different national trajectories. Between 2013 and 2021, the outbound mobility ratio dropped in Chad and Niger by about 10 percentage points but significantly increased in the Lao People's Democratic Republic (by 6 points) and Nepal (by 12 points) (**Figure 16.5**). Since the number of international students increased in all four countries – by around 50% in Chad and Niger, 75% in the Lao People's Democratic Republic, and 175% in Nepal – this means that the number of domestic students grew faster than the number of international students in Niger and Chad, but slower in the Lao People's Democratic Republic and Nepal.

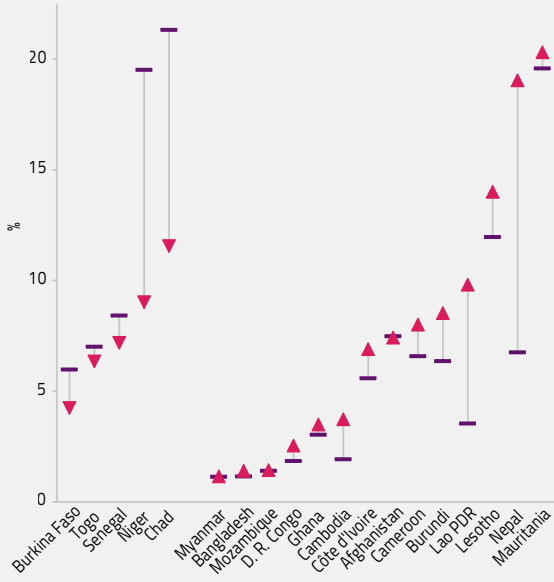
Language preference and historical ties are likely to influence students' destination (Woldegiorgis and Doevenspeck, 2015). Two thirds of international students from Northern Africa and more than half of students from sub-Saharan Africa travel to Northern America and Western Europe to pursue tertiary education. France was the main destination in 2021, hosting 62,000 sub-Saharan African students and 70,000 students from Northern Africa. One fifth of sub-Saharan African international students stayed in the region, with South Africa being the main destination, receiving nearly 30,000 students in 2021.

FOCUS 16.1. NEW FUNDING SOURCES OF SCHOLARSHIPS ARE EMERGING

In recent years, more governments outside the DAC members have been supporting national and regional universities and promoting regional student mobility (Kent, 2018). The share of ODA for scholarships from non-DAC countries rose from 1% in 2014 to 9% in 2022 (**Figure 16.6a**). Qatar, Romania, Saudi Arabia and Türkiye have significantly increased their ODA on scholarships, from just USD 29 million in 2013 to USD 450 million in 2022. Since 2018, a large part has gone to Syrian students (**Figure 16.6b**).

> "There is no established mechanism that systematically gathers and reports information on scholarships from non-state actors"

FIGURE 16.5:
International student mobility increased in some countries while it fell in others
Outbound mobility ratios, selected countries, 2013–21



GEM StatLink: https://bit.ly/GEM2024_fig16_5
Source: UIS database.

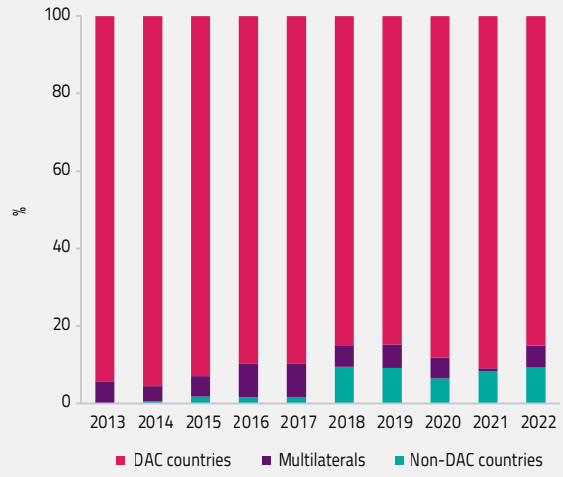
While international scholarships have historically been funded by governments (Perna et al., 2014), non-state actors outside of the Global North have been taking on a more prominent role. Non-state actors include private foundations, corporate foundations, consortiums of private donors, individual philanthropists, non-governmental organizations that accept donations, private universities, research institutes and religious organizations (Campbell, 2021). There is no established mechanism that systematically gathers and reports information from these actors. Nevertheless, it is possible to trace some developments in this diverse landscape.

In sub-Saharan Africa, a small number of large providers accounts for most scholarships (UNESCO, 2020). Non-state actors such as the ABSA Bank in South Africa, Kulika in Uganda, Zawadi Africa Education Fund in Kenya and the Mastercard Foundation offer various opportunities to higher education students (Campbell, 2021).

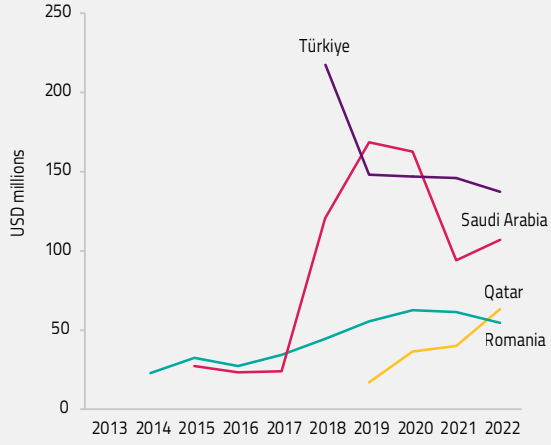
The Mastercard Foundation launched its Scholars Program in 2012 targeting high-achieving youth with demonstrated leadership potential. Scholars are selected by and receive academic and social support from a network of Mastercard

FIGURE 16.6:
Contributions from non-major industrialized nations are on the rise
Aid to education in the form of direct scholarships and imputed student costs, 2013–22

a. By type of donor



b. By non-DAC countries donor



GEM StatLink: https://bit.ly/GEM2024_fig16_6
Source: OECD Creditor Reporting System database.

partners, including an African leadership academy, non-governmental organizations and universities. The support includes orientation and tutoring; leadership, entrepreneurship and community service training activities; and access to networks, resources (such as counselling) and opportunities for professional preparation (such as internships). Scholars also receive financial support, which varies by partner but generally includes tuition and fees; books, a laptop and other learning materials; accommodation; a living stipend; health insurance; and travel expenses. Between 2012 and 2019, the Scholars Program supported 5,100 scholars at the undergraduate and 1,000 scholars at the graduate level. In 2019, just before COVID-19, the programme further committed USD 850 million for 9,000 university students and also for 26,000 secondary education scholarships. Two thirds of scholars studied in their home country, and nearly all the African alumni who studied in Africa stayed on the continent. Among African scholars who studied abroad, about 50% had returned (Cosentino et al., 2019).

In the Arab states, governments drive higher education funding through large programmes, such as the King Abdullah Scholarship Program launched in 2010 in Saudi Arabia, one of the largest overseas scholarship programmes worldwide (Hilal, 2013). Private foundations provide additional funding support, such as the Qaddumi Foundation supporting Palestinian students, the Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research supporting Emirati students and the Elia Nuqul Foundation supporting Jordanian students (Campbell, 2021).

In South Asia, the J. N. Tata Foundation, the Education Future International Scholarship and the Aga Khan Foundation administer programmes according to a new hybrid model, combining scholarships and education loans. In Japan, the Kobayashi International Scholarship Foundation and the Mitsubishi Corporation International Scholarship offer scholarships to outstanding students from Asia coming to Japanese universities. In China, the Schwarzman Scholars is a programme which funds up to 200 students annually – 20% Chinese students, 40% American and the remaining 40% from other countries – to attend a one-year masters at Tsinghua University in Beijing (Campbell, 2021). China has developed into a major scholarship provider for students from developing countries, although calculating the flows is not straightforward (**Chapter 18**).

International student mobility among Latin American students is relatively low, with most students heading to the United States (UIS, 2024; IESALC, 2019). In Brazil, Science Without Borders, a flagship scholarship programme launched in 2011 and funded by the Brazilian government, was terminated in 2017 for reasons ranging from students' low English proficiency to the lack of a strategy for the internationalization of the higher education sector (Nery, 2018; Sá, 2016). Two major actors are the Lemann Foundation and the Brazil Foundation, which offer scholarships to Brazilian students accepted to globally top-ranked universities, with the objective of developing the skills of tomorrow's leaders in Brazil (Campbell, 2021).

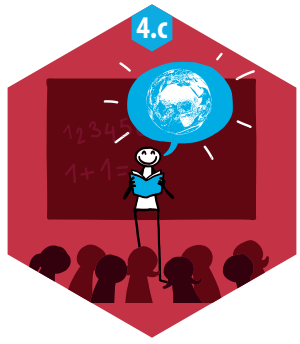
Students ready to graduate from Sebeta Special Needs Education Teachers College

Credit: © GPE/Kelley Lynch*

KEY MESSAGES

- Globally, at least a bachelor's degree is required by 38% of countries in pre-primary, 50% in primary, 62% in lower secondary and 73% in upper secondary education. In sub-Saharan Africa, however, 17% of countries only require a lower secondary certificate to teach in primary.
- Monitoring pedagogical training is hard because of the lack of a common international classification. Globally, around 85% of teachers in pre-primary, primary and secondary education have received at least the minimum pedagogical teacher training. These shares have declined in Europe and Northern America and in sub-Saharan Africa.
- There are between 10 and 30 students per teacher in primary education in most countries. Ratios can be far higher when considering only trained teachers. In Mali, where only 36% of teachers have the minimum pedagogical teacher training, there are 50 students per teacher, but 133 students per trained teacher.
- New UIS data shows that 45% of countries have a policy of compulsory continuous professional development for pre-primary teachers and 53% for primary and secondary education teachers. But policies are not enough. Fewer than 60% of primary school teachers in Denmark, Finland, Norway and Türkiye participated in-service training.
- Insufficient teachers in classrooms can be due to a shortage of teachers or a shortage of teacher positions. The first is more common in rich countries due to higher pressures, lower relative salaries and the declining prestige of the teaching profession. The second is more common in poorer countries, due to the higher relative costs of teachers and constrained budgets. In Senegal, in 2020, there was a surplus of over 1,000 qualified teachers.

CHAPTER 17



TARGET 4.c

Teachers

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

GLOBAL INDICATOR

4.c.1 – *Proportion of teachers with the minimum required qualifications, by education level*

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*

Qualified and trained teachers are at the core of SDG target 4.c. SDG global indicator 4.c.1, which is the 'proportion of teachers with the minimum required qualifications', is meant to capture whether teachers have received specific pedagogical training, while SDG thematic indicator 4.c.3 is the 'proportion of teachers qualified according to national standards' and is meant to capture teachers' academic qualifications. Nevertheless, there is still a lack of global understanding over the differences between these two concepts. Many countries do not distinguish between them in their language or administrative procedures, leading to data quality concerns (UNESCO, 2024b). International comparability is also hindered by the indicators' reliance on national requirements and minimum standards, which differ considerably between countries.

A new UIS survey on national teacher requirements aims to shed light on the concept of teacher preparedness. Results show that the most common academic requirement to teach across countries is a bachelor's degree. But in sub-Saharan Africa, the most prevalent qualification to teach in primary education is an upper secondary certificate, and 17% of countries in the region only require a lower secondary certificate. Minimum requirements tend to increase with countries' income level: only 4% of low-income countries require teachers to have a bachelor's degree to teach in pre-primary education, compared to 69% of high-income countries. Globally, at least a bachelor's degree is required by 38% of countries in pre-primary, 50% in primary, 62% in lower secondary and 73% in upper secondary education (UNESCO, 2024b).

Results from this survey can be used to revise the indicators under target 4.c. In line with the overarching principle of using comparable and standardized data, the UIS has proposed that the global indicator for target 4.c be revised to be the 'proportion of teachers with the minimum required academic qualification according to a global standard, by education level taught'. The global standard could be set using the most prevalent minimum requirement across countries, for example a bachelor's degree to teach upper secondary education. Data for this potential new indicator are being collected in 2024 as part of the UIS annual education data collection. The current indicator on the share of teachers with the minimum academic qualifications according to national standards (4.c.3) would remain as a thematic indicator to complement and contextualize the global one (UNESCO, 2024c).

Data on minimum pedagogical training requirements are harder to collect and compare given the wide variety of programmes and the lack of a common international classification. Pedagogical training can be acquired from teacher training programmes that grant a teacher diploma, whether concurrent or consecutive, or through short programmes that combine work in schools with tailored training. The UIS piloted a survey with 25 countries to begin the development of an International Standard Classification of Teacher Training Programmes (ISCED-T), but low response rates and challenges in collecting comprehensive data mean that ISCED-T is not immediately scalable.

Using current data on the minimum required qualifications countries reported for global indicator 4.c.1, it is estimated that about 85% of teachers in pre-primary, primary and secondary education globally have received at least the minimum pedagogical teacher training. In primary education, for which trend data are available, the share decreased from 90% in 2010 to 85% in 2023, while the total number of teachers increased by more than 5 million (**Figure 17.1**).

> In Europe and Northern America, the share of teachers with minimum qualifications has been gradually decreasing, from 98% in 2010 to 93% in 2023

In Europe and Northern America, the share of teachers with minimum qualifications has been gradually decreasing, from 98% in 2010 to 93% in 2023. Of the 250,000 teachers added between 2010 and 2023, more than 230,000 – or 92% of them – did not have the minimum required qualifications. This trend is a result of increasing teacher shortages in the region (**Focus 17.1**). In Sweden, shortages have increased the hiring of teachers with partial qualifications, including substitute teachers or those transitioning from other professions, who now make up 22% of all secondary school teachers. In Denmark, nearly 30% of primary and lower secondary school teachers do not meet all the national requirements to be teachers. Most of them are students taking a sabbatical year from their studies to work as teachers and fill immediate staffing needs. In Iceland, the share of non-fully qualified teachers in primary and lower secondary education increased from 4.5% in 2015 to 17% in 2023 (OECD, 2024a).

FIGURE 17.1:
In some regions, increases in the number of teachers means more untrained teachers
Number of teachers in primary education with and without the minimum required organized pedagogical teacher training, by region, 2000–23

GEM StatLink: https://bit.ly/GEM2024_fig17_1
Source: UIS database.

PUPIL/TEACHER RATIOS

Pupil/teacher ratios are a good indication of an education system's resource intensity. Within the SDG framework, pupil/teacher ratios are aligned with the teacher qualifications indicators: indicator 4.c.2 measures the pupil to trained teacher ratio in line with indicator 4.c.1, while indicator 4.c.4 measures the pupil to qualified teacher ratio in line with indicator 4.c.3. The pupil/trained teacher ratios are higher than pupil/teacher ratios, as there are fewer trained teachers than the entire pool of teachers. In most countries, there are between 10 and 30 students per teacher in primary education (**Figure 17.2**).

Ratios are higher in sub-Saharan Africa, where at least 12 countries have over 40 students per teacher. In Chad and Mozambique, there are 57 students per teacher.
In countries where there is a low share of teachers with the minimum required qualifications, the pupil/trained teacher ratio is even higher. In Mali, where only 37% of teachers have the minimum qualifications, there are 50 students per teacher, but 133 students per trained teacher. Mali's National Strategy for Teachers 2021–25 establishes the goal of setting up a system of teacher recruitment only to holders of a professional certificate or teaching permit as required by the education level in which they teach (Mali Ministry of National Education, 2020).

FIGURE 17.2:

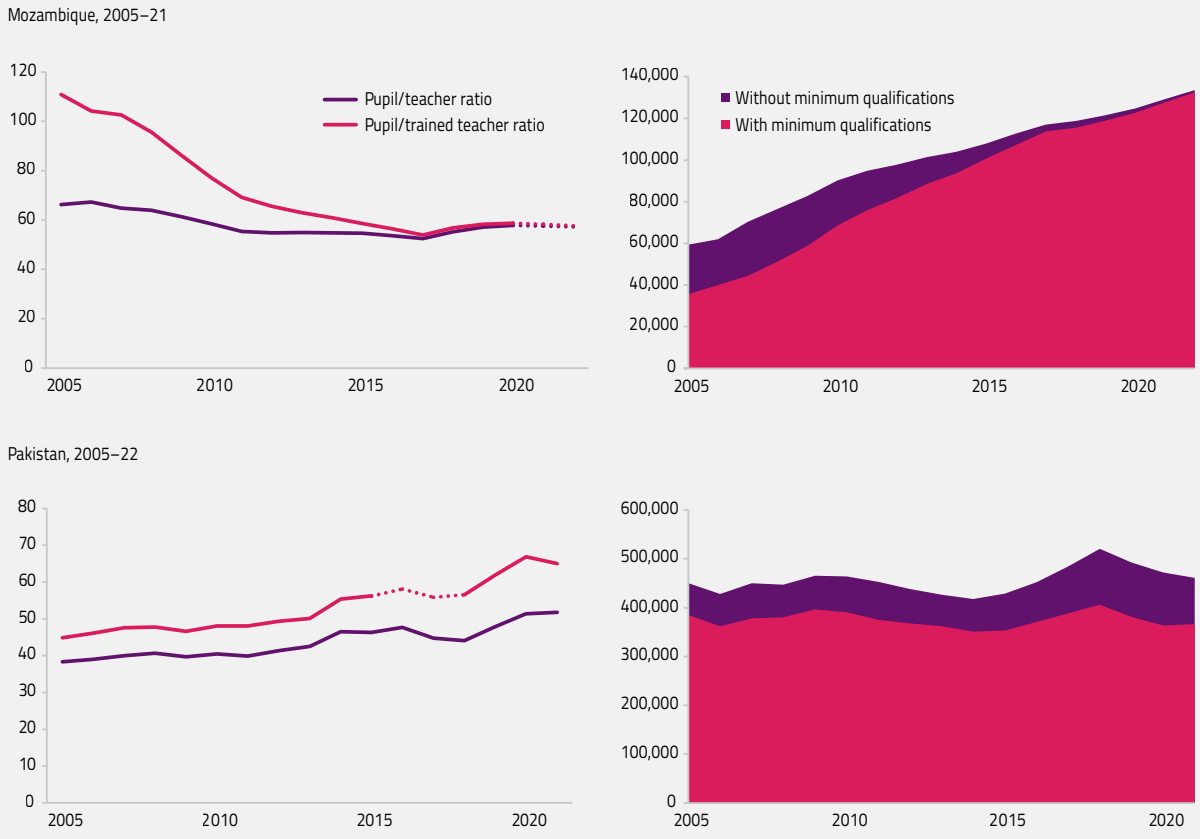
Low shares of trained teachers increase the pupil/trained teacher ratio

Pupil/teacher ratio and pupil/trained teacher ratio, primary education, 2021–23

GEM StatLink: https://bit.ly/GEM2024_fig17_2

Source: UIS database.

FIGURE 17.3:
Trends in pupil/trained teacher ratios can reflect changes in the share of trained teachers or in the relative number of teachers
Pupil/teacher and pupil/trained teacher ratio, primary education *Number of teachers and trained teachers, primary education*

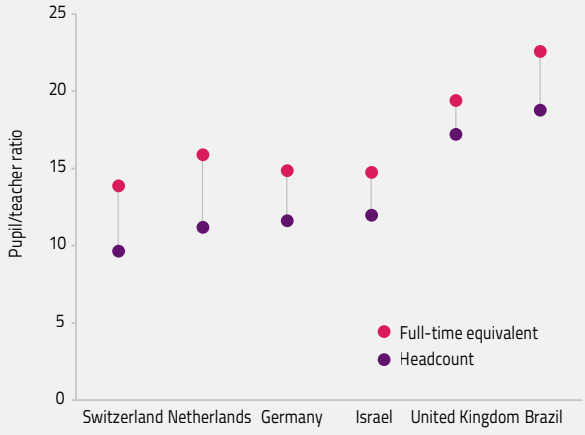


GEM StatLink: https://bit.ly/GEM2024_fig17_3
Source: UIS database.

The pupil/trained teacher ratio can decrease over time either by hiring more trained teachers or by training current teachers. In Mozambique, the pupil/trained teacher ratio in primary education has sharply decreased, from 111:1 in 2005 to 58:1 in 2022 (**Figure 17.3**). This trend, however, does not reflect an increase in the number of teachers per student, as the pupil/teacher ratio remained relatively stable during the period. Instead, it reflects the increase in the share of trained teachers from 60% in 2005 to 99% in 2022. Much of this increase is due to the establishment of the Instituto de Aperfeiçoamento de Professores (Institute for Teacher Improvement) in 2004, which began to organize training programmes specifically for teachers who were already employed (Mozambique Ministry of Education, 2004; Nicaquela and Assane, 2021). In Pakistan, fluctuations in the pupil/trained teacher ratio during this period reflected changes in the actual number of teachers per student, with the share of trained teachers remaining mostly constant between 80% and 85%.

Both the pupil/teacher ratio and the pupil/trained teacher ratio are calculated using headcounts: each teacher counts as one regardless of how many hours they work. Low pupil/teacher ratios, therefore, do not necessarily mean that the system has more teaching resources. In Lebanon, for example, the pupil/teacher ratio at the primary education level is relatively low at 14:1. However, this is partly driven by the high share of non-civil servant teachers who only teach a few hours a week. At the secondary education level, half of them only teach seven hours or less a week (Pushparatnam et al., 2024). When teachers' working hours are known, it is possible to calculate the pupil/teacher ratio using full-time equivalents (i.e. a teacher who works 50% of the statutory working hours only counts as 0.5). However, this measure can be very different for countries with many part-time teachers. In the Netherlands, where 71% of primary teachers work part time, the pupil/teacher ratio is 11:1 using headcounts but 16:1 using full-time equivalents (OECD, 2024b) (**Figure 17.4**).

FIGURE 17.4:
Pupil/teacher ratios can be considerably higher when taking into account teachers' working hours
Pupil/teacher ratios in primary education measured using teacher headcounts and full-time equivalents, selected countries, 2022



Note: Headcount ratios count every teacher as one. Full-time equivalent ratios count every teacher by their fraction of working hours. A teacher who works 50% of the statutory working time counts as 0.5.
GEM StatLink: https://bit.ly/GEM2024_fig17_4
Source: OECD (2024a).

There is no evidence to suggest an ideal pupil/teacher ratio for each level of education. High values are likely to indicate a shortage of teachers (**Focus 17.1**), which can result in difficult working conditions and insufficient resources for students. Low values are typically seen as more favourable, but they can also be a sign of inefficiency. In Lebanon, the relatively low pupil/teacher ratio is also explained by a high prevalence of small schools (Pushparatnam et al., 2024). Over one third of general education schools (pre-primary to upper secondary) have a pupil/teacher ratio below 10:1. In schools with fewer than 100 students, which represent nearly one fifth of schools, the average ratio is 7:1 (CRDP Lebanon, 2021). According to a World Bank estimate, by reorganizing the school network, increasing working hours and reducing the number of small-contract teachers, Lebanon could free up nearly 10% of the Ministry of Education and Higher Education's budget to invest in the quality of education delivery (World Bank, 2024).

IN-SERVICE TRAINING

Continuous professional development – or in-service training – is essential to ensure that teachers constantly improve their skills, practices, subject knowledge and capacity to cope with different learning environments. It is also a key factor in retaining teachers in the profession, particularly for those working with disadvantaged students (Geiger and Pivovarova, 2018; Ovenden-Hope et al., 2018). The importance of this dimension for target 4.c is captured in SDG thematic indicator 4.c.7, which is the 'percentage of teachers who received in-service training in the last 12 months'.

> 45% of countries have a compulsory continuous professional development policy for pre-primary education and 53% for primary and secondary education

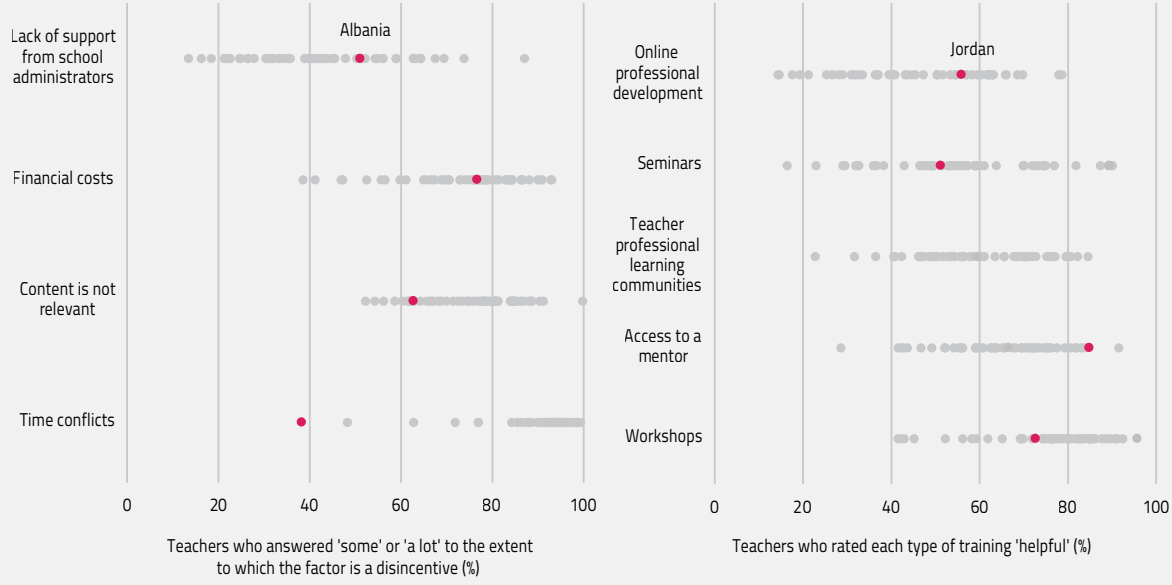
There are significant differences across countries on the extent to which teachers are encouraged or required to participate in professional development. A new UIS data set monitors whether countries have a compulsory continuous professional development policy. The data set shows that 45% of countries have such a policy for pre-primary education and 53% for primary and secondary education. Countries with higher academic level requirements for teachers are more likely to have a compulsory continuous development policy. This positive association is in large part driven by countries' income level. Richer countries are both more likely to have a higher academic requirement and to mandate compulsory professional development (UNESCO, 2024b).

Nevertheless, compulsory policies and financial resources may not be enough. The share of teachers who have received in-service training in the past year varies widely across countries and does not necessarily increase with income. The latest data for this indicator at the primary level come from the Progress in International Reading Literacy Study (PIRLS) 2021, released in 2023, which focus on grade 4 reading teachers. While nearly all primary school teachers in Azerbaijan, Egypt, Oman and Uzbekistan received training, participation was below 60% in Denmark, Norway and Türkiye and below 50% in Finland. In most countries, male and female teachers have similar rates of participation in in-service training. Exceptions include European countries, where overall participation is relatively low, and men are considerably less likely to participate. In Austria, 87% of female teachers participated in training compared to only 44% of male teachers. The gap is greater than 10 percentage points in Finland and France, and more than 20 percentage points in Denmark and Slovakia.

FIGURE 17.5:
Format and content of in-service training matter
Primary teachers, 2021

a. Teachers for whom the following factors were 'somewhat' or 'a lot' a disincentive to participate in professional development (%)

b. Teachers for whom the following types of professional development programmes were 'helpful' or 'somewhat helpful



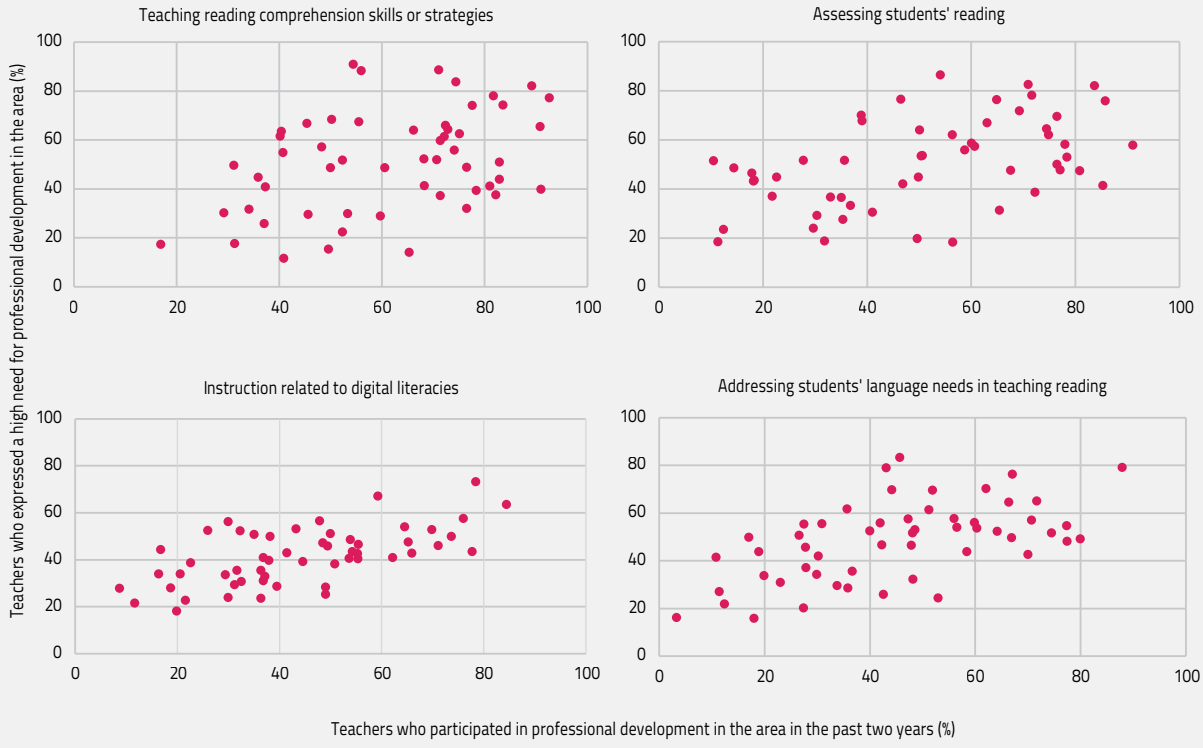
GEM StatLink: https://bit.ly/GEM2024_fig17_5
Source: Mullis et al. (2023).

Various obstacles hinder participation. In most PIRLS-participating education systems, at least 90% of teachers said time constraints were a disincentive to participating in professional development activities (**Figure 17.5a**). In some countries, financial costs and lack of support from school administrators represent greater barriers. In Albania, 77% of teachers said financial costs and 51% said lack of support from school administrators were a disincentive to participation. Specific policies can help overcome these barriers, including covering the cost of participation and of a substitute teacher and providing paid leave of absence. In some countries, professional development is required for career development. It is mandatory for teachers to get a promotion in the Republic of Korea, a salary increase in Israel or take on induction responsibilities in Ireland. Some upper-middle- and high-income countries also cover the costs for participation in non-compulsory professional development (OECD, 2022).

Another important element for participation is the content of the training. On average, three quarters of teachers in PIRLS-participating education systems stated that the irrelevance of content was a disincentive to participate in professional development. This was true for at least 50% of teachers in all education systems. The content of compulsory professional development is often mandated by central or local governments, with little input from teachers and schools. In some countries, including Colombia and Greece, teachers can decide which professional development activities they can undertake (OECD, 2022).

Across PIRLS-participating education systems, the most common topic for primary reading teachers' professional development was 'teaching reading comprehension skills or strategies'. Other prevalent ones included 'assessing students' reading', attended by over 90% of teachers in Egypt, and 'instruction related to digital literacies', attended by over 75% of teachers in Serbia and Uzbekistan. For all areas of professional development assessed, the higher the participation rates, the higher the share of teachers who reported a high need for development in that area (**Figure 17.6**). This association may suggest that teachers who participate in training realize how helpful it is and therefore prioritize their further development in the topic. This is especially true in rapidly evolving fields such as digital literacy (UNESCO, 2023).

FIGURE 17.6:
More training on a given topic is associated with a higher need for that training
Percentage of reading teachers in primary education who have participated in formal professional development in reading over the past two years and who would prioritize the need for future professional development as 'high', by content, 2021



GEM StatLink: https://bit.ly/GEM2024_fig17_6
Source: Mullis et al. (2023).

Not all training is equally helpful. Different formats, for example, can have different levels of effectiveness. On average, across PIRLS-participating education systems, teachers rated workshops as the most helpful and online programmes as the least helpful type of professional development (**Figure 17.5b**). There is some variation across countries. In Jordan, 85% of teachers believed having access to a mentor, such as a literacy coach, was helpful, the highest across the different types of professional development assessed. In nearly all countries, however, online professional development was the least likely to be considered helpful by teachers. Research highlights that training tends to be more effective when teachers can collaborate and actively engage in their own development and learning (Cordingley et al., 2015; Dunst et al., 2015; Ovenden-Hope et al., 2018). Many also argue for a school-embedded approach to professional development that is more contextualized and sustained over time (OECD, 2019; Postholm, 2018).

The different features of in-service training available in countries also have an impact on the comparability of results (e.g. participation might be higher in countries that offer more online training). Hoping to improve data collection and reporting, the UIS has proposed a new indicator on whether a country's in-service teacher training policies have specific features regarding content, format and duration. This indicator would complement the existing indicator on training participation (UNESCO, 2024c).

FOCUS 17.1. 'TEACHER SHORTAGES' IS USED TO DESCRIBE DIFFERENT PROBLEMS WHICH REQUIRE DIFFERENT POLICIES

Teacher shortages have been gaining increased attention worldwide. UNESCO has projected a need for 44 million additional primary and secondary teachers to meet SDG 4 targets by 2030 (UNESCO, 2024a). But using the term 'shortage' to describe phenomena with different

causes – insufficient supply and insufficient demand – and in need of different policy responses can be confusing. It would, therefore, be more useful to distinguish between a 'shortage of teachers' and a 'shortage of teaching positions':

- Vacancies but no teachers: An insufficient supply of teachers means that there are not enough qualified and interested candidates to fill current vacancies. This can be due to low enrolment in teaching programmes, low uptake of teaching positions or high attrition from the profession.
- Teachers but no vacancies: An insufficient demand for teachers means that there are not enough teaching vacancies available, usually because of budgetary restrictions, even though more teachers are needed to maintain or improve learning conditions and teachers are available.

These two challenges are often conflated because they lead to common outcomes, such as high pupil/teacher ratios, a high share of non-qualified or non-trained teachers, the strong prevalence of teaching 'out of field' (i.e. a subject unrelated to the teacher's specialization), double shifts, and multigrade classes.

> Using the term 'shortage' to describe phenomena with different causes – insufficient supply and insufficient demand – and in need of different policy responses can be confusing

In upper-middle- and high-income countries, there tends to be a teacher shortage on the supply side, with an insufficient pool of qualified and interested candidates. On average, in middle- and high-income countries, only about 4% of 15-year-olds wanted to become teachers in 2015, ranging from as low as 1% in Canada, Denmark and Latvia to 10% in Thailand, 12% in Tunisia and Viet Nam, and 23% in Algeria (OECD, 2018). Low interest has translated into low and sharply decreasing numbers of entrants into teaching programmes in many high-income countries. In Hungary, which faces teacher shortages in secondary education, the share of new tertiary entrants in the field of education fell from 12% in 2015 to 7% in 2022 (OECD, 2024a, 2024c). In the Netherlands, it fell from 10% to 7% and in the United Kingdom from 8% to 5% (OECD, 2024c).

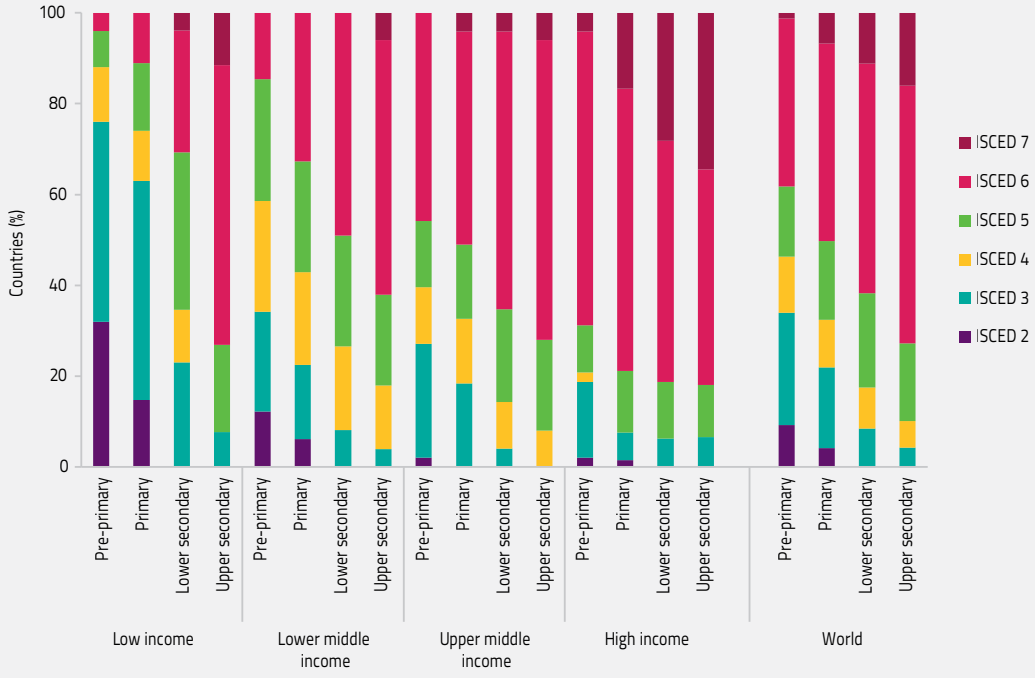
In Australia, where teacher shortages have reached an unprecedented level, nearly two thirds of teenagers who expressed interest in becoming teachers gave up by the time they turned 23 (Sikora, 2021; Withers, 2024). The number of graduates from initial teacher education declined by 17% in only three years between 2017 and 2020 (Australia Department of Education, 2022). A series of reforms, including scholarships for teacher education programmes, have been introduced to increase the attractiveness of the profession (OECD, 2024a).

In low- and lower-middle-income countries, the challenge tends to be a shortage of teaching positions, where in many cases the number of qualified teaching candidates surpasses the number of available teaching positions. In Senegal, over 3,000 candidates successfully passed the competition to become teachers in 2020, but despite the government's initial commitment to hire all of them, only 2,000 were hired (Faye, 2021). The surplus of qualified teachers available in Senegal contrasts with the fact that around one quarter of primary and lower secondary teachers do not have the minimum required qualifications to teach at those levels. In Congo, the Ministry of Education's 2022–26 recruitment plan proposed hiring 4,000 teachers per year during the period. But the Ministry of Finance, which decides on the number of vacancies, only authorized 1,500 positions in 2023 (Gouëdard, 2024).

Several factors help explain the differences between countries at different income levels in terms of teacher shortages or teacher position shortages. First, the level of qualification required for teaching tends to be higher in richer countries. In most high-income countries, teachers are required to have at least a bachelor's, and often a master's, degree to teach in pre-primary, primary and secondary education (**Figure 17.7**). Having higher qualifications increases the options available to teachers in other areas. A meta-analysis in high-income countries concludes that teachers with higher qualifications and specializations are more likely to leave the profession (Nguyen et al., 2020).

The high level of formal education required in high-income countries contrasts with the declining prestige of the teaching profession. In a survey of over 100 teacher unions, no European or North American country selected teaching as the most respected profession. This was only the case in Argentina, Côte d'Ivoire, Kenya, Lesotho, the Republic of Korea and Sri Lanka (Stromquist, 2018). In the United States, the social status of the teaching profession – including occupational prestige, interest among students, number of entrants and job satisfaction – is at its lowest level in 50 years (Kraft and Lyon, 2024).

FIGURE 17.7:
Richer countries often set higher minimum qualifications for teachers
Minimum required qualification to teach by education level and country income group, 2023



Notes: The ISCED classifications correspond to the following education levels: 2 = lower secondary; 3 = upper secondary; 4 = post-secondary, non-tertiary; 5 = short-cycle tertiary; 6 = bachelor's; and 7 = master's.
GEM StatLink: https://bit.ly/GEM2024_fig17_7
Source: UIS teacher requirements database.

Meanwhile, low national requirements and weak planning can contribute to a surplus of qualified teachers in poorer countries. In Ethiopia, enrolment in colleges of teacher education (CTE) – the minimum required qualification for primary and lower secondary teachers – is an alternative study path for academically weaker students. At the end of grade 10, students take a national examination that selects those who qualify for the 'preparatory level' (grades 11 and 12), which aims at preparing students for higher education. Those who do not pass the examination may enrol in CTEs or in technical and vocational education institutes (Ethiopia Ministry of Education, 2018). Due to the high number of entrants to CTEs, the supply of potential qualified teachers in the country is increasing much faster than demand. In 2019, the number of CTE graduates (86,363) was higher than attrition (10,944) combined with the number of unqualified teachers (52,439). This means that the number of graduates in 2019 alone would be enough to replace the teachers who left, substitute all unqualified teachers and still add 22,980 new members to the teaching force (Ethiopia Ministry of Education, 2020).

> "Low national requirements and weak planning can contribute to a surplus of qualified teachers in poorer countries"

Other important factors include salary and type of contract. In most high-income countries, teacher salaries are lower than those of similarly educated workers, increasing the opportunity cost of staying in the classroom. In low- and lower-middle-income countries, although not always the case, teachers are more likely to earn salaries that are on par with other professions at similar qualification levels (Bennell, 2023; UNESCO, 2021). Moreover, teachers are often civil servants with stable contracts and other benefits, which may be more valuable in countries with poor safety nets and a high share of informal employment (Barton et al., 2017).

The relatively higher administrative and budgetary costs of hiring qualified teachers help explain the insufficient demand in some low-income contexts. In Madagascar, recruitment into the civil service was frozen between 2018 and 2023 due to budgetary constraints, forcing many parents' associations to hire community teachers locally who tend to be underqualified and underpaid. The share of community teachers rose from 6% in 2015 to 32% in 2021, despite a ban on this type of recruitment by the Ministry of Education since 2014, in an attempt to improve teacher quality (Gouëdard, 2023).

Within countries, supply and demand challenges also apply to difficulties staffing specific schools, such as those in rural or disadvantaged areas. In the case of insufficient supply, two different phenomena may be occurring: there is a scarcity of teachers at the system level or teachers do not take positions in certain schools even if the alternative is to not teach at all. In Ecuador's centralized teacher selection process, prospective teachers apply for up to five school vacancies and are assigned to one of them by an algorithm. Because schools in favourable locations receive too many applications and disadvantaged schools too few, at the end of the process, a large number of vacancies remain unfilled and a large number of candidates – 56% of them in 2016 – are not hired at all (Ajzenman et al., 2021).

In decentralized systems, shortages may be the result of different policy responses. In Brazil, the states of Pará and Rio Grande do Sul have around the same number of students, but Rio Grande do Sul – which has double the gross domestic product per capita – has twice as many teachers (IBGE, 2023; INEP, 2024). There is a sufficient supply of teachers. The field of education is the most common bachelor's degree in Brazil and both states counted about 7,700 education graduates each in 2022 (INEP, 2023; Pinto dos Santos, 2022). But there is a difference in the availability of teaching positions. In 2018, the government of Pará conducted a public selection process to fill 2,112 open teaching positions (State of Para Government, 2018). However, the government continuously postponed the appointment of over one quarter of the approved candidates and only finalized hirings in 2022 (Menezes, 2020; State of Para Government, 2022; Tapajos de Fato, 2021). Meanwhile, Rio Grande do Sul opened and filled 1,500 teaching positions in 2023 and has planned to open another 3,000 vacancies in 2024 (State of Rio Grande do Sul Government, 2024a, 2024b).

Countries also face teacher shortages for subject areas. For example, a lack of science, technology, engineering and mathematics teachers in many high-income countries can be traced to insufficient supply. In England, United Kingdom, entry into initial teacher training is only 17% of the target number for physics and 30% for computing (Department for Education, 2019). In the United States, there were over 30,000 vacancies for physics teachers in 2019 but only some 6,000 physics majors (Foresman, 2019). But other systems face a demand challenge. In countries where school funding is tied to the pupil/teacher ratio, it is not always possible, especially in small schools, to have appropriately trained teachers covering the full spectrum of classes needed, leading to a high incidence of teaching out of field (Hobbs and Porsch, 2021).

> "A lack of science, technology, engineering and mathematics teachers in many high-income countries can be traced to insufficient supply"

Different types of shortages require different policy responses. A lack of interested teachers calls for policies related to increasing the attractiveness of the teaching profession and improving retention rates. A lack of teaching positions calls for better financing and planning. In either case, better understanding the problem can help governments better address it.

Kiran Srivastav and Hari Om get ready for school at their home in the slums of Madanpur Khadar in New Delhi, India, 10 November 2021. On 10 December, UNESCO's Global Education Monitoring (GEM) Report will release a report called Who Chooses, Who Loses, at the RewirED forum in the UAE. It provides the most comprehensive assessment yet of the role and impact of private and non-state actors in education globally. It warns that families in the poorest countries are facing high costs to send their children to school.

Credit: © UNESCO GEM Report/Arete Stories Ltd

CHAPTER

18

Finance

KEY MESSAGES

- Globally, median (mean) public education expenditure has gradually declined by 0.3 to 0.4 percentage points, falling from 4.4% (4.6%) of GDP in 2015 to 4% (4.3%) of gross domestic product in 2022. Globally, the median (mean) share of education in total public education expenditure has gradually declined by 0.6 to 0.7 percentage points, falling from 13.2% (13.7%) of GDP in 2015 to 12.6% (13%) in 2022.
- In 2023, data from 171 countries showed that 59 countries spent less than 4% of GDP and less than 15% of total public expenditure on education and 34 countries met both, while 78 countries met only one of these two international targets.
- In high-income counties, principals' salaries average 1.2 times GDP per capita in pre-primary, 1.4 times in primary; 1.5 times in lower secondary; and 1.6 times in upper secondary.
- Total education aid reached a record high of USD 16.6 billion in 2022, up from USD 14.3 billion in 2021. Despite an increase in the overall volume of aid to education, its share of total official development assistance fell from 9.3% in 2019 to 7.6% in 2022.
- In 2021/22, global climate finance flows reached nearly USD 1.3 trillion, but the education sector received only USD 13 million.
- The share of education in household consumption varies from under 1% in low-income countries to 2.9% in lower-middle-income countries.

Public expenditure 275
Focus 18.1. Are school principals' salaries attractive? 281
Aid expenditure 287
Aid to education reached a record absolute level but continues to decline in relative terms 287
Focus 18.2. Tapping climate finance to mobilize resources in education 292
Household expenditure 296

In 2022, global education spending increased by 0.8% to USD 5.8 trillion, according to the Education Finance Watch, a collaboration between the GEM Report, the UNESCO Institute for Statistics (UIS) and the World Bank (UNESCO and World Bank, 2024). This figure aggregates contributions from governments – to be spent domestically and abroad – and households.

This chapter offers an update on these three components of education spending: public spending, aid and household out-of-pocket contributions. It examines how the prioritization of education has shifted over time among governments, donor agencies and families. The chapter also highlights two specific policy issues: the remuneration of school principals (**Focus 18.1**) and the actual and potential use of climate finance to adapt schools to the impact of climate change (**Focus 18.2**).

PUBLIC EXPENDITURE

Governments are the principal source of funding in education. In 2022, governments' education budgets accounted for USD 4.3 trillion, or 75%, of global education expenditure. Regional spending ranged from a low of USD 70 billion (2% of the total) in sub-Saharan Africa to a high of USD 2.6 trillion (59% of the total) in Europe and Northern America (**Figure 18.1a**). Sub-Saharan Africa's share in the global school-age population increased from 17% in 2010 to 21% in 2022 but its share of total global public education spending barely rose in this period, from 1.2% to 1.6%. Europe and Northern America's share in total spending fell from 67% to 59%, while the share contributed by Eastern and South-eastern Asia increased from 16% to 21.5% (**Figure 18.1b**). Education Finance Watch estimates suggest that the share of governments in total education spending fell gradually from 79% to 75% in the 2010s but remained constant at that level during the COVID-19 upheaval.

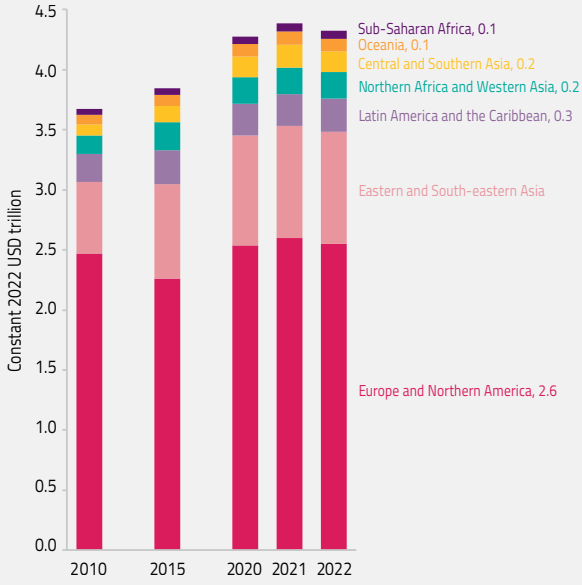
“In 2022, governments' education budgets accounted for USD 4.3 trillion, or 75%, of global education expenditure”

Between 2015 and 2022, total public education spending grew in real terms at an average annual rate of 1.7%, amounting to a 12% increase over the period. This was slower than the increase in the global gross domestic product (GDP), which increased in real terms at an average annual rate of 2.8%. Public education spending in Central and Southern Asia experienced notably higher growth, with an average annual increase of 3.9%, albeit starting from the lowest level among all regions. In contrast, Northern Africa and Western Asia, and Latin America and the Caribbean saw slight annual decreases of 0.8% and 0.5%, respectively, during this period. By 2022, low- and middle-income countries had increased their education investments by 33% in real terms compared to 2015 (UNESCO and World Bank, 2024).

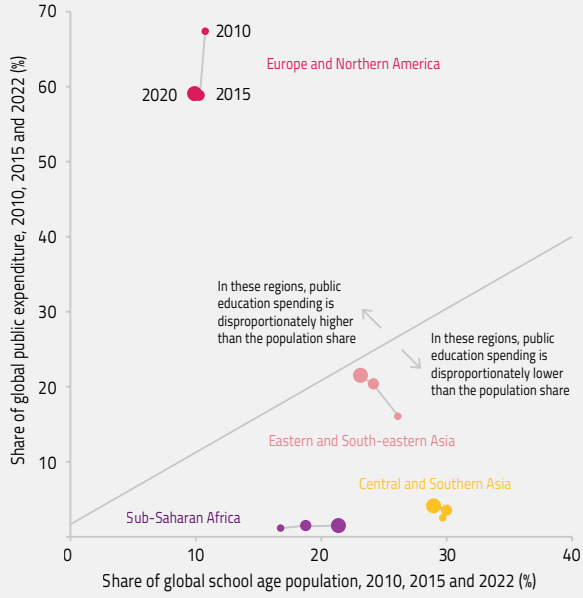
A short explanation is needed before the analysis of spending trends. When analysing enrolment trends, the unit of interest is the individual child, regardless of the country in which a child lives. For that reason, countries' enrolment trends are weighted by the countries' school-age population levels. But when analysing public expenditure trends, the unit of interest is the country. Two common measures to describe trends are the median, which shows spending for the country in the middle of the distribution; and the mean, which takes into account the dispersion in this distribution.

FIGURE 18.1:
In 2022, sub-Saharan Africa accounted for 21% of the global school-age population but 1.6% of global public education expenditure
Public education expenditure

a. By region, 2022 constant USD trillion, 2010, 2015 and 2020–22



b. Share of global school-age population and public education expenditure by region, 2010, 2015 and 2022



GEM StatLink: https://bit.ly/GEM2024_fig18_1
Source: Education Finance Watch database.

The two measures should yield similar insights about spending trends, although they may diverge in their estimates of spending levels. Given the small number of countries in every income or regional group, even small changes in data availability from year to year may lead to a temporary divergence from the long-term trend. Moreover, the mean may exceed the median if a few countries spend way more than the average country. While the mean and the median generally match at the global level, there is considerable discrepancy in middle-income countries, suggesting a more skewed distribution of spending in this group: the mean is systematically higher than the median by 0.5 percentage points in lower-middle-income countries and by 0.6 percentage points in upper-middle-income countries.

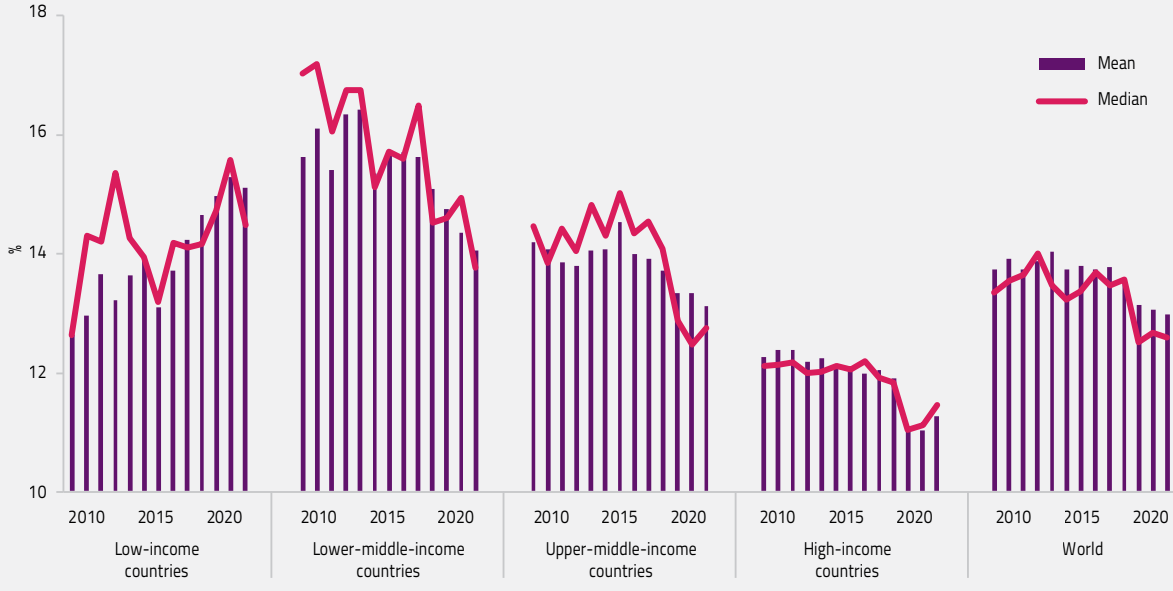
Globally, public education expenditure levels fell by 0.3 to 0.4 percentage points of GDP between 2015 and 2022: the median decreased from 4.4% to 4% and the mean dropped from 4.6% to 4.3%. However, this decline consists of two time periods. Taking the median as a measure, global spending levels fell from 4.4% to 4.1% between 2015 and 2019; they jumped to 4.5% in 2020, the year of the COVID-19 pandemic outbreak, before falling back to 4% in 2022. This average share hides a diversity of trajectories: spending increased rapidly in low-income countries from 2.6% in 2010 to 3.2% in 2015 and 3.8% in 2022. In contrast, it fell gradually from 4.5% in 2013 to 3.5% in 2021 in lower-middle-income countries. Spending levels were constant in upper-middle-income countries before a fall in the aftermath of COVID-19. Finally, spending levels remain the highest in high-income countries at 4.5% of GDP (although second in mean terms to upper-middle-income countries) (**Figure 18.2**).

Total public education spending as a share of GDP is the product of two indicators: the volume of total public expenditure (which, in turn, depends on government revenue and budget policies) and the priority which governments assign to education in their budget. Globally, the share of education in total public expenditure between 2015 and 2022 fell by 0.6 to 0.7 percentage points. In other words, it fell by more than total public expenditure on education as a share of GDP: the median level has fallen

FIGURE 18.2:
Global public education expenditure has fallen slightly since 2015
Public education expenditure as a share of GDP, by country income group, 2010–22

GEM StatLink: https://bit.ly/GEM2024_fig18_2
Source: Education Finance Watch database.

FIGURE 18.3:
Education has been receiving lower priority in government budgets since 2015
Share of education on total public expenditure, by country income group, 2010–22



GEM StatLink: https://bit.ly/GEM2024_fig18_3
Source: Education Finance Watch database.

FIGURE 18.4:

About 70% of countries have reduced their priority to education since 2015

Share of education on total public expenditure, by country income group, 2015 and 2022

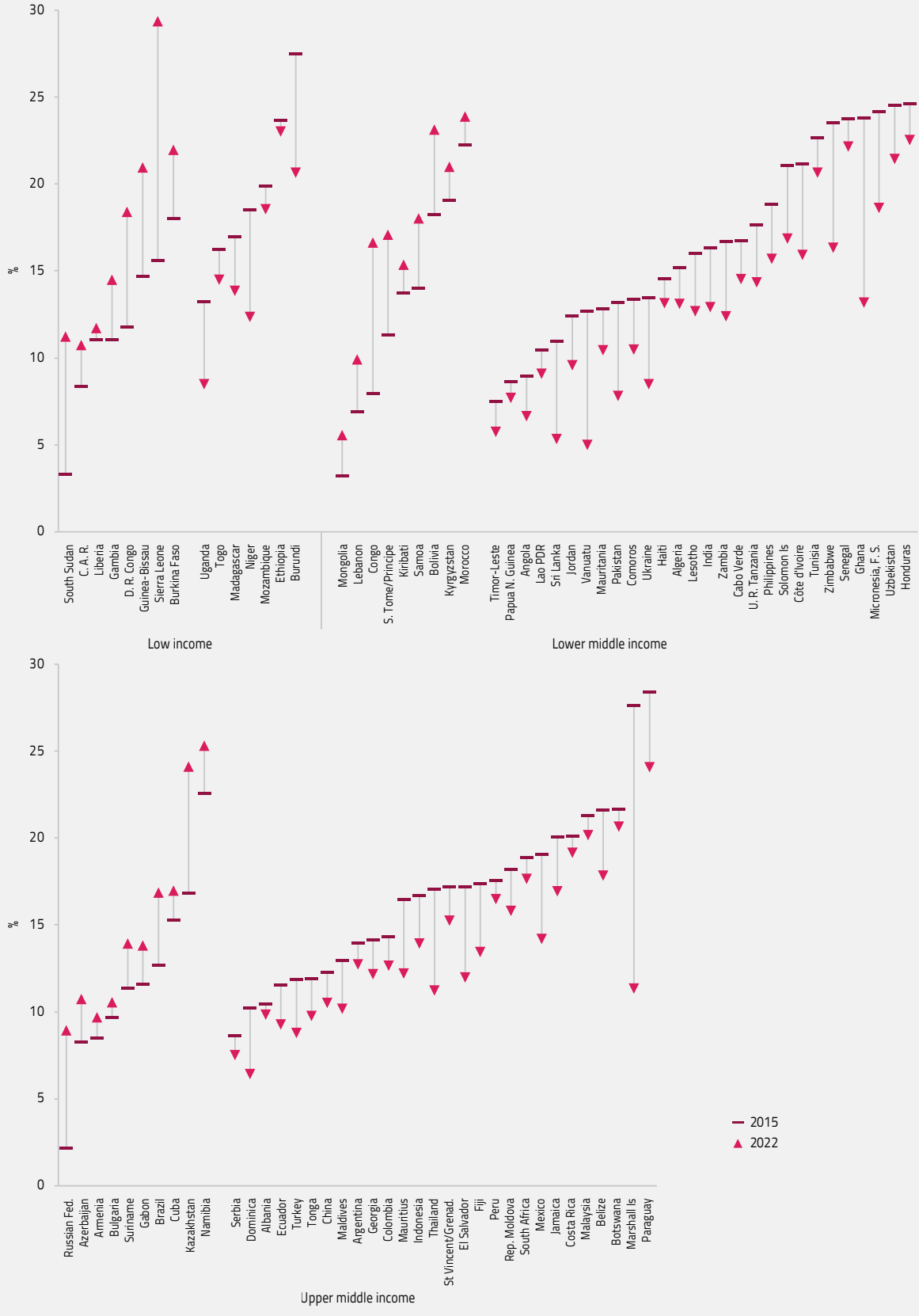
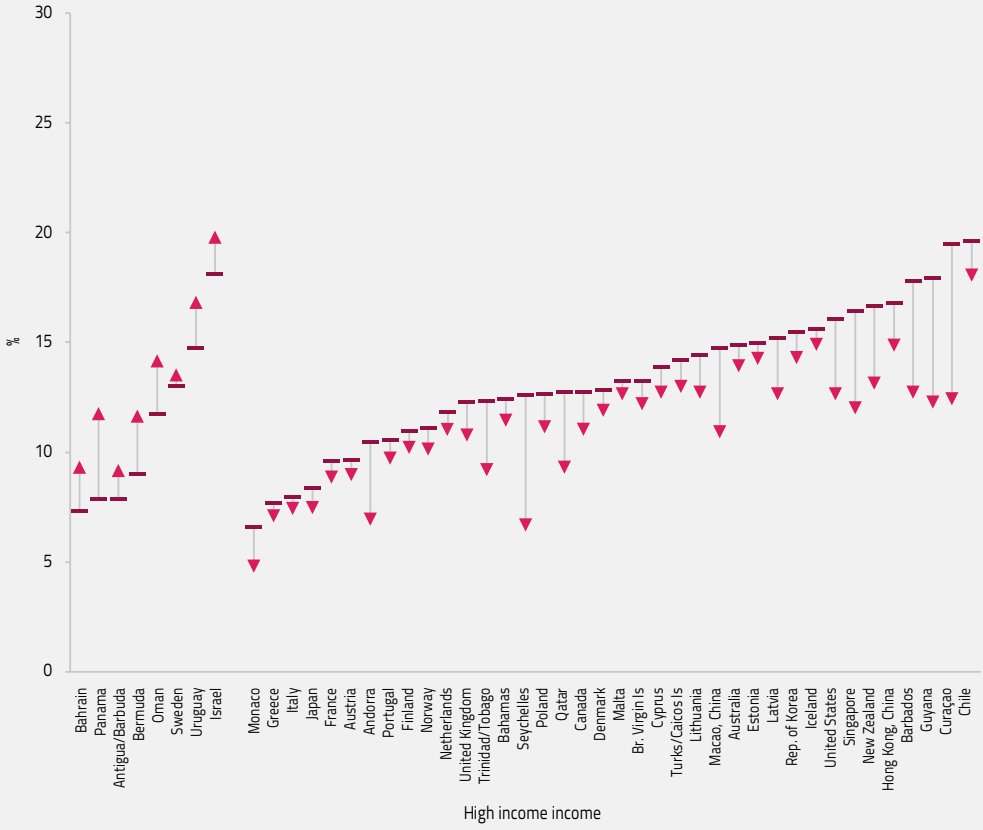


FIGURE 18.4 CONTINUED:
About 70% of countries have reduced their priority to education since 2015
Share of education on total public expenditure, by country income group, 2015 and 2022



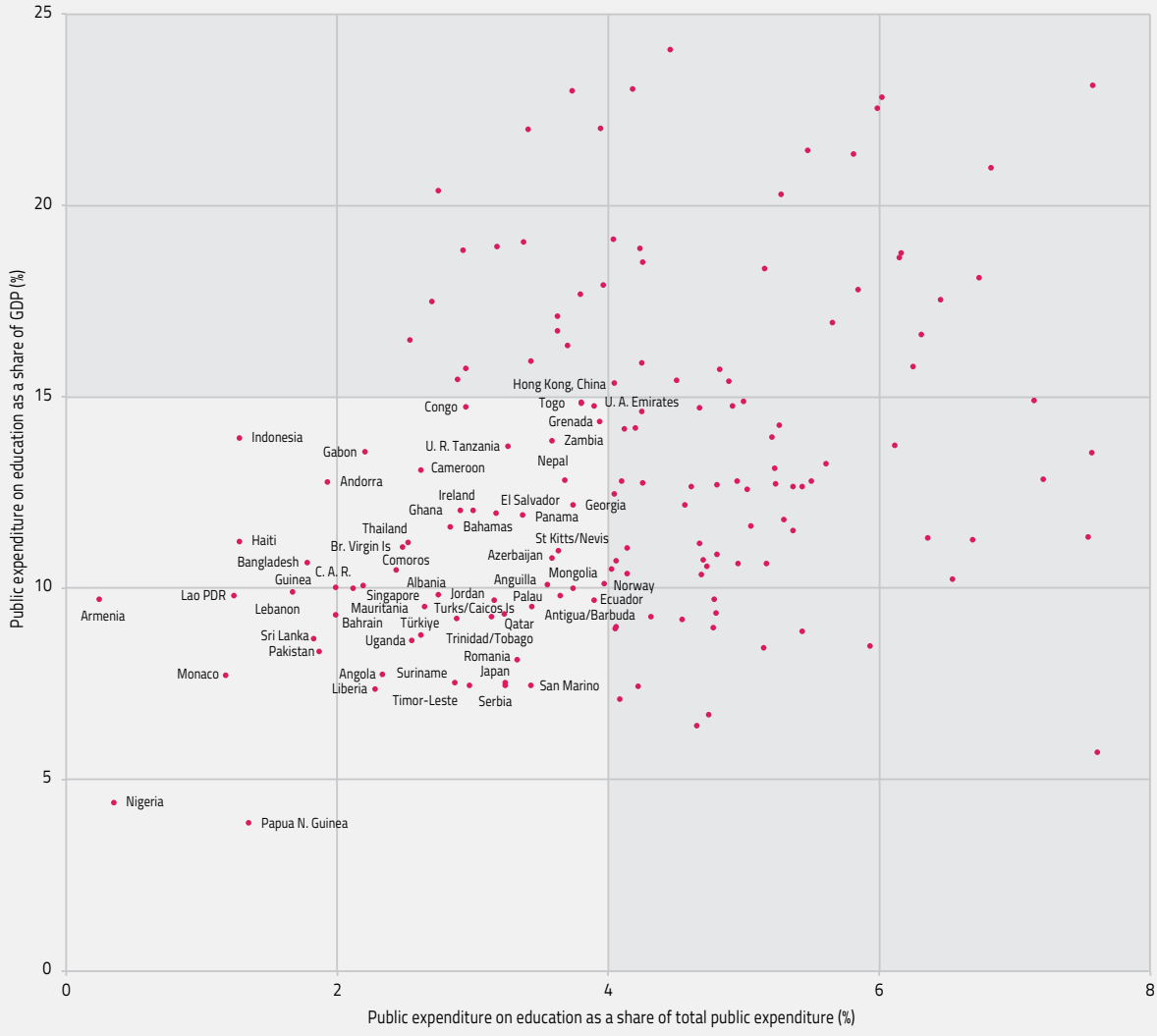
Note: Only countries with a difference greater than ±0.5 percentage points between 2015 and 2022 are included.
GEM StatLink: https://bit.ly/GEM2024_fig18_4
Source: Education Finance Watch database.

from 13.2% to 12.6% and the mean level has fallen from 13.7% to 13%. Between 2015 and 2022, the share increased by 0.5 percentage points in low-income countries but fell rapidly by 1.5 percentage points in middle-income countries and by 0.7 percentage points in high-income countries. In 2022, the median share was 14.5% in low-, 13.8% in lower-middle-, 12.7% in upper-middle and 11.5% in high-income countries (**Figure 18.3**).

Among the 137 countries with data for 2015 and 2022, where there was a change of at least 0.5 percentage points; 99 countries, or 72% of the total, reduced the share of education in total public expenditure between 2015 and 2022 (**Figure 18.4**). The proportion of countries where the share of education fell was lower in low-income (47%) than in middle-income (74%) and high-income countries (83%). The priority assigned to education was within 0.5 percentage points of the starting point in another 35 countries. There is particular concern about trends in countries caught up in a public debt crisis such as Ghana (where the share dropped from 23.8% in 2015 to 13.2% in 2022) and Zambia (a drop from 16.7% to 12.4%). A few low-income countries have increased their spending, such as the Democratic Republic of Congo (from 11.7% to 18.4%) and Guinea-Bissau (from 14.7% to 21%).

However, any increases in the prioritization of education in low-income countries are neither uniform nor large enough to compensate for the 24% increase in enrolment levels (from pre-primary to tertiary education) since 2015. In middle-income countries, the deprioritization of education coincides with an 8% increase in enrolment and is only possible to maintain with higher out-of-pocket spending by households. In high-income countries, enrolment has been constant.

FIGURE 18.5:
More than one in three countries fall short of both international public spending benchmarks
Public education expenditure as a share of total public spending and of GDP, 2023 or latest year

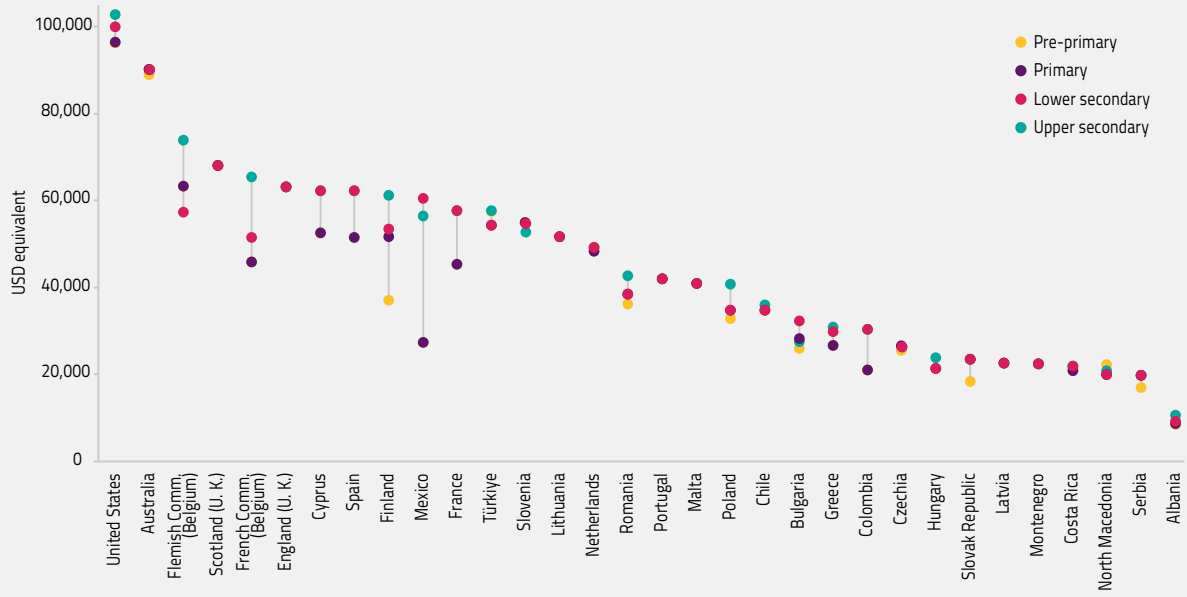


GEM StatLink: https://bit.ly/GEM2024_fig18_5
Source: UIS database.

International benchmarks established by the Education 2030 Incheon Declaration call for countries to allocate at least 4% of their GDP and at least 15% of total public expenditure to education. The percentage of countries falling below these thresholds has slightly increased to 59 of 171 countries (or 34.5%). Only 34 countries met both benchmarks, while 78 met only one of the two (**Figure 18.5**).

Disaggregated data by education level are scarce and are often not of good enough quality to provide a consistent picture. Based on the UIS database, it is estimated that 36% of government spending is allocated to primary education, which is equivalent to 1.4% of GDP. By region, this varies from a low of 13%, or 0.6% of GDP, in Europe and Northern America to a high of 50%, or 3% of GDP, in Oceania. Sub-Saharan African countries spend near the average.

FIGURE 18.6:
School principal salaries increase with the level of education
School principal statutory salary, by education level, selected upper-middle- and high-income countries, in USD PPP terms, 2022 or latest year



Note: Only countries with information at all four levels are listed.
GEM StatLink: https://bit.ly/GEM2024_fig18_6
Source: OECD (2023) and European Commission/EACEA/Eurydice (2024).

FOCUS 18.1. ARE SCHOOL PRINCIPALS' SALARIES ATTRACTIVE?

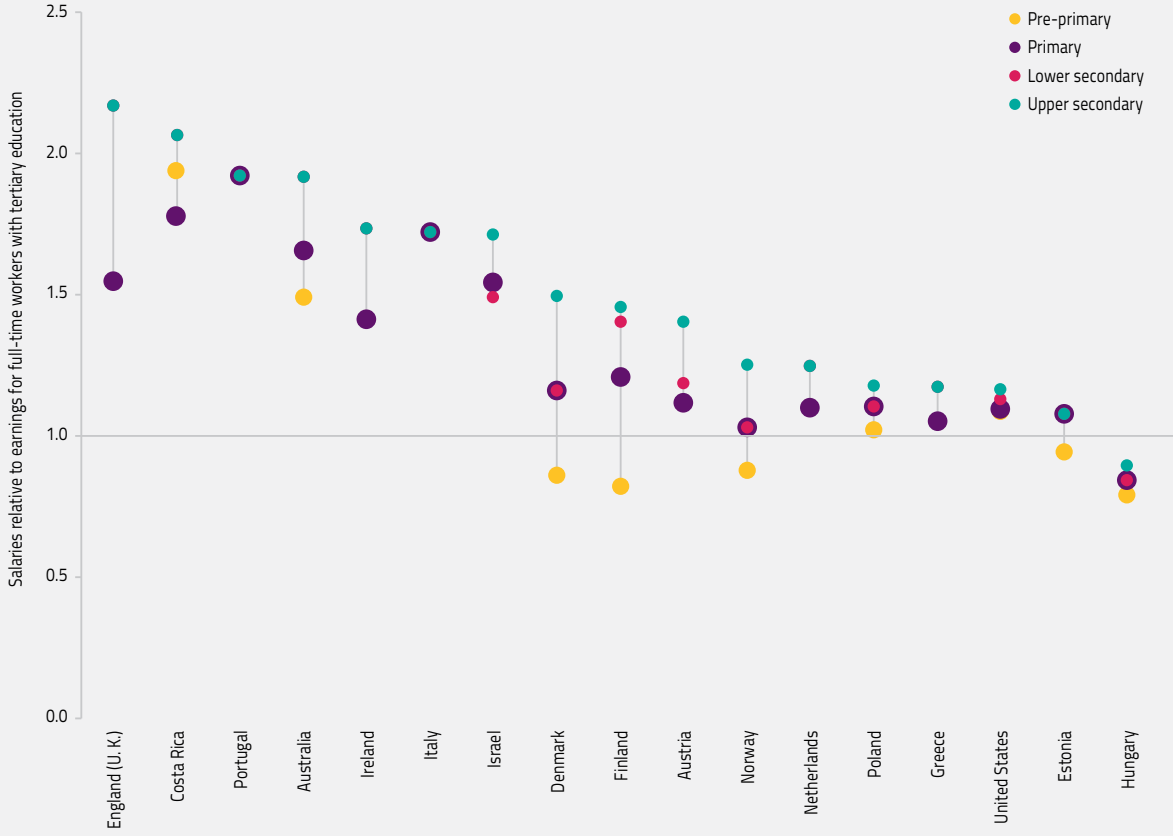
Financial compensation is an important motivating factor for attracting and retaining talented individuals in school principal positions. There is no global database that monitors school principals' salaries that matches SDG indicator 4.c.5, which monitors teacher salaries relative to those of other professions. The best comparable data set of school principals' remuneration is sourced from the European Union and the OECD (European Commission/EACEA/Eurydice, 2024), which compiles salaries and allowances of full-time, qualified principals in public schools from their member states and a few other European countries.

Two types of salary information are available: statutory and actual salaries. Statutory salary information includes additional pay, such as a 13th month and holiday pay, where applicable, and management allowance (Eurydice and OECD, 2021). Actual salary information includes social security and pension scheme contributions paid by the employees but not the employers. Actual salaries tend to be close to the maximum statutory salaries (European Commission/EACEA/Eurydice, 2016).

In upper-middle- and high-income countries, principal salaries can vary by up to 11 times between countries and up to 2 times by education level. In primary and upper secondary education, the statutory salary is USD 96 500 and USD 103 000 in the United States and USD 8 600 and USD 11 000 in Albania. In Mexico, preschool principals earn USD 27 500 and secondary school principals close to USD 60 000. In contrast, there are no pay gaps by education level in Latvia, Lithuania, Montenegro, Portugal, or England and Scotland (United Kingdom) (**Figure 18.6**).

Education systems seeking to attract talented individuals as principals need to offer competitive salaries relative to other professional fields. Preschool principals' salaries are lower than those of other professionals in 5 of the 13 countries with data. At the other education levels, principals are paid at least as well as other professionals in all 17 countries with data except Hungary. Salary premiums are at least 1.4 times higher than for other professions at all levels in 7 countries: Australia,

FIGURE 18.7:
Principal salaries are particularly competitive in a few countries
School principal actual salary relative to earnings of full-time, full-year workers with tertiary education by education level, selected upper-middle- and high-income countries, 2022 or latest year



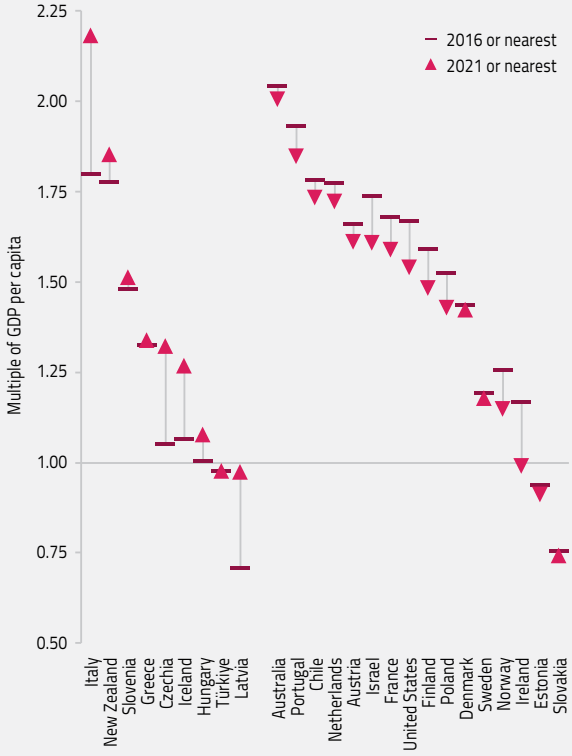
GEM StatLink: https://bit.ly/GEM2024_fig18_7
Source: OECD (2023).

Costa Rica, Ireland, Israel, Italy, Portugal and England (United Kingdom), with the highest premium (2.2 times) being offered for upper secondary school principals in England (**Figure 18.7**).

Another measure of competitiveness is to compare principals' salaries to GDP per capita. This comparison varies across different education levels. Although the number of countries with data is not large enough, a pattern emerges for this select group of upper-middle- and high-income countries. Principals' salaries are, on average, 1.2 times the GDP per capita in pre-primary, 1.4 times in primary, 1.5 times in lower secondary and 1.6 times in upper secondary education. Taking the case of lower secondary education as an example, two-thirds of these countries maintained or decreased salaries by 7% on average in relative terms between 2016 and 2021 (**Figure 18.8**).

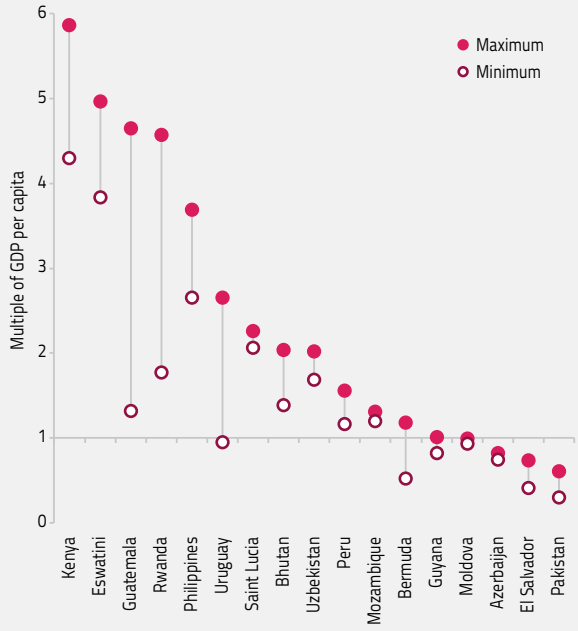
Among the countries that have maintained or increased principals' salaries, three stand out for having increased them by at least 20%: Czechia, Italy and Latvia. Italy has introduced major reforms in school leader autonomy which have significantly impacted principal salaries, albeit gradually. A 1997 law and 2001 legislative decree granted school principals greater autonomy, turning them into 'school managers' with expanded administrative and financial responsibilities. This reform aligned their salaries with other public administration managers. Since 2001, salaries have steadily increased, driven by collective labour agreements and budget laws. An average rise of 4% from 2019 to 2021 was partly linked to performance evaluations. In 2024, new criteria were introduced to account for school complexity when determining salary brackets (Italy Ministry of Instruction and Merit, 2024).

FIGURE 18.8:
Principals' salaries mostly align with or outpace economic growth, especially in primary education
Ratio of school principal actual salary to GDP per capita, by education level, selected upper-middle- and high-income countries, 2016 and 2021



GEM StatLink: https://bit.ly/GEM2024_fig18_8
Source: OECD (2023).

FIGURE 18.9:
Principals receive high relative salaries in some lower-middle-income countries
Ratio of minimum and maximum school principal salaries to GDP per capita, by education level, selected low- and middle-income countries, 2024 or latest data available



GEM StatLink: https://bit.ly/GEM2024_fig18_9
Sources: Azerbaijan Cabinet of Ministers (2016); Azerbaijan Ministry of Education (2023); Bermuda Government (2021); Bhutan Ministry of Finance (2023b); El Salvador Government (2019); World Bank (2021c) on Eswatini; Guatemala Ministry of Public Finance (2023); Guyana Ministry of Education (2024); Kenya Teachers Service Commission (2023); Mozambique Government (2022); Pakistan Government (2022); Peru Ministry of Education (2024); Letpasser (2024) on the Philippines; Republic of Moldova Government (2020); Buningwire (2022) on Rwanda; Saint Lucia Government (2022a, 2022b); and Odilov (2023) on Uzbekistan.

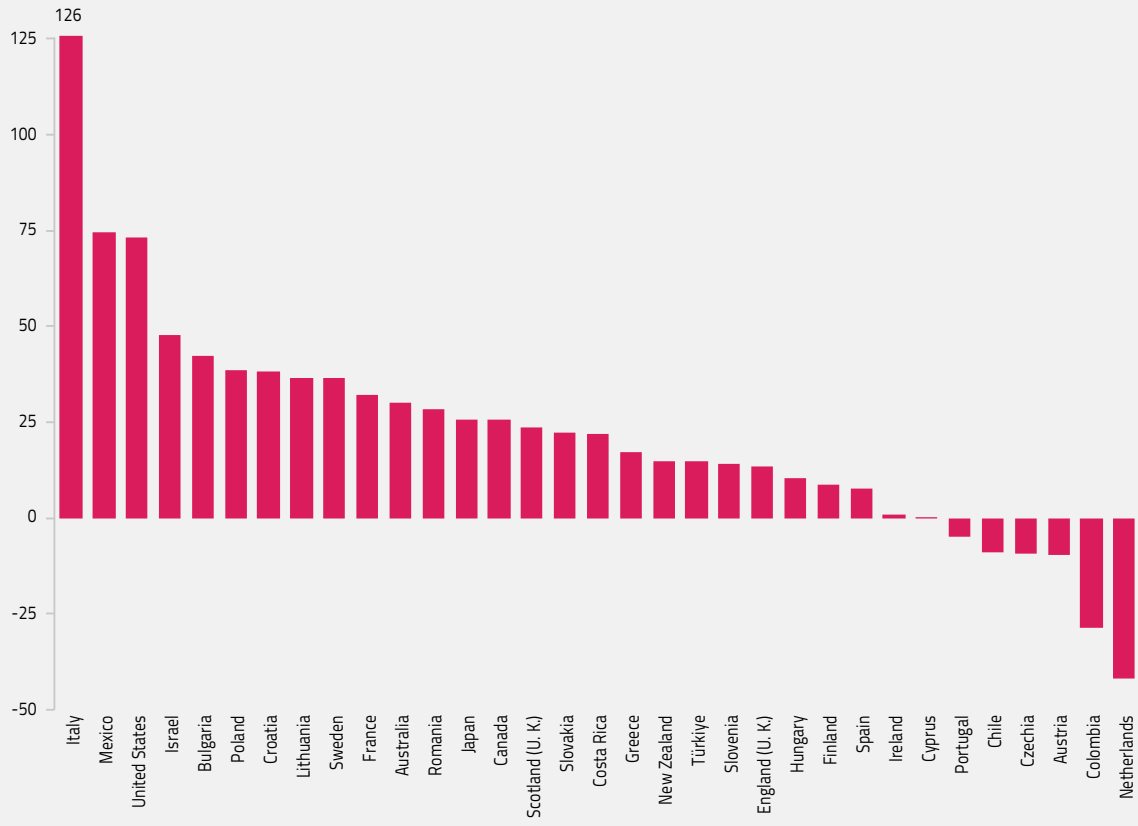
Data collected from middle-income countries show that many offer significantly higher salaries for school principals as a share of GDP per capita. These reflect the relative scarcity of principals' qualifications in the labour market. However, not all countries offer such a salary and there is much wider variation than in richer countries (**Figure 18.9**). In Eswatini and Kenya, principals earn between four and six times the GDP per capita. At the lower end, principals in El Salvador and Pakistan earn well below the GDP per capita. Also observed was the wide range of the salaries from the starting level to the highest level: in Guatemala and Rwanda, salaries start at about 1.5 times and eventually reach 4.6 times the GDP per capita.

The ratio of principals' starting salaries to those of experienced teachers is another measure of a country's approaches to making the position attractive to teachers. In 2022, headteachers earned about 20% more than teachers with 15 years of experience on average in 33 countries, although the gap varied widely by country. In Italy, principals' starting salary was more than twice as much as that of experienced teachers while in the Netherlands it was 40% less, making it an exception, alongside Colombia (**Figure 18.10**). Analysis of Eurydice data suggests that this relationship has shifted slightly in European countries in recent years. In 2016/17, principals' starting salaries were on average over 25% more than that of teachers with 15 years of experience but by 2020/21, the ratio had fallen to 20% (European Commission/EACEA/Eurydice, 2022). In Uruguay, in both primary and secondary education, a principal's salary is about 80% of what a full-time teacher at the highest grade earns, depending on the school's size, with vice-principals earning even less (ANEP, 2024; INEEd, 2016).

FIGURE 18.10:

Principals' starting salaries are about 20% higher on average than those of experienced teachers

Average minimum statutory salaries of principals relative to salaries of teachers with 15 years of experience, 2022 or latest year



GEM StatLink: https://bit.ly/GEM2024_fig18_10

Source: OECD (2023), European Commission/EACEA/Eurydice (2024).

PAY SCALES AND INCENTIVE STRUCTURES VARY

School principals' salary structure is crucial for understanding their career development. In many countries, these salaries are based on civil servant pay scales. Analysis of 211 education systems for this report shows that about 70% of countries employ principals as public servants, although this share drops to 48% in high-income countries (**Chapter 3**).

Principals' salaries may be determined by central government, local authorities or collective agreements among stakeholders, guided by a legal framework. In centralized systems, principals' salaries are part of the civil service pay structures. Adjustments in public service salaries, therefore, directly impact school principals, posing a challenge to compensating them adequately for their managerial roles and responsibilities. In decentralized systems, there is often a more tailored and equitable compensation structure that takes into account issues such as the local cost of living. In Finland, salaries are negotiated at the municipal level and can vary based on the municipal budget and specific agreements with local teacher unions (Finland Ministry of Education, 2007; Statistics Finland, 2023). In Germany, responsibility for determining school principals' salaries lies with the federal states, which allows for regional variations (European Commission/EACEA/Eurydice, 2015). In the United States, the average annual salary for school principals ranges from USD 57,000 in Puerto Rico to USD 149 000 in Washington, DC (United States Bureau of Labor Statistics, 2024).

Principals' pay scales are either separate than those for teachers or shared. When they are shared, adjustments are made to account for principals' responsibilities. For example, principals may receive an administrative allowance that acknowledges their increased responsibilities without creating a separate structure. Allowances refer to tasks

such as management duties, working overtime, providing student counselling, engaging in extracurricular activities, supporting or training other teachers, and fulfilling teacher or tutor responsibilities. This approach simplifies payroll management while recognizing the principal's additional workload. It also fosters a sense of unity and a cohesive work environment. However, it can blur the distinction between roles and narrow the salary growth and career development opportunities within the scale. Careful management is required, therefore, to ensure principals feel adequately compensated. Separate pay scales ensure that compensation is directly aligned with principals' specific duties and the complexity of their work.

Unified salary systems for principals and teachers are more common in low- and middle-income countries than in high-income countries. In Eswatini, principals and teachers follow the same salary system, but there are differentiated salary structures based on education level. Principals' salaries are placed higher than the most experienced secondary teachers, for example (World Bank, 2021a). Zambia has nine salary levels, from primary education teachers to permanent secretaries. Primary school principals are positioned at the fifth level, while secondary school principals are at the sixth level, just below local education officials and supervisors (Zambian Observer, 2024). In Peru, the remuneration policy involves grouping head teachers and teachers together, assigning principals to the teacher pay scale with additional allowances ranging from USD 160 to USD 210 for positions involving greater responsibilities (Peru Ministry of Education, 2024). In Europe, only nine countries have adopted a unified scale (European Commission/EACEA/Eurydice, 2022). In Czechia, preschool principals are categorized within the tenth salary category of the teacher pay scale. This placement is higher than that of teachers at the same level but lower than that of teachers in primary and secondary education. School principals are placed in the highest salary category, alongside some teachers who have extensive programme planning responsibilities (OECD, 2022a).

Separate pay scales explicitly recognize principals' unique roles and responsibilities, setting clear boundaries and expectations which are distinct from teaching staff. This method provides clearer career progression and can motivate teachers to aspire to principal positions by offering distinct financial benefits and formal recognition of their leadership roles. In Europe, 23 education systems use separate pay scales for school principals (European Commission/EACEA/Eurydice, 2022). In England (United Kingdom), there are eight levels of school principal pay, explicitly recognizing their leadership and administrative roles (NASUWT, 2023; OECD, 2022a).

In a few countries, school principals are not integrated into the government's payroll system. For example, in Somalia, while half are registered under the public payroll, the remainder receives salaries from private sources or international donors such as the World Bank (IIEP and GPE, 2022).

Some studies argue that principals' salaries are inadequate given their workload and responsibilities (Lee and Mao, 2023). Well-designed compensation packages and appraisal systems play a crucial role in enhancing the appeal of a principalship career (Biasi, 2021). Elements of such a design include regularly updating salaries to maintain competitiveness, ensuring that the pay reflects the responsibilities and challenges of the role, recognizing additional skills in salary scales and implementing pay-for-performance models. Fixed compensation schemes are common. But systems vary by country and within countries. In Chile, the bonus component of wages represents 22% of the principal's salary in voucher-private schools but only 9% in public schools (Muñoz and Prem, 2022).

Principals' pay scales may reflect factors such as school size and location. In Bhutan, principals can advance from the level of Principal III to Principal I. With each promotion, they receive a higher salary and performance-based incentives, along with the expectation to perform at a higher level with additional roles. For example, school principals with a Principal I ranking may be asked to lead larger schools (Bhutan Ministry of Finance, 2023b; Royal Civil Service Commission, 2017). In Uzbekistan, school principals' base salary is differentiated based on the size of the school and the position and category levels. For example, as of August 2022, relative to the base salary, school principals received 7% more for schools with 401 to 880 students, 13% more for schools with 881 to 1,600 students, and 20% more for schools with more than 1,600 students (Odilov, 2023). In half of the OECD countries with data, school principals receive additional compensation for working in disadvantaged or remote areas.

> “Some systems design pay scales that give additional money for relevant qualifications and expertise”

Some systems design pay scales that give additional money for relevant qualifications and expertise, as well as to encourage principals to stay in their jobs. Allowances are provided for further formal qualifications, successful completion of continuing professional development

activities and outstanding performance. Countries often establish qualification programmes for leadership preparation, offering higher salary increments upon completion. In Malaysia, graduates of the National Professional Qualification for Educational Leaders (NPQEL) receive a salary increase upon completion. Initiated in 1979, this programme was initially designed to train senior teachers and experienced administrators for headship roles. NPQEL 2.0 was launched in 2018. It reduces the training period from five months to three months and three weeks. This change aimed to avoid the need for replacement teachers and to reduce costs through hybrid learning (Singh, 2019). Now mandatory for future principals, the restructuring of NPQEL led to an increase in participants, with three intakes per year instead of two (Education Service Commission, 2024; Ng, 2017; Nor and Razak, 2021; Singh, 2019).

In contrast, some countries do not automatically offer salary increases for upgrading skills and qualifications. In Eswatini, there are horizontal career steps from teacher to deputy principal to principal and to higher administrative positions. While there is a substantial salary increase when moving to higher steps, the salary increments within each step are minimal (World Bank, 2021b).

The obligation of obtaining professional training and qualifications may discourage potential candidates if salaries are not paid during the study. Singapore's Leaders in Education Program provides a model. An initiative by the Ministry of Education in collaboration with the National Institute of Education, this six-month full-time programme is designed to prepare selected vice-principals and ministry officers for school leadership roles. To attract and retain top talent in education leadership, participants receive their full salary during the programme and all fees are covered by the Ministry of Education (Nor and Razak, 2021).

SOME CHANGES TO PRINCIPALS' SALARIES ARE PART OF WIDER REFORMS

Efforts to improve incentives for principals often coincide with broader teacher policy reforms aimed at improving professionalization and educators' career development. In Bhutan, the 2022 Pay Structure Reform Act introduced a performance-based pay scale in civil servant compensation. Historically, these pay scales were based solely on fixed basic pay, which provided little flexibility or motivation for employees to exceed expectations. The new pay structure incorporates a variable payment component in addition to the basic pay, determined by a set of performance indicators tailored to different roles and responsibilities. For instance, in the education sector, school principals' performance is assessed based on factors such as student outcomes, school management efficiency and community engagement (Bhutan Ministry of Finance, 2023a, 2023b; Pay Commission, 2023; Pay Structure Reform Bill of Bhutan 2022, 2022).

In Kenya, the Teachers Service Commission has introduced significant changes to improve teachers' and principals' remuneration (Kenya Gazette Supplement, 2024). These amendments include not only salary increases but also comprehensive financial policies, such as structured salary scales under the 2018 Career Progression Guidelines and the 2017–21 Collective Bargaining Agreement (Teachers Service Commission, 2019). Salaries are negotiated with the Kenya National Union of Teachers and the Kenya Union of Post Primary Education Teachers, with new policies designed to reflect the increased responsibilities of school principals and provide incentives for career advancement (Teachers News, 2024b). Principals have been positioned above senior teachers – a key modification in the 2021–25 Collective Bargaining Agreement – offering financial incentives such as higher basic salaries, substantial allowances and improved pension benefits. These changes were to be implemented in two phases in 2023 and 2024 but the salary increase for 2024 has been delayed in its implementation due to budget cuts (Mwangi, 2024; Kenya Gazette Supplement, 2024; School Updates, 2024; Teachers Updates, 2024). Current debate focuses on reviewing the Career Progression Guidelines for creating a new pathway for senior teachers to transition into management-level leadership positions (Teachers News, 2024a).

Beginning in 2007, Peru introduced a series of teacher policy reforms, such as test-based hiring and the elimination of automatic yearly promotions. In 2012, the Teacher Reform Law incorporated a merit-based payment mechanism for teachers and principals (Bruns et al., 2023; Mendoza Choque, 2019). The reform differentiated school principals' pay scales from those of other senior teachers. It also introduced a nationwide exam for principal qualifications, with additional allowances for those who passed, while incumbent principals who failed were replaced (World Bank, 2015, 2021c). The Teacher Reform Law also established meritocratic appointment standards and improved career incentives for school principals. Implementation began in 2014 and, in 15,000 of 52,000 public schools, school principals were appointed through this process in 2015 (Bruns et al., 2023).

Overall, alongside adjustments to salaries in line with inflation to maintain the attractiveness of principals' positions, countries have adopted various measures to attract candidates, including comprehensive training programmes, qualification schemes and the alignment of job descriptions with those in comparable sectors in the civil service. These efforts underscore the importance of professionalization and career development in enhancing the attractiveness of school leadership roles.

AID EXPENDITURE

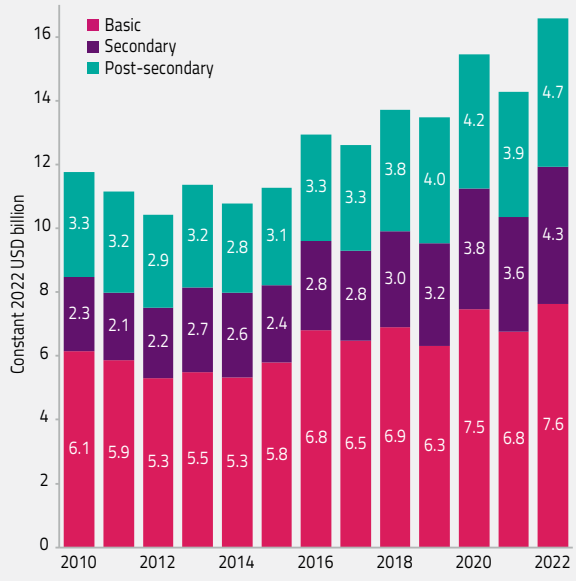
In recent years, official development assistance (ODA) has risen significantly, driven by the COVID-19 pandemic in 2020 and the war in Ukraine in 2022. According to data from the OECD Creditor Reporting System (CRS), a 16.5% increase in 2022 is primarily attributed to the war in Ukraine and the associated refugee costs in Europe, especially in countries including Germany, Greece and Italy, where over 20% of ODA was allocated to supporting refugees. As a result, ODA increased from 0.33% of gross national income (GNI) in 2021 to 0.37% in 2022. ODA increased further from USD 211 billion in 2022 to USD 224 billion in 2023, or by 1.8% in real terms, still representing 0.37% of GNI (OECD, 2024a). Among the 32 members of the OECD Development Assistance Committee (DAC), only Denmark, Germany, Luxembourg, Norway and Sweden met the 0.7% of GNI target while the United States remained the largest donor in absolute terms but was among the lowest contributors relative to GNI, at just 0.22%.

AID TO EDUCATION REACHED A RECORD ABSOLUTE LEVEL BUT CONTINUES TO DECLINE IN RELATIVE TERMS

Total education aid reached a record high of USD 16.6 billion in 2022, up from USD 14.3 billion in 2021, growing in real terms by 16% year on year (**Figure 18.11**). By level, aid increased by USD 883 million in basic education (by 13%), by USD 684 million in secondary education (by 19%) and by USD 723 million in post-secondary education (by 18%) between 2021 and 2022.

The amount of ODA is lower than in previous GEM reports because imputed student costs (i.e. the cost of tuition in donor countries for nationals of ODA recipient countries) have been excluded from the calculation to improve consistency. Only some European countries have been including imputed student costs in their ODA definition, which has been distorting comparisons. Some countries have also recently stopped reporting imputed costs, including Belgium in 2022. Excluding imputed student costs also aligns with the introduction of the OECD's

FIGURE 18.11:
Education aid reached USD 16.6 billion in 2022
Total aid to education, by level of education, in 2022 constant USD, 2010–22



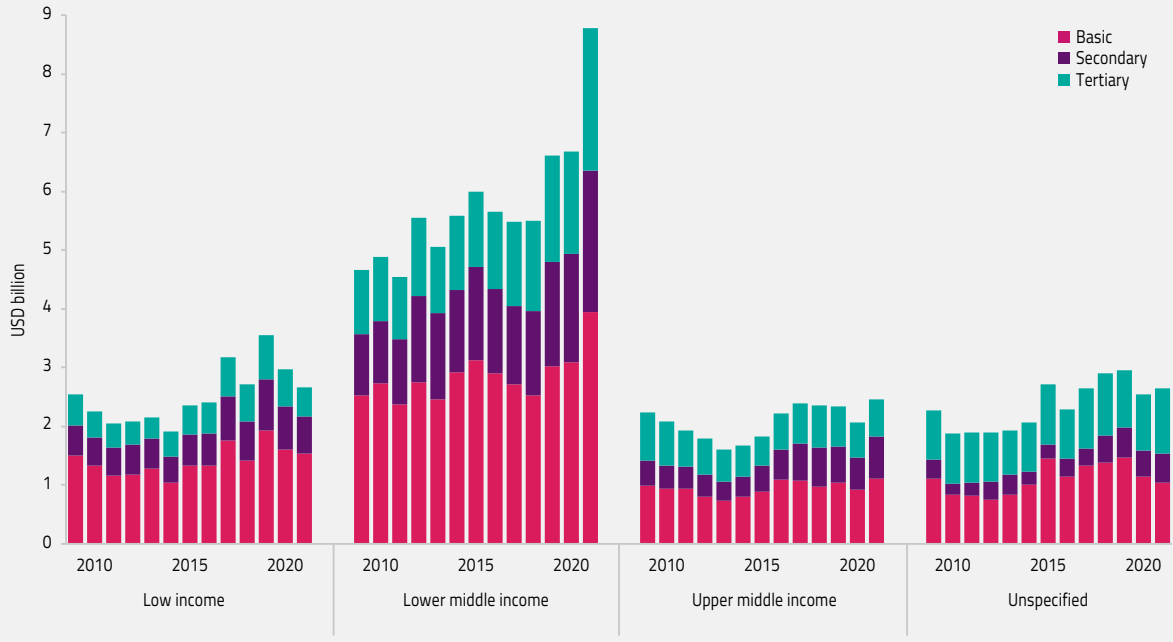
GEM StatLink: https://bit.ly/GEM2024_fig18_11
Source: GEM Report team analysis based on OECD DAC CRS data.

Total Official Support for Sustainable Development (TOSSD) framework, which has reclassified these flows as global public goods. If imputed student costs had been included, they would have accounted for 15% of total ODA (**Chapter 16**).

> "Aid for education increased by 2.9% per year from 2010 to 2022"

Aid for education has consistently risen over the years, increasing from roughly USD 11.8 billion in 2010, an increase of 41% (or 2.9% per year) between 2010 and 2022. Basic education receives the largest share of ODA, although this share fell from 52% in 2010 to 46% in 2022, while the share of secondary education increased from 20% to 26% and the share of post-secondary education remained constant at about 28%. Basic education consistently received the largest portion, growing gradually from USD 6.1 billion in 2010 to USD 7.6 billion in 2022.

FIGURE 18.12:
Recent increase in aid to education is mainly allocated to lower-middle-income countries
Aid to education without imputed student costs, by volume, by recipient income group, 2010–22



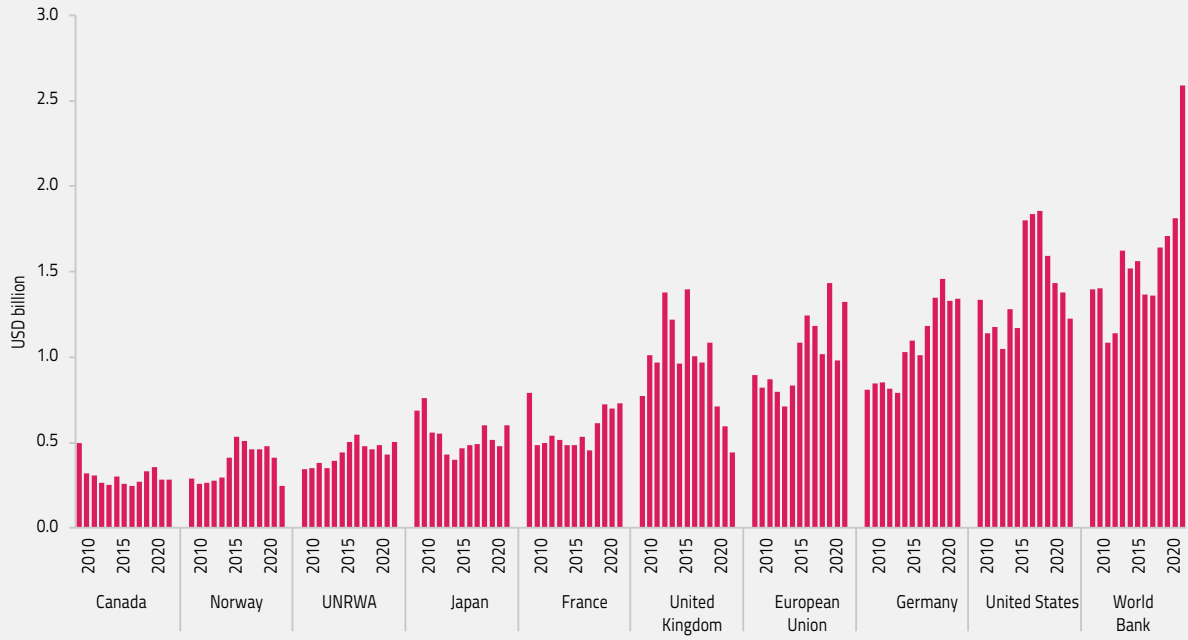
GEM StatLink: https://bit.ly/GEM2024_fig18_12
Source: GEM Report team analysis based on OECD DAC CRS data.

Despite the increase in the overall volume of aid to education, the share of education in total ODA, which rose from 8.2% in 2013 to 9.3% in 2019, has fallen in recent years to 7.6% in 2022. In contrast, the share of the health and population sector in total ODA increased from 17.5% in 2019 to 23.8% in 2022, likely as a result of shifting priorities during the pandemic. The energy sector's allocation rose from 4.6% in 2002 to 7.7% in 2022.

The volume of aid to low-income countries increased gradually and consistently throughout the 2010s but there has been a notable decline since 2019. During this period, the share of lower-middle-income countries has increased, with a particularly sharp increase in 2022, when it increased by six percentage points compared to 2021. The increase was predominantly driven by the surge in aid to Ukraine. In fact, aid to education to Ukraine increased from USD 187 million in 2021 to USD 2.1 billion in 2022. Except for Europe and sub-Saharan Africa, other regions experienced a decline in the level of aid to education in 2022 (**Figure 18.12**).

Between 2020 and 2022, the World Bank's International Development Association disbursed an average of USD 2 billion per year, followed by Germany (USD 1.4 billion), the United States (USD 1.3 billion) and the European Union (USD 1.2 billion) (**Figure 18.13**). The next three largest donors in volume – France, Japan and the United Kingdom – cumulatively contributed less than USD 1 billion annually. Two of these major bilateral donors have reduced their contributions in recent years: the United Kingdom (from its peak in 2013 by 68%) and the United States (from its peak in 2018 by 34%). While not reported to OECD, the Global Partnership for Education, which disbursed USD 454 million annually on average between 2021 and 2022, increased disbursements to USD 521 million in 2023 (Global Partnership for Education, 2023). These figures are included in the funding reported by its donors, such as the European Union and the United Kingdom, to the OECD. Donor priorities in education vary by country. The United States (75%) and Norway (66%) prioritize basic education while France (60%) and Japan (53%) focus more on post-secondary education.

FIGURE 18.13:
The World Bank increased its aid to education by nearly 90% in five years
Aid to education in constant 2022 USD billion, top 10 donors, 2010–22



Note: UNRWA = United Nations Relief and Works Agency for Palestine Refugees in the Near East.
GEM StatLink: https://bit.ly/GEM2024_fig18_13
Source: GEM Report team analysis based on OECD DAC CRS data.

The World Bank has significantly increased its aid to education, with nearly a 90% rise in disbursements between 2017 and 2022. This increase was particularly notable in sub-Saharan Africa, where disbursements surged by USD 816 million between 2021 and 2022. Over the years, the World Bank's contributions have grown substantially, from a low of USD 364 million in 2013 to USD 675 million in 2018, USD 1 billion in 2020 and USD 1.9 billion in 2022. While World Bank funding for education has increased, its priorities have shifted. The share of funding for basic education decreased from 36% in 2011 to 27% in 2022, while secondary education funding grew from 12% to 26% during the same period. However, in low-income countries, the focus on basic education rose significantly, from 13% in 2011 to 41% in 2022.

These observations match those of a recent review of the World Bank's priorities over the past 25 years during which the number of projects has doubled and total funding quadrupled to USD 73 billion. Despite its 2011 strategy aimed at improving foundational learning skills, emphasis on primary education and learning outcomes has, in fact, diminished. Projects aimed at improving learning outcomes have generally underperformed and received lower ratings. By contrast, early childhood education projects grew significantly and have been rated more positively, as they are often evaluated by simpler metrics like enrolment rates (Bedasso and Sandefur, 2024).

Project-based funding is the dominant modality of aid; it was 64% in 2022. Core funding and technical assistance grew in the 2010s, with disbursement rising from USD 1.2 billion in 2010 to USD 2.1 billion in 2020, before declining back to USD 1.3 billion in 2022. Budget support increased to USD 852 million in 2022 from a low of USD 532 million in 2016. Overall, the combined share of core funding, technical assistance and budget support fell from 36% in 2010 to 23% in 2022. Flexible, non-earmarked aid promotes sustainability by allowing recipient countries to tailor resources to their needs. While bilateral donors differ in their strategies, some donors including Germany and Norway have increased their funding to multilateral financing organizations or softened earmarking (OECD, 2021, 2024b).

MORE INFORMATION IS EMERGING ON SOUTH–SOUTH COOPERATION

While OECD-DAC countries have provided the bulk of aid flows, South–South cooperation, which represents development efforts among developing countries, has grown in recent years. These efforts often operate beyond the traditional ODA framework, which has made the tracking of such contributions challenging. However, insights can be gained by using the TOSSD framework for some emerging donors and the College of William & Mary's AidData database to better understand China's education contributions, which dwarf all other flows (**Box 18.1**).

TOSSD was introduced by the OECD as a new data framework to capture a more comprehensive view of international financial flows that support sustainable development. Unlike traditional ODA, which primarily tracks financial aid from the Global North to the Global South, TOSSD includes a broader spectrum of resources and financial activities. It is particularly valuable for tracking South–South and triangular cooperation, providing valuable insights into the activities of upper-middle- and high-income countries that do not report to the OECD CRS. Since 2019, Azerbaijan, Brazil, Chile, the Dominican Republic, Indonesia, Mexico, Peru and Thailand have disclosed their resource contributions, capturing an increase in funding directed towards education from USD 10 million in 2019 to USD 102 million in 2022, the bulk provided by Brazil and Mexico.

BOX 18.1:

After a significant period of expansion, Chinese aid to education has declined

In the past two decades, China has emerged as a major donor. However, it has been impossible to assess the volume of aid, as these flows are not documented in any official global database. The AidData initiative at the College of William & Mary addresses data gaps in global development finance, with a particular focus on China. Its Global Chinese Development Finance Dataset covers almost 21,000 projects from 2000 to 2023, with data on financial allocations, geographic distributions and sectoral breakdowns, capturing both state and non-state initiatives.

China's involvement in development aid began in the 1950s with a focus on fostering solidarity with newly independent nations in Asia and Africa through technical assistance and infrastructure projects. China's ODA expanded in the 1980s and 1990s as part of economic engagement that facilitated countries' access to Chinese goods and China's access to natural resources. A more significant increase in China's ODA volume and geographic reach coincided with its accession to the World Trade Organization in 2001. This trend continued with the launch of the Belt and Road Initiative in 2013, which aimed at enhancing infrastructure investments. As China's global influence grew, its aid strategies shifted towards supporting broader global development agendas. This move was symbolized by the Global Development Initiative introduced in 2021, which emphasizes fostering inclusive sustainable development, including support for education.

China's foreign aid is administered through various agencies. The China International Development Cooperation Agency, established in 2018, sets guidelines, coordinates aid efforts and oversees key aid programmes. The Ministry of Commerce manages specific economic cooperation projects, including those in education, while ensuring alignment with broader economic and diplomatic goals. In terms of financial backing, state-owned policy banks such as the China Development Bank and the Export-Import Bank of China offer concessional loans and infrastructure funding for development projects. State-owned commercial banks, such as the Industrial and Commercial Bank of China, along with state-owned companies and funds, implement and support projects.

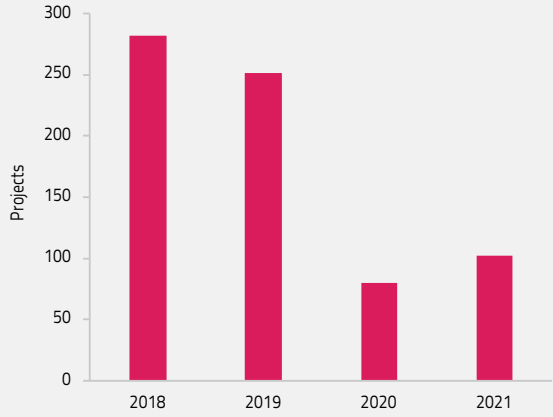
The project-level data of the AidData database cover the period 2018–21 and include both ODA and ODA-like projects, which may not fully meet OECD ODA definitions, such as certain types of concessional loans or technical assistance. Projects were categorized by modality, education level and geographic location. There has been a notable decline in the number of China's development assistance projects in education, from 282 in 2018 to 102 in 2021, largely due to the COVID-19 pandemic (**Figure 18.14a**). Grants made up the majority of projects (61%), followed by scholarships or training conducted in China (36%) (**Figure 18.14b**). Most education projects were funded by Chinese government agencies (88%) and primarily focused on post-secondary education (47%), followed by basic (25%) and secondary education (12%) (**Figure 18.14c**). Geographically, over half of the projects were located in Africa, with Namibia and Nigeria being the top recipients (**Figure 18.14c**).

Continued on next page...

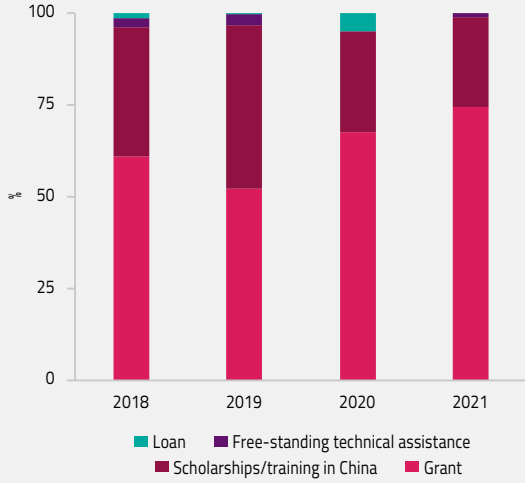
BOX 18.1 CONTINUED:

FIGURE 18.14:
There was a decline in Chinese aid to education activity during COVID-19
Characteristics of Chinese education development cooperation projects, 2018–21

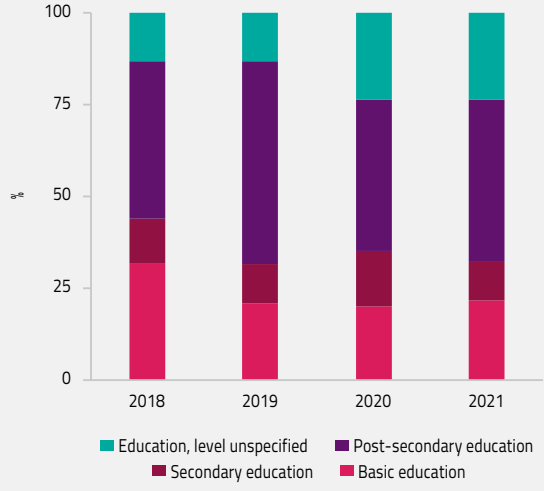
a. Number of projects



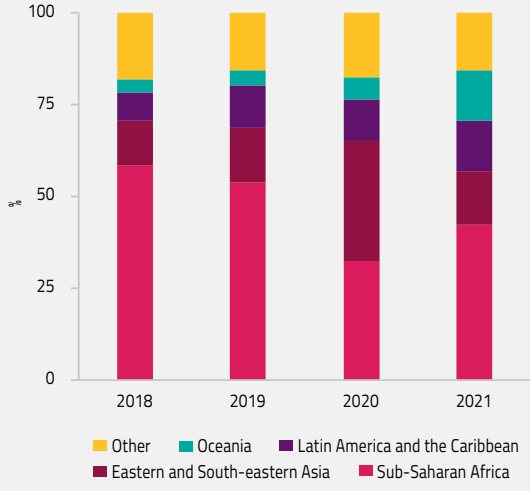
b. Project modality



c. Project distribution by education level



d. Project distribution by region



GEM StatLink: https://bit.ly/GEM2024_fig18_14
Source: GEM Report team analysis based on ChinaAid (2023).

One of the major challenges in analysing China's development aid data is that financial information is missing in 78% of cases, which means that any effort to assess the volume is speculative. The information refers to commitments and its distribution over time is unknown. Making simple imputation assumptions, it is estimated that the financial commitment fell from USD 552 million in 2018 to USD 66 million by 2021, faster than the decline in project activity. Some projects are also classified as multisectoral but include education components, which further complicates classification and analysis. The links to the original data in the AidData 3.0 database, often derived from online media reports, have sometimes expired, which also prevents data verification. Despite these challenges, the AidData project provides valuable insights into China's development finance activities.

FOCUS 18.2. TAPPING CLIMATE FINANCE TO MOBILIZE RESOURCES IN EDUCATION

In recent years, like other human activities, the education sector has felt the effects of climate change. Rising temperatures, more frequent and severe natural disasters, and other climate-related challenges create obstacles for schools and students. Excessive heat poses significant health risks and often leads to school closures, resulting in missed educational opportunities. Climate-related disasters such as flooding and droughts, cyclones, hurricanes, tornadoes, landslides, and wildfires jeopardize students' safety and well-being (**Chapter 15**).

Many low- and lower-middle-income countries are particularly vulnerable to the impacts of extreme weather events (Eckstein et al., 2021). In 2022, excessive flooding in Pakistan disrupted schooling for 3.5 million children and destroyed more than 26,000 schools (Imran, 2022). Somalia has been impacted by severe drought, resulting in population displacement. More than 80 schools in the states of Jubaland and Galmudug were closed as of April 2022 as a result (Internal Displacement Monitoring Centre, 2023). The number of medium- to large-scale disasters is projected to increase from 400 annually in 2015 to 560, or about 1.5 each day, by 2030 (UNDRR, 2023).

> Climate finance presents an opportunity to support large-scale investments in school infrastructure to help schools withstand climate events

Education can play a critical role in the response to climate change, especially through the inclusion of climate change content in curricula. The investment is not costly and can, in principle, be covered by education budgets. But climate finance presents an opportunity to support large-scale investments in school infrastructure to help schools withstand climate events. Integrating education into climate finance initiatives may also enhance the capacity for adaptation and mitigation efforts.

A BRIEF HISTORY OF CLIMATE FINANCE

Climate finance emerged in response to the growing recognition of climate change as a critical global issue. The concept gained traction with the 1992 Earth Summit, where the United Nations Framework Convention on Climate Change acknowledged the need for financial resources to support climate efforts (UNDRR, 2023, 2023; United Nations Framework Convention on Climate Change, 1992). The Kyoto Protocol, adopted in 1997, marked a significant step by introducing mechanisms which facilitated investments in emissions-reduction projects in developing countries (UNFCCC, 1997).

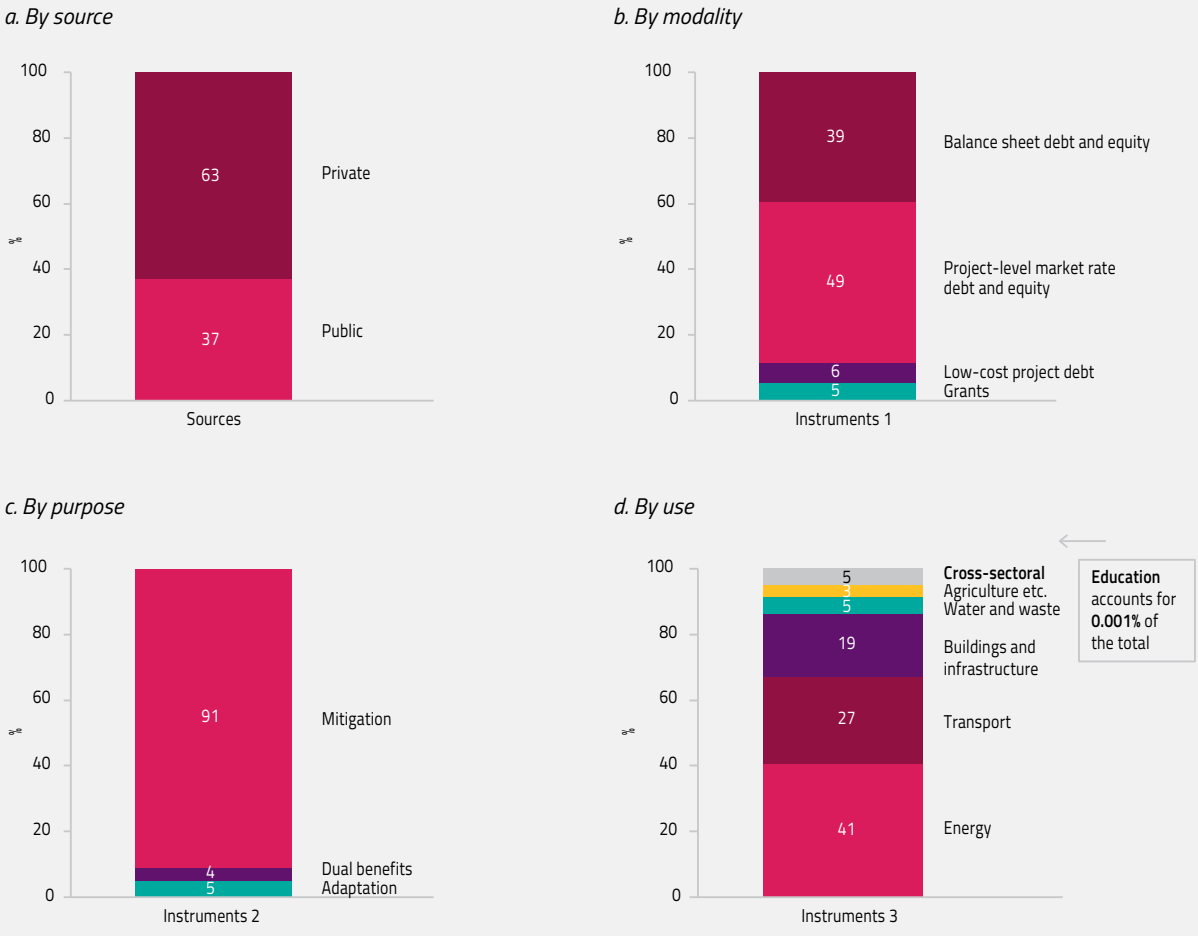
As climate finance evolved, key milestones included the establishment of the Global Environment Facility in 1991 and the Climate Investment Funds in 2008 (CIF, 2024; Global Environment Facility, 2024). The 2009 Copenhagen Accord was pivotal, committing developed nations to mobilize USD 100 billion annually by 2020, leading to the creation of the Green Climate Fund in 2010. The 2015 Paris Agreement further reinforced these commitments and emphasized the need to enhance developing countries' capacity (Paris Agreement, 2015).

The most recent development which specifically targeted education occurred at the 2023 United Nations Climate Change Conference or Conference of the Parties of the United Nations Framework Convention on Climate Change, more commonly known as COP28, where 45 countries endorsed the Declaration on the Common Agenda for Education and Climate Change. This declaration calls for nations to adapt, mitigate and invest in building climate-smart education systems through the four pillars of action of the Greening Education Partnership: greening schools, curricula, teacher training and community engagement (UNESCO, 2024).

The 2023 Global Landscape of Climate Finance Report reveals that average annual climate finance flows reached almost USD 1.3 trillion in 2021/22, nearly double the 2019/20 levels. This increase was primarily driven by a significant acceleration in mitigation finance (which accounts for 91% of the total). Government climate finance commitments have surged to USD 288 billion, a significant rise from USD 179 billion in 2021. Notably, only USD 33 billion was directed internationally, with two thirds, or USD 21 billion, flowing from OECD to non-OECD countries (IDFC, 2022, 2024). Even with the recent surge in climate finance, only a small fraction is recorded as ODA. According to the OECD CRS, over USD 900 million were disbursed through major climate financing facilities and instruments in 2022, a growth of 350% since 2015. However, the education sector received just USD 13 million for climate finance initiatives (**Figure 18.15**).

> Average annual climate finance flows reached almost USD 1.3 trillion in 2021/22, nearly double the 2019/20 levels

FIGURE 18.15:
Climate finance is estimated at USD 1.3 trillion but education gets a tiny fraction
Distribution of climate finance (%), 2021/22



GEM StatLink: https://bit.ly/GEM2024_fig18_15
Source: Global Center on Adaptation and Climate Policy Initiative (2023).

COUNTRIES FACE CHALLENGES AND OPPORTUNITIES IN ACCESSING CLIMATE FUNDS FOR EDUCATION

Climate finance is typically managed by entities outside the education sector, so education ministries can find it difficult to access these funds directly. Effective access to climate finance hinges on several key components. First, a national climate plan must clearly outline the education sector's role in climate preparedness and establish a coordination mechanism among various stakeholders. This plan should define the responsibilities of the education ministry and other relevant ministries to ensure robust disaster risk management and secure adequate resource allocation for the education sector. Incorporating disaster risk considerations into budgetary processes is essential to support resilience-building efforts effectively across line ministries (Southerland et al., 2024). However, national plans often overlook the education sector's importance in climate finance. The education sector also requires improved capacity for risk assessment and climate planning to effectively contribute to these efforts (**Box 18.2**).

Various countries show examples of education leveraging climate finance. In Grenada, efforts to enhance resource

BOX 18.2:

Japan has built a disaster-resilient education system

Japan's extensive experience in managing domestic natural disasters has directly influenced its commitment to supporting disaster resilience in education systems globally. As a country frequently impacted by natural hazards, mainly earthquakes but also, and increasingly, climate-related ones such as floods and cyclones, Japan has developed robust disaster-preparedness strategies that it shares through international development cooperation.

Domestically, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) plays a critical role within the Central Disaster Management Council, benefiting from significant government funding (Sakurai, 2016). After the 1995 Great Hanshin-Awaji Earthquake, which damaged over 3,800 schools, Japan implemented substantial reforms to improve school safety. MEXT issued new guidelines in 2002 for vulnerability assessments and retrofitting efforts which increased the share of earthquake-resistant schools from 45% in 2002 to 96% by 2015 (World Bank, 2016).

Beyond infrastructure, Japan integrates disaster preparedness into education, conducting regular drills and using schools as emergency shelters. Disaster education is introduced early in school curricula, cultivating a culture of readiness. Post-disaster, rapid response mechanisms ensure swift repairs, and there are policies that allow the quick resumption of classes in temporary locations. Mental health services and remote learning options further aid student recovery and maintain educational continuity. In 2022, MEXT updated guidelines for disaster risk reduction education for elementary school teachers and the Cabinet Office issued guidelines to promote collaboration between schools and communities (Japan Cabinet Office, 2023).

In 2022, Japan's public budget for disaster risk management was JPY 3.5 trillion (USD 23 billion) (Japan Cabinet Office, 2023). The government uses its ordinary budget for prevention, while both national and local governments use reserves for emergency measures. The Cabinet Office, central to Japan's disaster risk management framework, ensures that sufficient funds are directed toward both infrastructure resilience and emergency contingencies (Tsuda, 2019).

Internationally, Japan applies its disaster-preparedness experience by providing both technical and financial support to help build disaster resilience in developing countries. Through collaborations, for example with the World Bank in its Global Program for Safer Schools, Japan promotes disaster risk management within education systems at risk. For example, it has assisted cyclone-affected areas in Mozambique and strengthened climate resilience in schools in sub-Saharan Africa (GFDRR, 2024; GPE, 2024b).

allocation for climate resilience are underway, with a focus on increasing the number of schools with disaster management plans. While government agencies are encouraged to design their own continuity and emergency response plans, recurrent funding for disasters is primarily allocated to the National Disaster Management Agency. Strengthening the coordination within the Ministry of Education for preparedness planning and providing clearer guidance for schools on disaster plan preparation are essential steps. Dedicated staff with the necessary expertise can further enhance these efforts. A clearly defined role for the Ministry of Education within a coordinated national mechanism is crucial for effective and equitable resource mobilization in climate finance (Grenada Ministry of Education, 2023).

Thailand, which faces significant climate risks, has developed a National Adaptation Plan that incorporates climate education into its strategy. This plan outlines a coordination mechanism for accessing international funds, ensuring budgetary support for government agencies and establishing integrated budgeting for climate change actions. The Department of Climate Change and Environment serves as the focal point for cross-sectoral coordination of adaptation monitoring and evaluation (UNFCCC, 2024). While the plan's current focus is stronger in sectors such as health and agriculture, there is potential to enhance the role of education, which could further secure resources for educational initiatives.

Second, effective access to climate finance requires a dedicated national agency to bridge international and domestic funding sources. Such an agency can align national goals with global funding opportunities, ensuring the education sector's needs are well integrated into broader climate finance initiatives. Accessing climate finance from entities like the Green Climate Fund and the Global Environment Facility can be challenging for developing countries due to complex processes and stringent criteria. Detailed project proposals must meet

specific requirements, often involving multiple project cycles and coordination with various entities, such as the national designated authority and focal points for these funds. Moreover, securing funding from development banks entails compliance with diverse criteria, adding to administrative burdens.

Kenya is demonstrating a proactive approach to climate finance in sub-Saharan Africa. With national adaptation plans in place and support from development partners, Kenya has established a national designated agency for the Global Climate Fund. It also has two national accredited entities, the National Environment Management Authority of Kenya and KCB Bank Kenya Limited, to implement projects (Green Climate Fund, 2023a). To enhance green finance delivery, the Treasury conducted a public expenditure and budget review, leveraging public financial management systems (Kenya National Treasury, 2017). Priority areas include water and the blue economy, forestry, wildlife, tourism, disaster risk management, and food and nutrition security. While education is not explicitly highlighted, community-led sanitation, which may include schools, and capacity-building projects receive external support (Kazimbaya-Senkwe, 2024; World Bank, 2021d).

Rwanda's National Environment Fund serves as a national financing mechanism for climate change and environmental projects. Established by the government, the Fund channels, programmes, disburses and monitors climate finance. Acting as a national basket fund, pooling resources from various contributors, it facilitates direct access to international funds such as the Green Climate Fund, streamlining the integration of external aid and domestic finance. The fund is accessible to line ministries, districts, private entities and civil society, supporting projects that align with Rwanda's goals for sustainable, climate-resilient and green economic growth (Rwanda Government, 2022; Rwanda Green Fund, 2022).

Third, while international finance often supports projects on a case-by-case basis, a comprehensive approach is essential for maximizing risk preparedness. Addressing system-wide aspects through broader frameworks and engaging diverse stakeholders is key. For example, the Global Partnership for Education's Climate Smart Education System initiative aims to improve readiness to access climate finance for up to 35 of the most climate-vulnerable countries, in turn developing a viable pipeline for future investments between 2024 and 2026. The initiative supports education ministries to access climate finance to integrate climate change into the sector. It provides technical assistance for evidence-based planning, cross-ministerial coordination and building greener, more resilient education infrastructure (GPE, 2024a).

The World Bank's Global Facility for Disaster Reduction and Recovery emphasizes cross-sectoral involvement and the establishment of a comprehensive framework for disaster risk reduction in education. Its Global Program for Safer Schools integrates technical advice, risk-informed investment designs and risk reduction considerations into education infrastructure. Between 2014 and 2023, the programme supported 35 countries and 564,000 schools, influencing the design and implementation of over USD 3.1 billion worth of school infrastructure projects (World Bank, 2019, 2024).

The World Bank also supports the Pacific Safer Schools Program, which collaborates with governments, the construction industry and non-governmental organizations in Samoa, Tonga and Vanuatu to reinforce school buildings and infrastructure (Cordero, 2024; Kleymeyer, 2017; World Bank, 2022, 2024). In 2024, the World Bank approved a USD 1.25 billion loan for resilient schools in the Philippines, with USD 500 million dedicated to supporting the recovery of disaster-affected schools in selected regions.

> "Effective risk assessment and cost estimation are crucial for the education sector to comprehensively address its needs"

Finally, effective risk assessment and cost estimation are crucial for the education sector to comprehensively address its needs. Resources for capital investment should be clearly outlined in education sector plans that incorporate disaster preparedness and management. Belize's Education Sector Plan 2021–2025 addresses the significant risks posed by hurricanes and droughts, emphasizing the need for hurricane-resistant facilities and effective risk mitigation strategies. The plan highlights the importance of allocating sufficient capital for achieving climate resilience objectives: 89% of the education budget is dedicated to staff costs, with the remaining 11% for training, scholarships, facility maintenance and materials. This underscores the challenge of securing adequate funding for capital expenditures Belize Ministry of Education, Culture, Science and Technology, 2021).

To address similar challenges globally, initiatives like Building the Climate Resilience of Children and Communities through the Education Sector (BRACE) have been launched. This initiative is based on the Climate Smart Education System initiative and exclusively finances the education sector. BRACE focuses on increasing the resilience of education systems by retrofitting and constructing climate-adaptive schools in countries such as Cambodia, South Sudan and Tonga. It aligns with the international School Safety Framework and is implemented in collaboration with UNESCO, its International Institute for Educational Planning and Save the Children (GADRRRES, 2022; GPE, 2023; Green Climate Fund, 2023b, 2023c).

Climate finance offers valuable opportunities to enhance disaster preparedness and resilience within the education sector. Accessing climate finance can be challenging, but overcoming these obstacles is feasible and can lead to substantial benefits. Initiatives like BRACE demonstrate how targeted investments can strengthen education systems and support sustainable development in vulnerable regions.

HOUSEHOLD EXPENDITURE

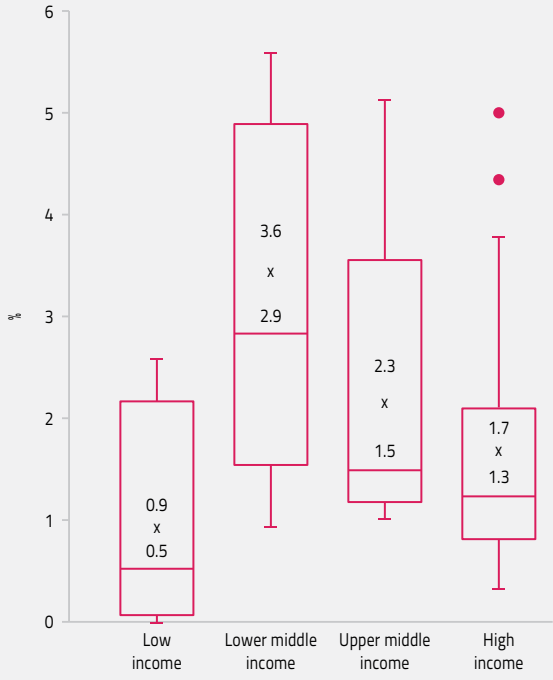
Households contribute significantly worldwide to education, filling gaps left by public funding and investing in their children's futures. According to the 2024 Education Finance Watch, the share of households in total education spending has increased from 21% in 2010 to 25% in 2022, while the share of governments has dropped from 79% to 75% in this period.

> The share of households in total education spending has increased from 21% in 2010 to 25% in 2022

The United Nations National Accounts Official Country Database (UN Data, 2024) provides detailed time series data on national accounts, including household total and education consumption spending. Data are available for a wide range of countries from 2010 to 2021, although most are upper-middle- and high-income countries, potentially skewing global averages.

Education's share of household budgets varies significantly by country income group, reflecting both economic constraints and public spending patterns (**Figure 18.16**). In low-income countries, households spend less than 1% of their budgets on education, constrained by economic hardship. In contrast, households in lower-middle-income countries allocate a median of 2.9% and an unweighted mean of 3.6% of their spending to education, with their spending distribution being the widest among all income groups. The high level of spending in lower-middle-income countries suggests that households face pressures to supplement inadequate public funding (UNESCO, 2021a). In upper-middle-income countries, the median share of household budgets spent on education drops to 1.5%, with an unweighted mean of 2.3%. Finally, households in high-income countries dedicate a median of 1.3% or an unweighted mean of 1.7% to education.

FIGURE 18.16:
Households in lower-middle-income countries spend at least twice as high a share of their budget on education as households in high-income countries
Distribution of share of education in total household consumption spending, by country income group, 2018–22



Notes: The box plots show the distribution of the share of education in total household consumption expenditure by country income group. The box limits show the range within which the central 50% of the data can be found. The central line (and label) marks the median value and the x sign (and label) marks the unweighted mean for each country income group. Lines extend from each box to capture the range of the remaining data, with dots placed past the line edges to indicate outliers. There are observations from 4 low-, 12 lower-middle, 17 upper-middle- and 42 high-income countries.
GEM StatLink: https://bit.ly/GEM2024_fig18_16
Source: Education Finance Watch team analysis based on the United Nations National Accounts Official Country Database.

FIGURE 18.17:
Household education spending tends to be stable
Household education consumption expenditure as a share of GDP, selected countries, by region, 2010–22

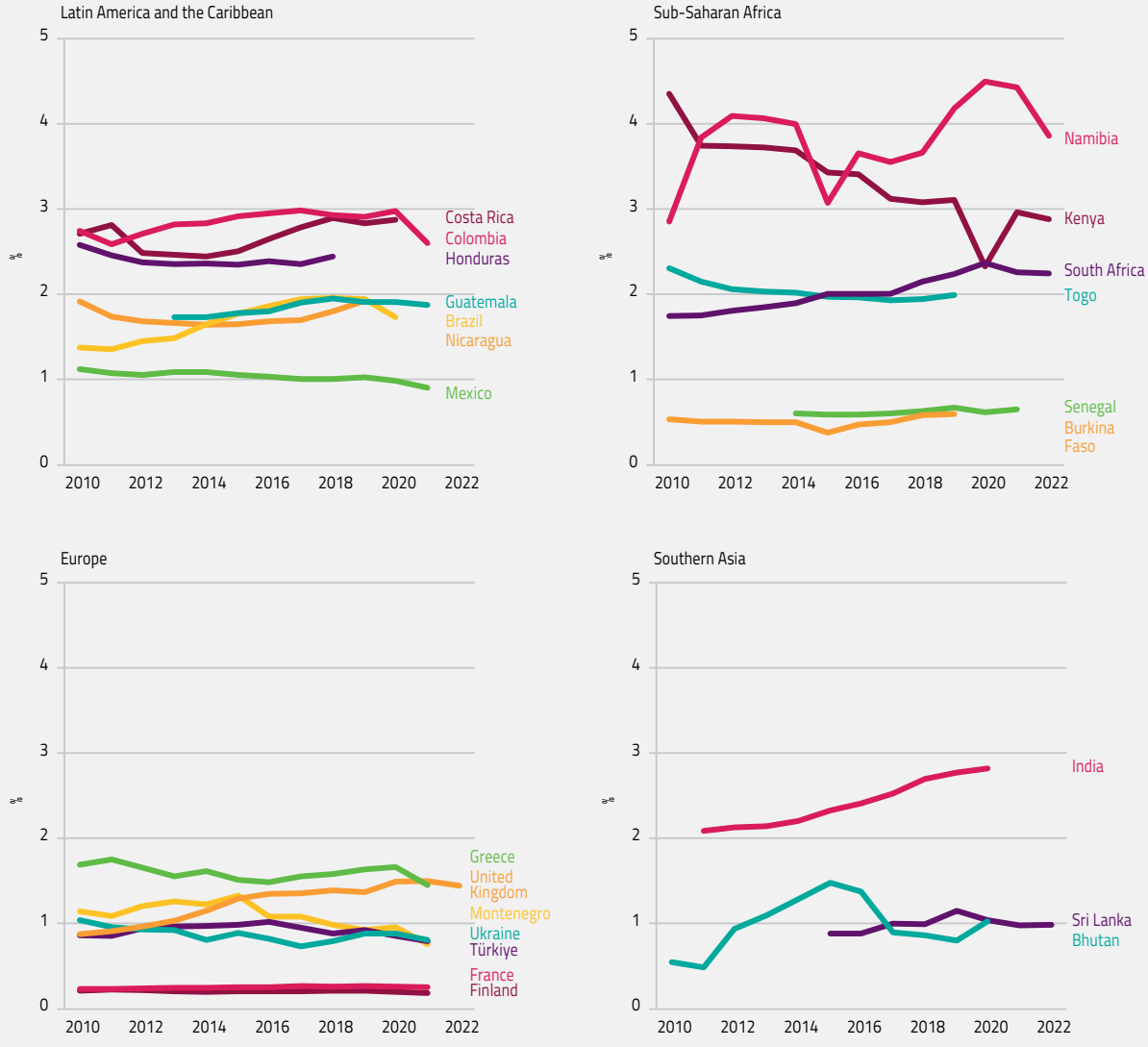


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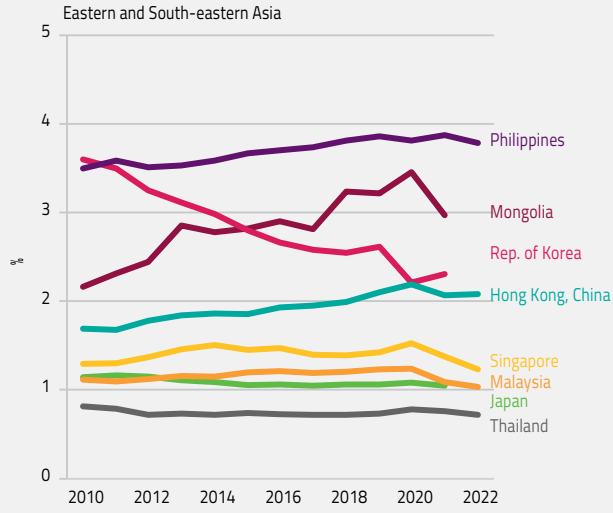
FIGURE 18.17 CONTINUED:
Household education spending tends to be stable
Household education consumption expenditure as a share of GDP, selected countries, by region, 2010–22



GEM StatLink: https://bit.ly/GEM2024_fig18_17
Source: Education Finance Watch team analysis based on the United Nations National Accounts Official Country Database (on share of education in total household consumption expenditure) and World Development Indicators (on consumption as a share of GDP).

Household education spending varies greatly within regions. In South Asia, households in India spend nearly three times as much on education as their counterparts in Sri Lanka. In Latin America, households in Costa Rica spend close to three times more than those in Mexico, while in sub-Saharan Africa, Namibia's households bear a sixfold higher education cost than those in Senegal. Even within Europe, there are large disparities: households in Greece invest six times as much in education as those in France. These variations may be linked to differences in public policy, economic conditions and cultural priorities. Countries with robust public education funding typically see lower household education spending, but in areas where public support is insufficient, families must shoulder a heavier financial burden.

The story of household education spending is not just one of regional and income-based inequality; it is also one of change over time (**Figure 18.17**). Between 2010 and 2021, several countries experienced shifts in the share of household education spending relative to GDP. For instance, the United Kingdom saw this figure rise from 0.9% to 1.5%, while South Africa's increased from 1.7% to 2.4%. In contrast, countries like Kenya and the Republic of Korea witnessed declines. The impact of COVID-19 further complicated this landscape, as countries including Colombia, Namibia and Singapore saw declines in household education spending due to economic shocks.

Ayyub Najarada, attends school at the Kalbajar School #56 in the Masazy settlement in Absheron Region. The World Bank supported improving content and relevance of teaching in Azerbaijan's secondary schools.

Credit: © Allison Kwesell / World Bank*

STATISTICAL TABLES[1]

This report presents for the first time an overview table that compares progress between 2015 and 2023 for selected SDG 4 benchmark indicators. Tables 1 to 7 present the latest information for a range of global, thematic and other education indicators. Table 1 presents basic information on demographic and education system characteristics as well as on domestic education finance. Tables 2 to 7 are organized by each of the seven Sustainable Development Goal (SDG) 4 targets (4.1 to 4.7) and three means of implementation (4.a to 4.c). The tables mainly focus on the SDG 4 monitoring framework of 43 internationally comparable indicators: 12 global and 31 thematic indicators. An additional indicator, 'Proportion of children/young people prepared for the future, by sex', is the product of the two global indicators of SDG target 4.1. The UNESCO Institute for Statistics (UIS) reported on all indicators in 2024, except indicators 4.7.3 and 4.a.4 (**Table I.1**).[2,3] The tables also include additional indicators, which are not formally part of the SDG 4 monitoring framework, such as transition from primary to secondary education, and student mobility.

METHODOLOGICAL NOTES

Most data in the statistical tables come from the UIS. Where the statistical tables include data from other sources, these are mentioned in footnotes. The most recent UIS data on pupils, students, teachers and education expenditure presented in the tables are from the September 2024 release and refer to the school year or financial year ending in 2023.[4] These statistics refer to formal education, both public and private, by level of education. The statistical tables list 208 countries and territories, all of which are UNESCO Member States or associate members with the exception of Bermuda and the Turks and Caicos Islands. Most report their data to the UIS using standard questionnaires issued by the UIS itself. For 46 countries, education data are collected by the UIS via the UIS/OECD/Eurostat (UOE) questionnaires.[5]

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 mainly based on the World Population Prospects estimates produced by the UN Population Division (UNPD). Single year age data are not provided for countries with a total population of less than 90,000. For some countries, population estimates are derived from Eurostat (Demographic Statistics), the Secretariat of the Pacific Community (Statistics and Demography Programme) or national statistical offices.

While the World Population Prospects estimates remain the default source of population data, the UIS has been implementing a new population data policy endorsed by the TCG in March 2023, which was first used for the September 2023 data release.[6] Under this policy, countries for which national population data meet a set of pre-defined standard quality criteria, have the possibility to request UIS to use their national population data for the calculation of their population-based indicators instead. .As part of the new population data policy, information requirements are: (i) complete time series data and metadata from 2000 to 2023; (ii) complete sex and age disaggregated data for the 0 to 99 age population; (iii) data compiled and disseminated by recognized international organizations or publicly available; and (iv) data with adequate population coverage and representative of the underlying population to the extent possible. Estimates or counts where more than 5% of the total population is excluded are not eligible for use in calculations. This hybrid approach aims to improve national ownership over education statistics disseminated by the UIS, especially in countries where UNPD data coverage differs from the coverage of education data reported by countries to the UIS.

1 The statistical tables are accessible on the GEM Report website at https://en.unesco.org/gem-report/statistical-tables.

2 The Inter-agency and Expert Group on SDG Indicators proposed the 11 SDG 4 global indicators. The UN Statistical Commission adopted them at its 48th session, in March 2017. The United Nations Economic and Social Council adopted them in June 2017. The completion rate (indicator 4.1.2) was added to the list in March 2021 following the 2020 Comprehensive Review.

3 The Technical Advisory Group on post-2015 education indicators originally proposed the 43 indicators. The Technical Cooperation Group (TCG), which became the Education Data and Statistics Commission (EDSC) in February 2024, endorsed them, with some changes, to monitor progress towards the SDG 4 targets. Information on indicator methodological developments can be accessed at the TCG website, http://tcg.uis.unesco.org/.

4 This means 2022/23 for countries with a school year that overlaps two calendar years, and 2023 for those with a calendar school year. The most recent reference year for education finance for the UOE countries is the year ending in 2021.

5 The countries concerned are most European countries, non-European Organisation for Economic Co-operation and Development (OECD) countries, and a changing set of other countries.

6 See https://tcg.uis.unesco.org/wp-content/uploads/sites/4/2022/11/2_WG_EMIS_3_UIS_Population_Data_Note.pdf.

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.

ESTIMATES AND MISSING DATA

Regarding statistics produced by the UIS, both observed and estimated education data are presented throughout the statistical tables. The latter are marked with subscript (i). Wherever possible, the UIS encourages countries to make their own estimates. Where this does not happen, the UIS may make its own estimates if sufficient supplementary information is available. 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 2023 is not available, data for earlier or later years are used, and are indicated by footnotes.

AGGREGATES

Figures for regional and other aggregates represent either sums, the percentage of countries meeting some condition(s), medians or weighted averages, as indicated in the tables, depending on the indicator. Weighted averages take into account the size of the relevant population of each country, or more generally of the denominator in case of indicators that are ratios. The aggregates are derived from both published data and imputed values, for countries for which no recent data or reliable publishable data are available. Aggregates marked with (i) in the tables are based on incomplete country coverage of reliable data (between 33% and 60% of the population [or aggregate denominator value] of a given region or country grouping). GEM Report calculated sums are flagged for incomplete coverage if less than 95% of the population of a given region or country income group is represented among the countries for which data are available.

REGIONAL AND COUNTRY INCOME GROUPS

In terms of regional groups, the statistical tables use the SDG regional classification of the United Nations Statistics Division (UNSD), with some adjustments. The UNSD classification includes all territories, whether independent national entities or parts of larger 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 the Turks and Caicos Islands, both of which are non-member states that were included in the statistical tables of the Education for All Global Monitoring Report. The UIS does not collect data for the Faroe Islands, so this territory is not included in the GEM Report, despite its status as a UNESCO associate member. In terms of country income groups, the statistical tables use the World Bank groups, which are updated each year on 1 July.

SYMBOLS USED IN THE STATISTICAL TABLES

± n	Reference year differs (e.g. -2: reference year 2021 instead of 2023)
i	Estimate and/or partial coverage
-	Magnitude nil or negligible
…	Data not available or category not applicable

Notes by indicator (**Table I.2**), footnotes to the tables and a glossary provide additional help to interpret the data.

TABLE I.1: SDG 4 monitoring framework indicators

	Indicator
	Target 4.1
4.1.0	Proportion of children/young people prepared for the future, by sex
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
4.1.2	Completion rate (primary education, lower secondary education, upper secondary education)
4.1.3	Gross intake ratio to the last grade (primary education, lower secondary education)
4.1.4	Out-of-school rate (one year before primary, primary education, lower secondary education, upper secondary education)
4.1.5	Percentage of children over-age for grade (primary education, lower secondary education)
4.1.6	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
4.1.7	Number of years of (a) free and (b) compulsory primary and secondary education guaranteed in legal frameworks
	Target 4.2
4.2.1	Proportion of children aged 24-59 months 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
4.2.3	Percentage of children under 5 years experiencing positive and stimulating home learning environments
4.2.4	Gross early childhood education enrolment ratio in (a) pre-primary education and (b) and early childhood educational development
4.2.5	Number of years of (a) free and (b) compulsory pre-primary education guaranteed in legal frameworks
	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
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
	Target 4.4
4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill
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 and level of education
	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
4.5.2	Percentage of students in a) early grades, b) at the end of primary, and c) at the end of lower secondary education who have their first or home language as language of instruction
4.5.3	Existence of funding mechanisms to 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
4.5.6	Expenditure on education by source of funding (public, private, international) as a percentage of GDP
	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
4.6.2	Youth/adult literacy rate
	Target 4.7
4.7.1	Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment
4.7.2	Percentage of schools that provide life skills-based HIV and sexuality education
4.7.3	Extent to which green policy intentions are mainstreamed in curriculum documents
4.7.4	Percentage of students in lower secondary education showing adequate understanding of issues relating to global citizenship and sustainability
4.7.5	Percentage of students in lower secondary showing proficiency in knowledge of environmental science and geoscience
	Target 4.a
4.a.1	Proportion of schools offering basic services, by type of service
4.a.2	Percentage of students experiencing bullying in the last 12 months in a) primary, and b) lower secondary education
4.a.3	Number of attacks on students, personnel and institutions
4.a.4	Proportion of school attending children receiving school meals
	Target 4.b
4.b.1	Volume of official development assistance flows for scholarships by sector and type of study
	Target 4.c
4.c.1	Proportion of teachers with the minimum required qualifications, by education level
4.c.2	Pupil-trained teacher ratio by education level
4.c.3	Proportion of teachers qualified according to national standards by education 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

Notes: Global indicators are highlighted in grey shading.
Source: UIS.

TABLE I.2: Notes of indicators in the statistical tables

	Indicator Notes
	Table 1
A	**Compulsory education by level** Number of years during which children are legally obliged to attend school.
B	**Free years of education by level** Number of years during which children are legally guaranteed to attend school free of charge.
C	**Official primary school starting age** The official age at which students are expected to enter primary school. This is expressed in whole years, not accounting for cutoff dates other than the beginning of the school year. The official entrance age to a given programme or level is typically, but not always, the most common entrance age.
D	**Duration of each education level** Number of grades or years in a given level of education.
E	**Official school-age population by level** Population of the age group officially corresponding to a given level of education, whether enrolled in school or not.
F	**Total absolute enrolment by level** Individuals officially registered in a given educational programme, or stage or module thereof, regardless of age.
G	**Initial government expenditure on education as a percentage of gross domestic product (GDP)** Total general (local, regional and central, current and capital) initial government funding of education includes transfers paid (such as scholarships to students), but excludes transfers received, in this case, international transfers to government for education (when foreign donors provide education sector budget support or other support integrated in the government budget).
H	**Expenditure on education as a percentage of total government expenditure** Total general (local, regional and central) government expenditure on education (current, capital and transfers), expressed as a percentage of total general government expenditure on all sectors (including health, education, social services, etc.). It includes expenditures funded by transfers from international sources to government.
I	**Initial government expenditure per pupil by level, in constant 2019 purchasing power parity (PPP) USD and as a percentage of GDP per capita** Total general (local, regional and central, current and capital) initial government funding of education per student, which includes transfers paid (such as scholarships to students), but excludes transfers received, in this case, international transfers to government for education (when foreign donors provide education sector budget support or other support integrated in the government budget).
J	**Initial household expenditure on education as percentage of GDP** Total payments of households (pupils, students and their families) for educational institutions (i.e. tuition fees, exam and registration fees, contribution to parent-teacher associations, and fees for canteen, boarding and transport) and purchases outside of educational institutions (i.e. uniforms, textbooks, teaching materials, or private classes). 'Initial funding' means that government transfers to households, (i.e. scholarships and other financial aid for education) are subtracted from what is spent by households.
	Table 2
A	**Out-of-school children, total number and as a percentage of corresponding age group** Children in the official school age range who are not enrolled in either primary or secondary school (*Source:* UIS and GEM Report analysis of household surveys and administrative data, VIEW database).
B	**Education completion rate by level** Percentage of children aged 3-5 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 completion rate in a country with a 6-year cycle where the official age of entry into the last grade is 11 is the percentage of 14- to 16-year-olds who have reached grade 6 (*Source:* UIS and GEM Report analysis of household surveys, VIEW database).
C	**Percentage of pupils over-age for grade by level** The percentage of pupils in each level of education whose age is two years or more above the intended age for their grade.
D	**Gross enrolment ratio in primary education** Total enrolment in primary education, regardless of age, expressed as a percentage of the population in the official age group. It can exceed 100% because of early or late entry and/or grade repetition.
E	**Primary adjusted net enrolment rate** Enrolment of the official age group for primary education either at that level or the levels above, expressed as a percentage of the population in that age group.
F	**Gross intake ratio to last grade of primary education** Total number of new entrants to the last grade of primary education, regardless of age, expressed as a percentage of the population at the official school entrance age for that grade.
G	**Effective transition from primary to lower secondary general education** Number of new entrants to the first grade of lower secondary education in the following year expressed as a percentage of the students enrolled in the last grade of primary education in the given year who do not repeat that grade the following year.
H	**Lower secondary total net enrolment rate** Number of pupils of the official school age group for lower secondary education who are enrolled in any level of education, expressed as a percentage of the corresponding school age population.
I	**Gross intake ratio to last grade of lower secondary education** Total number of new entrants to the last grade of lower secondary education, regardless of age, expressed as a percentage of the population at the official school entrance age for that grade.
J	**Upper secondary total net enrolment rate** Number of pupils of the official school age group for upper secondary education who are enrolled in any level of education, expressed as a percentage of the corresponding school age population.
K	**Administration of nationally representative learning assessment in early grades (grade 2 or 3), or final grade of primary or lower secondary** The definition includes any nationally representative, national or cross-national formative, low-stake learning assessment.
L	**Percentage of students achieving at least a minimum proficiency level in reading and mathematics** The minimum proficiency level in reading and mathematics is defined by each assessment. Data need to be interpreted with caution since the different assessments are not comparable. In the absence of assessments conducted in the proposed grade, surveys of student learning achievement in the grade below or above the proposed indicator grade are used as placeholders.

	Indicator Notes
	Table 3
A	**Percentage of children aged 36 to 59 months who are developmentally on track in health, learning and psychosocial well-being** The UNICEF Early Childhood Development Index is collected through the UNICEF Multiple Indicator Cluster Surveys and is a measure of fulfilment of developmental potential that assesses children aged 36 to 59 months in four domains: (a) literacy-numeracy; (b) physical development; (c) social-emotional development; and (d) learning (ability to follow simple instructions, ability to occupy themselves independently). The percentage of children who are developmentally on track overall is the percentage of children on track in at least three of the four domains.
B	**Under-5 moderate or severe stunting rate** Proportion of children in a given age group whose height for their age is below minus two standard deviations from median height for age established by the National Center for Health Statistics and the World Health Organization (WHO) (*Source:* 2021 UNICEF, WHO and World Bank Joint Child Malnutrition Estimates [JME]. Regional aggregates are JME statistical estimates for the reference year, not weighted averages of the observed country values in the country table).
C	**Percentage of children aged 36 to 59 months experiencing positive and stimulating home learning environments** 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 three 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 (*Source:* UNICEF database).
D	**Percentage of children under 5 years living in households with three or more children's books** Percentage of children aged 0 to 59 months who have three or more books or picture books (*Source:* UNICEF database).
E	**Gross early childhood education enrolment ratio in pre-primary education** Total enrolment in pre-primary education, regardless of age, expressed as a percentage of the population in the official age group. It can exceed 100% because of early or late entry.
F	**Adjusted net enrolment rate one year before the official primary school entry age** Enrolment of children one year before official primary school entry age in pre-primary or primary education, expressed as a percentage of the population in that age group.
	Table 4
A	**Participation rate in adult education and training** Participation rate of adults (aged 25 to 54) in formal or non-formal education and training in the last 12 months. Estimates based on other reference periods, in particular 4 weeks, are included when no data are available on the last 12 months.
B	**Percentage of youth enrolled in technical and vocational education** Youth (aged 15 to 24) enrolled in technical and vocational education at ISCED levels 2–5, as a percentage of the total population of that age group.
C	**Share of technical and vocational education in total enrolment by level** Total number of students enrolled in vocational programmes at a given level of education, expressed as a percentage of the total number of students enrolled in all programmes (vocational and general) at that level.
D	**TVET share of post-secondary non-tertiary (%)** Share of technical and vocational education and training (TVET) in post-secondary non-tertiary enrolment (%).
E	**Gross graduation ratio from tertiary (%)** Number of graduates from first degree programmes (at ISCED 6 and 7) expressed as a percentage of the population of the theoretical graduation age of the most common first degree programme.
F	**Gross enrolment ratio in tertiary education** Total enrolment in tertiary education, regardless of age, expressed as a percentage of the population in the five-year age group above the official graduation age from upper secondary. It can exceed 100% because of early or late entry and prolonged study.
G	**Percentage of adults (15 and over) with specific information and communication 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; using basic arithmetic formulas in a spreadsheet; writing a computer program using a specialized programming language.
H	**Percentage of adults (25 and over) who have attained at least a given level of education** 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. Primary refers to ISCED 1 or higher, lower secondary to ISCED 2 or higher, upper secondary to ISCED 3 or higher, post-secondary to ISCED 4 or higher.
I	**Percentage of population of a given age group achieving at least a fixed level of proficiency in functional literacy/numeracy skills** The threshold level corresponds to level 2 on the Programme for the International Assessment of Adult Competencies scale.
J	**Youth (15 to 24)/adult (15 and above) literacy rate**
K	**Number of youth (aged 15 to 24)/adult (aged 15 and above) illiterates** Number of literate youth (aged 15 to 24) and adults (aged 15 and above), expressed as a percentage of the total population in that age group. Literacy data include both national observed data from censuses or household surveys and UIS estimates. As definitions and methodologies used for data collection differ by country, data need to be used with caution.
	Table 5
A	**Adjusted gender parity index, by indicator** The gender parity index (GPI) is the ratio of female to male values of a given indicator. If the female value is less than or equal to the male value, adjusted gender parity index (GPIA) = GPI. If the female value is greater than the male value, GPIA = 2 - 1/GPI. This ensures the GPIA is symmetrical around 1 and limited to a range between 0 and 2. A GPIA equal to 1 indicates parity between females and males (*Sources:* UIS database; GEM Report team calculations based on national and international household surveys).
B	**Completion rate, by level**
C	**Percentage of students with a minimum level of proficiency at the end of a given level**
D	**Youth and adult literacy rate**
E	**Percentage of adults (16 and over) achieving at least a fixed level of proficiency in functional literacy and numeracy skills**
	Gross enrolment ratio, by level
F	**Location and wealth disparity** The location parity index is the ratio of rural to urban values of a given indicator. The wealth parity index is the ratio of the poorest 20% to the richest 20% of values of a given indicator.
G	**Completion rate, by level**
H	**Percentage of students with a minimum level of proficiency at the end of a given level**

	Indicator Notes
	Table 6
A	**Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed at all levels in: (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment** Information is collected with the questionnaire for monitoring the implementation by UNESCO Member States of the 1974 Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms. For each of the four components of the indicator (policies, curricula, teacher education and student assessment), a number of criteria are measured, which are then combined to give a single score between zero and one for each component (*Source:* UNESCO, 2020).
B	**Percentage of schools providing life skills-based HIV/AIDS education** Percentage of lower secondary schools providing life skills-based HIV/AIDS education (all institutions).
C	**Percentage of schools with basic drinking water, basic (single-sex) sanitation or toilets, and basic handwashing facilities** Basic drinking water means drinking water from an improved source, and water available at the school at the time of the survey. Basic sanitation or toilets means improved sanitation facilities at the school that are single-sex and usable (available, functional and private) at the time of the survey. Basic handwashing facilities means handwashing facilities with water and soap available at the school at the time of the survey.
D	**Percentage of public schools with electricity** Regularly and readily available sources of power (e.g. grid/mains connection, wind, water, solar and fuel-powered generator) that enable the adequate and sustainable use of ICT infrastructure by pupils and teachers to support course delivery or independent teaching and learning needs.
	Percentage of public schools with internet used for pedagogical purposes Internet that is available for enhancing teaching and learning and is accessible by pupils irrespective of the device used. Access can be via a fixed narrowband, fixed broadband or mobile network.
	Percentage of public schools with computers Use of computers to support course delivery or independent teaching and learning needs, including to meet information needs for research purposes, develop presentations, perform hands-on exercises and experiments, share information, and participate in online discussion forums for educational purposes. The definition includes desktops, laptops and tablets.
E	**Percentage of public primary schools with access to adapted infrastructure and materials for students with disabilities** Any built environments related to education facilities that are accessible to all users, including those with various types of disability, enabling them to gain access to use and exit from them. Accessibility includes ease of independent approach, entry, evacuation and/or use of a building and its services and facilities (such as water and sanitation) by all of the building's potential users with an assurance of individual health, safety and welfare during the course of those activities.
F	**Percentage of students experiencing school-related bullying in lower secondary education** Percent of students subjected to bullying in the past 12 months (or alternative period as available in the source data) at the lower secondary level. The definition of bullying includes, when possible, physical, verbal and relational abuse. This scope reflects current research on bullying as well as the definitions for major international student assessments.
G	**Level of attacks on students, teachers or institutions** Number of violent attacks, threats or deliberate use of force in a given time period (e.g. the last 12 months, a school year or a calendar year) directed against students, teachers and other personnel or against education buildings, materials and facilities, including transport. The indicator focuses on attacks carried out for political, military, ideological, sectarian, ethnic or religious reasons by armed forces or non-state armed groups.
H	**Internationally mobile students, inbound and outbound numbers enrolled, and mobility rates** Number of students from abroad studying in a given country, expressed as a percentage of total tertiary enrolment in that country. Number of students from a given country studying abroad, expressed as a percentage of total tertiary enrolment in that country.
I	**Volume of official development assistance for scholarships** Total gross disbursement of official development assistance flows (all sectors) for scholarships (all levels). The sum of the values of regions and country income groups does not add up to the global total because some aid is not allocated by country.
	Imputed student costs Costs incurred by donor countries' higher education institutions when they receive students from developing countries.

	Indicator Notes
	Table 7
A	**Number of classroom teachers** Persons employed full-time or part-time in an official capacity to guide and direct the learning experience of pupils and students, irrespective of their qualifications or the delivery mechanism (i.e. face-to-face and/or at a distance). This definition excludes educational personnel who have no active teaching duties (e.g. headmasters, headmistresses or principals), or who work occasionally or in a voluntary capacity in educational institutions.
B	**Pupil/teacher ratio** Average number of pupils per teacher at a given level of education, based on headcounts of pupils and teachers.
C	**Percentage of trained classroom teachers** 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 are not collected for UIS/OECD/Eurostat (UOE) countries.
D	**Percentage of qualified classroom teachers** Qualified teachers are defined as those who have the minimum academic qualification necessary to teach at a specific level of education according to national standards.
E	**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.
F	**Relative teacher salary level** Teacher salary relative to other professionals with equivalent academic qualifications. 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.
G	**Percentage of teachers who received in-service training in the last 12 months** For data representative of teachers at a level of education or grade, the proportion of teachers that have received in-service training in the past 12 months (or time period available in the dataset). For data representative of students' teachers, the proportion of students' teachers that have received in-service training in the past 12 months (or time period available in the dataset). For cross-national assessments with more than one assessment in the same level of education, the average of all grades is used.

PROGRESS SINCE 2015: SELECTED INDICATORS

	Participation/Completion														Gender	
	A		B						C						D	
	Adjusted net enrolment rate one year before primary entry (%)		Out-of-school rate (%)						Completion rate (%)						Gender gap in upper secondary completion rate (Female – Male)	
			Primary		Lower secondary		Upper secondary		Primary		Lower secondary		Upper secondary			
	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
SDG indicator	4.2.2		4.1.4						4.1.2							
Region	**Weighted average**															
World	74$_{i}$	75$_{i}$	11	10	14	14	32	30	85	88	74	78	53	59	0.8	2.4
Sub-Saharan Africa	44$_{i}$	49$_{-1i}$	22	19	32	33	47	46	60	67	42	47	25	28	-4.7	-3.6
Northern Africa and Western Asia	45$_{i}$	51$_{i}$	12	11	15	10	32	21	86	89	66	71	52	59	2.3	4.3
Northern Africa	46$_{i}$	47$_{-1i}$	13	11	14	11	35	22	85	90	64	69	52	59	4.4	6.3
Western Asia	44$_{i}$	56$_{i}$	10	11	15	10	30	21	86	89	70	73	51	58	-0.1	2.1
Central and Southern Asia	...	90$_{i}$	13	8	15	12	42	39	84	89	74	81	45	56	-6.0	-2.2
Central Asia	47	62$_{i}$	2	4	4	2	17	16	100	100	98	99	90	95	-3.1	-2.1
Southern Asia	...	91$_{i}$	14	8	16	13	42	40	83	88	73	81	44	55	-6.3	-2.3
Eastern and South-eastern Asia	81$_{-2i}$	...	3	5	7	8	21	19	96	98	85	90	63	72	9.0	12.7
Eastern Asia	...	...	3	5	3	6	14	11	98	99	90	94	68	87	10.5	17.4
South-eastern Asia	86$_{i}$	84$_{-2i}$	4	4	12	10	33	33	93	96	77	84	54	50	7.3	8.0
Oceania	80	81$_{i}$	6	8	4	9	21	29	85	87	73	72	61	61	3.2	3.9
Latin America and the Caribbean	91	91$_{i}$	4	4	6	7	21	19	90	93	78	84	57	64	7.8	7.5
Caribbean	...	...	7	9	5	10	22	25	76	78	70	73	50	52	5.9	8.9
Central America	...	...	4	6	11	15	34	35	92	95	76	81	46	54	3.6	5.2
South America	...	...	4	3	4	3	14	10	91	94	80	86	62	69	10.0	8.6
Europe and Northern America	93	90$_{i}$	2	2	2	2	6	5	100	100	98	98	88	89	3.8	4.0
Europe	94	91$_{i}$	2	2	2	1	6	6	100	100	97	97	85	87	4.3	4.7
Northern America	92	87$_{i}$	3	3	2	2	7	4	100	100	99	99	92	93	3.1	2.9
Low income	39$_{i}$	44$_{-1i}$	25	23	35	38	54	55	51	60	30	36	16	20	-4.3	-2.2
Middle income	77$_{i}$	79$_{i}$	10	8	13	12	33	30	88	91	76	82	52	61	1.0	3.3
Lower middle	73$_{i}$	76$_{i}$	13	10	17	15	41	38	83	88	70	77	46	52	-3.9	-1.5
Upper middle	82$_{i}$	82$_{-2i}$	4	5	5	6	19	14	95	97	85	90	62	76	9.3	12.5
High income	92	89$_{i}$	2	2	2	2	6	5	100	100	97	98	88	89	3.7	4.0

A Adjusted net enrolment rate (NERA) one year before the official primary school entry age.
B Out-of-school rate by level - model data [*Source:* UIS and GEM Report analysis of administrative data and household surveys available at https://education-estimates.org/].
C Education completion rate by level - model data
[*Source:* UIS and GEM Report analysis of administrative data and household surveys available at https://education-estimates.org/].
D Gender gap in upper secondary completion rates (female - male) - model data
[*Source:* UIS and GEM Report analysis of administrative data and household surveys available at https://education-estimates.org/].
E Percentage of students achieving at least a minimum proficiency level in reading and mathematics.
F Percentage of schools with internet used for pedagogical purposes.
G Percentage of teachers with the minimum required qualifications
(received at least the minimum organized and recognized pre-service and in-service pedagogical training) to teach at a given level of education.
H Initial government expenditure on education as % of GDP.
I Initial government expenditure on education as % of total government expenditure.

Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.
Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.
(-) Magnitude nil or negligible.
(...) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).
(i) Estimate and/or partial coverage.

	Learning								Digital		Teachers						Finance			
	E								F		G						H		I	
	Minimum proficiency level (%)										Trained teachers (%)									
	End of primary				End of lower secondary				Upper secondary schools with access to Internet for pedagogical purposes (%)		Primary		Lower secondary		Upper secondary		Government expenditure on education as a percentage of GDP (%)		Government expenditure on education as a percentage of total government spending (%)	
	Reading		Mathematics		Reading		Mathematics													
	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
	4.1.1								4.a.1		4.c.1								1.a.2	
	Weighted average																Median			
	59$_{i}$	58$_{-4i}$	45$_{i}$	44$_{-4i}$	63$_{i}$	64$_{-4i}$	50$_{i}$	51$_{-4i}$	61$_{i}$	72$_{i}$	86$_{i}$	85$_{i}$	86$_{i}$	85$_{-1i}$	88$_{+1i}$	85$_{-1i}$	4.2	4.1	13.2	12.5
	31$_{i}$	30$_{-4i}$	12$_{i}$	11$_{-4i}$	...	...	...	...	25$_{i}$	...	66$_{i}$	64$_{-1i}$	57$_{i}$	60$_{-4i}$	58$_{i}$	63$_{-4i}$	3.6	3.7	16.2	14.8
	...	...	31$_{i}$	32$_{-4i}$	61$_{i}$	63$_{-4i}$	30$_{i}$	31$_{-4i}$	81$_{i}$	87$_{i}$	84$_{i}$	83$_{i}$	83$_{i}$	87$_{-1i}$	85$_{i}$	90$_{-1i}$	4.3	4.0	12.1	12.4
	...	...	...	...	...	...	...	...	71$_{i}$	77$_{i}$	85$_{i}$	94$_{i}$	81$_{i}$	94$_{-1i}$	81$_{i}$	97$_{-1i}$	5.7	6.0	19.2	17.8$_{i}$
	...	...	...	...	...	...	...	...	87$_{i}$	93$_{i}$	82$_{i}$	75$_{i}$	84$_{i}$	80$_{i}$	...	82$_{i}$	3.6	3.7	11.6	10.8
	...	...	...	...	...	...	...	...	45$_{i}$	71	76$_{i}$	90	84$_{i}$	85	85$_{+1i}$	95	3.3	4.1	16.3	17.2
	...	...	...	...	...	...	...	...	...	85$_{-1i}$	100$_{i}$	93$_{i}$	94$_{+1i}$	...	97$_{+1i}$	...	5.2	5.5	19.1	21.4
	...	...	...	...	...	...	...	...	44$_{i}$	70	75$_{i}$	90	82$_{i}$	86	84$_{+1i}$	94	3.3	3.3	13.1	12.2
	...	...	...	...	56$_{i}$	55$_{-4i}$	48$_{i}$	47$_{-4i}$	86$_{i}$	87$_{-1i}$	...	...	...	...	...	...	3.4	3.1	14.9	10.8
	...	...	...	...	...	...	...	...	93$_{i}$	95	...	...	...	...	...	...	3.8	3.9	12.3	10.3$_{-1}$
	...	...	...	...	...	...	...	...	82$_{i}$	82$_{-3i}$	98$_{i}$	94$_{-2i}$	98$_{i}$	94$_{-2i}$	96$_{i}$	98$_{-2i}$	3.4	2.7	15.1	12.6
	...	...	64$_{i}$	64$_{-4i}$	83$_{i}$	81$_{-4i}$	79$_{i}$	76$_{-4i}$	95	97$_{-1i}$	...	...	...	...	...	...	5.5	6.1	14.0	11.6
	44$_{i}$	43$_{-4i}$	39$_{i}$	36$_{-4i}$	51$_{i}$	52$_{-4i}$	34$_{i}$	36$_{-4i}$	63$_{i}$	70$_{i}$	83$_{i}$	80$_{i}$	...	79$_{-1i}$	...	74$_{-1i}$	4.5	3.9	16.5	12.8
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.3	3.7	13.0	12.0
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.1	3.8	20.4	15.9
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.0	4.5	17.8	15.2
	97$_{i}$	97$_{-4i}$	76$_{i}$	77$_{-4i}$	80$_{i}$	81$_{-4i}$	74$_{i}$	75$_{-4i}$	98$_{i}$	99$_{-3i}$	96$_{i}$	93$_{i}$	...	...	...	...	4.9	4.7	11.0	10.7
	...	...	...	...	...	...	...	...	98$_{i}$	98$_{-1i}$	94$_{i}$	91$_{-3i}$	...	...	...	...	4.9	4.7	11.0	10.6
	...	...	...	...	...	...	...	...	100	100$_{-3i}$	99	97$_{i}$	99	99$_{i}$	98	93$_{i}$	4.7	4.1	12.7	11.9$_{-1}$
	18$_{i}$	17$_{-4i}$	10$_{i}$	10$_{-4i}$	...	...	...	...	29$_{i}$	...	68$_{i}$	53$_{i}$	...	...	...	...	3.0	3.8	16.0	15.7
	...	...	...	...	...	...	...	...	57$_{i}$	72$_{i}$	85$_{i}$	87$_{-1i}$	86$_{i}$	85$_{-2i}$	88$_{+1i}$	90$_{-2i}$	4.2	3.9	15.2	13.6
	52$_{i}$	54$_{-4i}$	...	...	...	...	38$_{i}$	39$_{-4i}$	45$_{i}$	68	76$_{i}$	85$_{i}$	80$_{i}$	82$_{i}$	80$_{+1i}$	89$_{i}$	4.0	3.6	14.3	15.1
	53$_{i}$	52$_{-4i}$	48$_{i}$	46$_{-4i}$	55$_{i}$	56$_{-4i}$	43$_{i}$	44$_{-4i}$	74$_{i}$	79$_{i}$	...	...	...	...	...	...	4.4	4.2	16.5	12.8
	93$_{i}$	93$_{-4i}$	71$_{i}$	72$_{-4i}$	81$_{i}$	81$_{-4i}$	71$_{i}$	71$_{-4i}$	96$_{i}$	97$_{-3i}$	96$_{i}$	92$_{i}$	90$_{i}$	86$_{-3i}$	93$_{i}$	93$_{-3i}$	4.7	4.5	12.1	11.1

PROGRESS SINCE 2015: SELECTED INDICATORS: Continued

	Participation/Completion														Gender	
	A		B						C						D	
			Out-of-school rate (%)						Completion rate (%)							
	Adjusted net enrolment rate one year before primary entry (%)		Primary		Lower secondary		Upper secondary		Primary		Lower secondary		Upper secondary		Gender gap in upper secondary completion rate (Female – Male)	
Country or territory	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
SDG indicator	4.2.2		4.1.4						4.1.2							
Sub-Sarahran																
Angola	68$_{+1i}$	...	28	24	24	36	39	54	53	62	33	38	17	19	-5.5	-4.6
Benin	85$_{+1}$	...	20	13	29	38	51	64	59	69	29	40	14	20	-11.6	-13.9
Botswana	31$_{-1}$	51$_{-1}$	12	11	8	13	16	26	96	98	89	96	52	63	7.8	11.9
Burkina Faso	9	19	33	36	44	47	71	63	48	68	20	41	8	15	-5.1	-9.1
Burundi	31	46$_{-3}$	15	7	31	32	57	61	44	57	20	31	7	9	-1.5	0.5
Cabo Verde	79	86$_{-3}$	6	9	10	13	23	23	...	...	...	...	...	...	...	...
Cameroon	51	40	18	9	30	47	52	67	73	78	40	47	16	21	-2.8	-0.2
Central African Republic	...	...	39	44	46	50	75	66	30	32	15	17	8	9	-4.6	-3.5
Chad	8	18	45	23	49	57	63	72	28	34	15	18	6	6	-6.1	-4.8
Comoros	53$_{-1}$	37$_{-2}$	19	18	30	22	47	34	74	84	47	61	25	34	6.6	15.2
Congo	...	4	21	13	29	32	61	59	80	90	44	60	23	31	-7.4	-6.7
Côte d'Ivoire	16	20	27	22	46	32	67	41	51	76	27	40	12	16	-5.2	-7.9
D. R. Congo	...	21$_{-3}$	23	17	15	14	29	27	54	60	44	49	19	22	-4.6	-1.6
Djibouti	...	...	38	33	51	42	69	53	82	88	55	64	26	33	-3.8	6.4
Equat. Guinea	33	...	57	52	57	57	70	72	67	72	28	32	7	8	-6.1	-5.1
Eritrea	24	35$_{-1}$	42	45	37	44	46	51	...	...	...	...	...	...	...	...
Eswatini	...	...	8	8	7	13	19	24	69	80	56	81	41	55	3.1	3.2
Ethiopia	35	42$_{-2}$	24	17	39	42	64	64	48	61	23	30	12	15	1.2	4.3
Gabon	...	...	4	5	4	3	10	6	67	74	39	46	18	22	4.2	8.8
Gambia	48$_{i}$	53$_{-2}$	26	16	33	17	53	31	64	72	47	56	27	32	-3.0	3.3
Ghana	81$_{-2}$	85$_{-2}$	14	10	15	12	40	34	72	78	55	64	30	44	-3.1	-2.4
Guinea	37	49$_{-2}$	34	19	47	46	63	64	46	59	31	41	19	24	-12.9	-11.4
Guinea-Bissau	...	...	38	37	29	37	39	50	22	27	12	14	9	11	-4.9	-4.3
Kenya	...	...	15	14	8	11	23	18	74	86	59	61	34	37	-2.1	2.7
Lesotho	40	32$_{-3}$	7	10	15	15	37	43	66	83	31	38	20	24	6.1	7.8
Liberia	80$_{i}$	66$_{-1}$	16	26	21	23	29	24	29	29	20	22	12	14	-2.7	-1.1
Madagascar	34$_{-1}$	66	9	18	21	37	55	66	47	53	25	28	11	14	-	0.7
Malawi	...	...	10	13	24	24	51	56	44	50	20	27	13	15	-2.5	1.5
Mali	42	30	40	28	52	56	69	75	46	57	23	28	10	12	-6.7	-5.8
Mauritania	...	...	33	33	41	31	61	52	44	51	35	41	15	22	-7.0	-4.3
Mauritius	90$_{i}$	81$_{i}$	0.5	0.3	4	2	16	14	100	100	88	93	48	59	8.6	12.2
Mozambique	...	...	13	5	39	31	64	64	38	52	11	14	4	5	-2.6	-2.6
Namibia	75$_{-2}$	77$_{-1}$	2	1	7	1	27	7	80	85	49	55	32	36	6.1	9.0
Niger	23$_{+1i}$	23$_{i}$	44	43	71	72	89	85	43	73	14	34	3	5	-2.8	-3.2
Nigeria	...	...	27	23	26	25	40	37	78	81	67	73	59	64	-13.9	-14.6
Rwanda	44$_{+1i}$	69$_{i}$	6	5	16	13	52	40	44	67	22	33	13	21	-0.4	2.4
Sao Tome and Principe	55	73$_{-2}$	8	5	13	5	29	14	83	90	68	87	33	53	3.4	9.0
Senegal	18	21	39	28	38	32	52	53	50	55	24	32	9	11	-2.5	0.4
Seychelles	99$_{+1i}$	94$_{i}$	0.1	-	0.5	0.2	23	11	...	...	...	...	...	...	...	...
Sierra Leone	34	59	25	12	33	17	56	38	60	67	38	45	13	14	-6.2	-5.0
Somalia	...	...	...	...	...	...	...	...	26	28	20	22	8	9	-10.7	-11.2
South Africa	70	69$_{-1}$	6	13	8	8	25	20	97	98	86	90	46	51	7.0	10.3
South Sudan	20$_{i}$	...	64	58	58	50	58	53	7	8	10	13	2	2	-1.2	-1.3
Togo	...	...	22	3	30	23	54	54	72	85	34	46	14	21	-8.1	-9.9
Uganda	...	...	12	15	26	33	62	75	38	35	26	28	16	17	-1.7	1.7
United Republic of Tanzania	43	63	17	15	46	40	78	79	77	75	29	33	10	11	-2.6	-2.0
Zambia	...	...	17	11	20	19	36	49	70	69	45	47	25	29	-4.8	-3.4
Zimbabwe	49	57$_{-1}$	7	4	26	12	61	42	85	87	69	74	8	8	-3.1	-3.4

Learning								Digital		Teachers						Finance				Country code
E								F		G						H		I		
Minimum proficiency level (%)										Trained teachers (%)										
End of primary				End of lower secondary				Upper secondary schools with access to Internet for pedagogical purposes (%)		Primary		Lower secondary		Upper secondary		Government expenditure on education as a percentage of GDP (%)		Government expenditure on education as a percentage of total government spending (%)		
Reading		Mathematics		Reading		Mathematics														
2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	
4.1.1								4.a.1		4.c.1								1.a.2		
...	...	...	...	...	...	...	...	26_{+1}	...	...	93_{-2}	54	94_{-2}	47	89_{-2}	3.1	2.3_{-1}	8.9	6.4_{+1}	AGO
23_{-1}	...	11_{-1}	...	...	...	...	...	...	5_{-1}	69	75_{-2}	...	...	...	...	3.2	3.4_{-1}	17.5	19.0	BEN
68_{-2}	...	37_{-2}	...	...	...	...	...	...	97_{-1}	99_{-2}	100_{-1}	...	100_{-1}	...	99_{-1}	8.4	8.1_{-3}	23.1	21.5_{-3}	BWA
21_{-1}	...	22_{-1}	...	...	...	...	...	3_{+1}	2	85	91	...	66	...	63	3.7	5.3_{-1}	18.0	20.3	BFA
7_{-1}	...	40_{-1}	...	...	...	...	...	7_{+1}	...	100	...	100	...	100	...	7.1	4.8_{-1}	27.5_{i}	15.7	BDI
...	...	...	...	...	...	...	...	100_{+1}	100_{-2}	96_{-1}	93_{-2}	77_{-1}	95_{-2}	100_{-1}	96_{-2}	4.8	4.7_{-1}	16.7	13.4_{+1}	CPV
24_{-1}	...	12_{-1}	...	...	...	...	...	29_{+1i}	34	...	82_{-1}	50	62	57	59	2.7_{i}	2.6_{-1}	13.2_{i}	13.1	CMR
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	2.1_{-1}	8.4	10.0	CAF
3_{-1}	...	3_{-1}	...	...	...	...	...	...	5	65_{-2}	64	38	62	49_{+1}	60	2.3	2.5_{-1}	12.5_{-2}	16.5	TCD
...	...	...	...	...	...	...	...	...	25_{-2}	40_{-1}	75	...	...	...	...	2.5	2.4_{-1}	13.4	10.5_{-1}	COM
17_{-1}	...	6_{-1}	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1_{i}	3.0_{-1}	8.0_{i}	14.7	COG
22_{-1}	...	3_{-1}	...	...	...	...	...	...	...	100	100	...	...	...	...	3.5_{i}	3.4	21.2_{i}	15.9	CIV
...	...	...	...	...	...	...	...	...	...	95_{-1}	13	...	...	...	...	2.2	3.0_{-1}	15.7	...	COD
...	...	...	...	...	...	...	...	...	91	100	66	100	71	100	81	3.6_{i}	...	8.6_{i}	...	DJI
...	...	...	...	...	...	...	...	...	...	37	...	11	...	...	...	...	...	...	...	GNQ
...	...	...	...	...	...	...	...	...	...	71_{-1i}	77_{-1}	86_{-2}	...	80_{-2}	...	...	...	...	...	ERI
84_{-2}	...	37_{-2}	...	...	...	...	...	69_{+1}	23	82	...	...	...	...	...	5.4	6.3	16.4	16.6_{-1}	SWZ
...	...	...	...	...	...	...	...	...	23_{-2}	95_{-1}	...	...	...	100	...	5.2	3.7_{-1}	23.7	23.0_{-1}	ETH
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.8	2.2_{-1}	11.6	13.6	GAB
...	...	...	...	...	...	...	...	...	...	86	88_{-2}	90	69_{-2}	94	80_{-2}	2.2	2.7	12.4	17.5	GMB
...	...	...	...	...	...	...	...	...	...	55	66_{-2}	70	77_{-2}	83	81_{-2}	3.7	2.9_{-1}	23.8_{i}	12.0	GHA
...	...	...	...	...	...	...	...	...	...	76	69_{-2}	...	...	...	...	2.5	2.0_{-1}	11.6	10.0	GIN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0_{-2}	...	16.2_{-2}	...	GNB
...	26	...	37	...	...	...	...	...	...	...	...	...	...	...	...	4.9	4.0	...	17.9_{-3}	KEN
48_{-2}	11	10_{-2}	20	...	...	...	...	...	...	79	100	...	...	...	...	7.6	6.7	13.9	10.4_{+1}	LSO
...	...	...	...	...	...	...	...	...	...	47	62_{-1}	62	82_{-3}	60	83_{-3}	2.1	2.3_{-1}	6.8_{-1i}	7.4_{-2}	LBR
4	...	5	...	...	...	...	...	...	...	15	...	22_{-1}	...	17_{-1}	...	2.7	3.1_{-1}	17.0_{i}	18.0_{-4}	MDG
15_{-2}	...	4_{-2}	...	...	...	...	...	...	...	91_{-2}	...	...	...	...	...	3.4	...	21.8	...	MWI
...	...	...	...	...	...	...	...	...	57	...	37	...	44	...	37	3.8	4.0_{-1}	18.2	19.1	MLI
...	...	...	...	...	...	...	...	...	...	91_{-1}	...	100	...	76_{-1}	...	2.8	2.6	12.8	10.2_{+1}	MRT
75_{-2}	...	59_{-2}	...	...	...	...	...	99	100	100	100	...	...	...	...	4.8	4.6	16.5	12.2_{-1}	MUS
36_{-2}	...	15_{-2}	...	...	...	...	...	...	...	93	99_{-1}	85_{-2}	...	95_{-2}	...	6.0	6.2_{-1}	19.9	18.8_{-2}	MOZ
61_{-2}	...	17_{-2}	...	...	...	...	...	...	...	87	96_{-1}	...	...	...	...	9.9	9.0	22.6	25.0	NAM
2_{-1}	...	1_{-1}	...	...	...	...	...	...	17	56	98	...	22	15	53	4.5	4.1_{-1}	18.5	12.8	NER
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.3_{-1}	9.3	4.4	NGA
...	...	...	...	...	...	...	...	28_{i}	85	94	68	...	87	...	62	3.6_{i}	4.9	12.5_{i}	14.8	RWA
...	...	...	...	...	...	...	...	...	...	34	...	20_{+1i}	...	...	...	4.7	5.2_{-1}	11.3	18.3	STP
35_{-1}	...	29_{-1}	...	...	...	...	...	...	74_{-1}	68	74	...	75_{-1}	...	71_{-1}	5.5	6.0_{-1}	23.8	22.5	SEN
80_{-2}	...	52_{-2}	...	...	...	...	...	100_{+1}	100	84	80	...	...	...	...	4.9	4.7_{-1}	12.6	6.7_{-3}	SYC
...	...	...	...	...	...	...	...	...	7	54	66	69	81_{-2}	73	...	2.7_{-1}	6.8	15.1_{-1}	29.4_{-1}	SLE
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2_{-4}	SOM
57_{-2}	...	30_{-2}	...	...	...	...	...	...	...	...	...	...	...	...	...	5.5	6.1	18.9	18.6_{-1}	ZAF
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5	...	3.3	...	SSD
16_{-1}	...	20_{-1}	...	...	...	...	...	...	22	73	80	...	38_{-2}	...	28_{-2}	3.7	3.8_{-1}	16.2	11.6_{+1}	TGO
50_{-2}	...	21_{-2}	...	...	...	...	...	...	...	71	...	...	...	...	...	2.3_{i}	2.6	13.2_{i}	8.6	UGA
61_{-2}	...	8_{-2}	...	...	...	...	...	...	...	99_{+1}	...	...	...	...	...	4.2	3.3	17.6	13.4_{+1}	TZA
2_{+1}	10	4_{+1}	16	...	...	...	...	23_{+1}	...	86	...	...	...	...	...	4.6	3.6_{-1}	16.7	15.4_{+1}	ZMB
45_{-2}	...	23_{-2}	...	...	...	...	...	61	71_{-3}	94	98_{-1}	...	...	...	...	6.1_{-1}	...	29.5	15.7_{-3}	ZWE

PROGRESS SINCE 2015: SELECTED INDICATORS: Continued

	Participation/Completion														Gender	
	A		B						C						D	
			Out-of-school rate (%)						Completion rate (%)							
	Adjusted net enrolment rate one year before primary entry (%)		Primary		Lower secondary		Upper secondary		Primary		Lower secondary		Upper secondary		Gender gap in upper secondary completion rate (Female – Male)	
Country or territory	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
SDG indicator	4.2.2		4.1.4						4.1.2							
Northern Africa and Western Asia																
Algeria	...	68	1	1	4	5	24	18	94	96	62	71	37	48	20.8	29.2
Armenia	48	78	10	8	12	11	28	15	99	99	98	98	89	90	5.2	5.2
Azerbaijan	28$_{i}$	96$_{i}$	2	9	8	5	5	0.5	98	98	93	94	89	95	-5.5	-3.7
Bahrain	81	77	5	14	8	5	13	10	...	...	...	...	...	...	...	...
Cyprus	95$_{i}$	99$_{-1i}$	0.2	0.1	1	0.2	7	2	99	99	95	94	91	93	5.5	5.3
Egypt	37$_{-1}$	33$_{-2}$	3	2	10	1	30	8	93	96	82	87	80	87	2.7	4.9
Georgia	...	...	0.1	0.1	1	-	8	0.3	99	100	98	99	91	93	2.2	1.8
Iraq	...	...	13	12	35	10	55	28	72	78	41	49	30	51	1.9	-5.4
Israel	97$_{i}$	97$_{-1i}$	-	-	-	-	-	-	100	100	99	99	92	95	6.2	6.1
Jordan	...	67$_{i}$	25	16	34	19	44	36	98	99	91	92	62	60	12.4	16.5
Kuwait	80$_{-1}$	44$_{-2}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lebanon	73	82	31	23	41	28	59	53	...	...	...	...	...	...	...	...
Libya	...	...	44	35	55	40	66	51	...	...	...	...	...	...	...	...
Morocco	50$_{i}$	83	6	2	13	4	32	20	74	82	42	46	23	26	-1.2	0.7
Oman	74$_{i}$	82	6	1	2	8	10	30	...	...	...	...	...	...	...	...
Qatar	94$_{i}$	77$_{-1i}$	9	1	11	7	33	30	99	99	95	97	84	86	2.3	4.4
Saudi Arabia	37$_{i}$	55$_{-1i}$	8	12	3	10	6	14	...	...	...	...	...	...	...	...
State of Palestine (the)	66	70	5	8	10	6	37	22	99	100	96	98	79	83	13.1	12.0
Sudan	...	...	41	40	34	37	49	48	71	76	40	41	29	33	-2.0	-1.7
Syrian Arab Republic	33$_{-2}$	47	2	11	17	21	58	58	97	98	46	51	33	36	5.9	9.5
Tunisia	...	...	1	3	6	5	30	18	92	96	84	92	52	58	11.8	15.6
Türkiye	72$_{i}$	99$_{-1i}$	2	2	1	0.5	12	3	96	98	91	97	58	70	1.2	6.2
United Arab Emirates	98$_{i}$	100$_{i}$	5	1	10	1	28	3	...	...	...	...	...	...	...	...
Yemen	4$_{+1}$	...	19	21	31	27	56	50	65	73	48	57	31	38	-11.5	-6.5
Central and Southern Asia																
Afghanistan	...	...	41	53	50	67	67	79	55	71	41	54	29	37	-22.7	-21.8
Bangladesh	...	20$_{-1}$	17	5	18	3	47	26	79	88	59	71	25	35	-6.2	1.5
Bhutan	...	56$_{-1}$	7	4	14	9	28	19	78	91	70	86	59	73	-1.8	7.4
India	...	94$_{-1}$	10	4	13	12	42	42	91	96	81	89	49	63	-7.5	-3.4
Iran, Islamic Republic of	48	59$_{-3}$	2	1	4	1	16	9	94	96	85	91	64	73	8.5	13.7
Kazakhstan	94	80	0.1	0.2	0.2	0.1	4	1	100	100	100	100	97	99	0.5	0.1
Kyrgyzstan	66	84$_{-1}$	3	2	6	2	26	15	99	99	98	98	94	97	0.7	0.5
Maldives	90	83	3	3	16	12	44	37	98	99	87	97	27	38	6.6	16.4
Nepal	84	76	27	8	10	6	33	34	73	88	62	79	32	49	-5.8	-1.9
Pakistan	...	12$_{-1}$	29	20	28	19	44	41	51	56	44	50	22	26	0.5	5.0
Sri Lanka	61	52$_{-1}$	1	0.3	2	1	27	7	...	...	...	...	...	...	...	...
Tajikistan	11	...	6	15	2	6	22	13	99	99	94	98	70	78	-18.8	-14.5
Turkmenistan	...	...	3	1	14	3	71	25	100	100	100	100	94	95	3.2	3.1
Uzbekistan	29	66$_{-1}$	2	0.4	3	1	12	21	100	100	98	98	92	99	-2.1	0.2

Learning								Digital		Teachers						Finance				
E								F		G						H		I		
Minimum proficiency level (%)										Trained teachers (%)										
End of primary				End of lower secondary				Upper secondary schools with access to Internet for pedagogical purposes (%)		Primary		Lower secondary		Upper secondary		Government expenditure on education as a percentage of GDP (%)		Government expenditure on education as a percentage of total government spending (%)		Country code
Reading		Mathematics		Reading		Mathematics														
2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	
4.1.1								4.a.1		4.c.1								1.a.2		
...	...	...	...	21	...	19	...	...	85	100	92	...	...	...	...	6.2	5.6	16.1	14.4_{+1}	DZA
...	...	55	...	...	...	50	...	...	100	...	84	...	84	...	86	2.8	0.2	8.7_{-2}	9.7_{-1}	ARM
81_{+1}	67_{-2}	...	...	...	31_{-1}	...	38_{-1}	62_{+1}	88	99	99	92_{+1}	100	...	98	3.0	3.6	8.3	10.8_{-2}	AZE
69_{+1}	71_{-2}	40	...	...	...	39	...	100_{+1}	100	82	100	83	100	84	100	2.7	2.0_{-1}	7.3	9.3_{-1}	BHR
...	92_{-2}	74	...	64	39_{-1}	57	47_{-1}	...	...	...	100_{-2}	...	100_{-2}	...	100_{-2}	6.3	5.2_{-2}	13.9	12.7_{-2}	CYP
...	45_{-2}	...	...	...	...	21	...	47_{+1}	59_{-2}	74_{+1}	87_{-2}	69_{+1}	86_{-2}	65_{+1}	83_{-2}	3.9	...	12.0	...	EGY
86_{+1}	87_{-2}	47	...	48	33_{-1}	43	34_{-1}	100_{+1}	100	...	...	...	...	...	...	3.2	3.7	14.1	12.2_{-1}	GEO
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	IRQ
91_{+1}	88_{-2}	...	...	73	70_{-1}	68	63_{-1}	85_{+1}	99_{-3}	...	...	...	...	...	...	5.8	6.5_{-1}	18.1	17.5_{-1}	ISR
...	47_{-2}	...	...	54	20_{-1}	32	17_{-1}	...	100	100_{-1}	100	100_{-1}	100	100_{-1}	100	3.5_{+1}	3.2_{-1}	12.2_{+1}	9.7_{-1}	JOR
...	...	12	...	...	...	18	...	...	100_{-2}	79	100_{-2}	...	100_{-2}	...	100_{-2}	6.0_{+1}	5.0	11.3_{+1}	12.6	KWT
...	...	...	...	30	...	35	...	...	96	...	41	...	40	...	45	2.1_{+1}	1.7_{-3}	7.1_{+1}	9.9_{-3}	LBN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LBY
33_{+1}	41_{-2}	16	...	...	19_{-1}	...	18_{-1}	...	77	100	100	...	100	...	100	5.1	6.0	22.2	23.3_{+1}	MAR
59_{+1}	62_{-2}	32	...	...	...	23	...	100_{+1}	100	...	100_{i}	...	100_{i}	...	93_{i}	4.4_{-2}	4.2_{-1}	11.1_{-2}	14.2_{-1}	OMN
66_{+1}	80_{-2}	36	...	48	53_{-1}	36	44_{-1}	100_{+1}	100	100	100	100	100	100	100	3.6_{-1}	3.2_{-3}	12.7_{-1}	9.3_{-3}	PSE
63_{+1}	71_{-2}	16	...	...	37_{-1}	...	30_{-1}	100_{+1}	100_{-1}	100	100_{-1}	100	100_{-1}	100	100_{-1}	...	5.1	...	...	QAT
...	...	...	...	...	23_{-1}	...	20_{-1}	90_{+1}	99	100	100	100	100	100	100	4.7	5.4_{-2}	...	...	SAU
...	...	...	...	...	...	...	...	...	...	...	...	...	...	66	...	...	...	...	...	SDN
...	...	...	...	...	...	...	...	...	13	...	43	...	...	92_{-2}	44	...	...	...	...	SYR
...	...	...	...	28	...	25	...	...	99	100	100	...	100_{-1}	...	100_{-1}	6.2	6.7	22.7	17.8_{+1}	TUN
...	86_{-2}	57	...	60	71_{-1}	42	61_{-1}	100	100_{-1}	...	...	...	...	...	...	4.3	2.6_{-1}	11.8	8.8_{-1}	TUR
68_{+1}	75_{-2}	42	...	60	52_{-1}	46	51_{-1}	100_{+1}	100	100	100	100	100	100_{+1}	100	...	3.9_{-2}	...	14.8_{-2}	ARE
...	...	...	...	...	...	...	...	...	...	...	...	...	...	95_{-2}	...	...	...	...	...	YEM
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.3	...	7.3	...	AFG
...	...	...	...	...	...	...	...	...	58	48	77	60_{-2}	68	59_{+1}	63	1.9	1.8	12.0	11.6_{+1}	BGD
...	...	...	...	...	...	...	...	97	99_{-1}	100	100_{-1}	100	100_{-1}	100	97_{-1}	5.8	5.8	19.9	17.2_{+1}	BTN
...	...	...	...	...	...	...	...	40_{+1}	76	...	95	77_{+1}	92	...	92	4.1	4.1_{-1}	16.3	14.2_{-1}	IND
66_{+1}	59_{-2}	33	...	...	...	34	...	...	...	100	...	100	...	100_{-1}	...	2.6	2.9	18.6	18.8_{-1}	IRN
98_{+1}	91_{-2}	80	...	59	36_{-1}	...	50_{-1}	...	100	100	100	...	...	...	...	3.3	4.5_{-1}	16.8	24.1_{-2}	KAZ
...	...	...	...	...	...	...	...	48_{+1}	91	93	96	...	...	...	...	7.0	6.8	19.1	21.0_{-1}	KGZ
...	...	...	...	...	...	...	...	...	...	83	87_{-1}	93	98_{-1}	94	99_{-1}	4.6	5.2	12.9	10.7_{+1}	MDV
...	...	...	...	...	...	...	...	...	77	94	98	81	96	83_{i}	91	3.3	3.7	...	12.8_{-2}	NPL
...	...	...	...	...	...	...	...	...	...	82	80_{-1}	61	58_{-1}	...	77_{-1}	2.4	1.9	13.2	8.3	PAK
...	...	...	...	...	...	...	...	...	63_{-1}	86	87_{-1}	86	83_{-1}	77_{+1i}	78_{-1}	2.1	1.8	11.0	7.2_{+1}	LKA
...	...	...	...	...	...	...	...	...	...	100	...	...	...	...	...	5.0	5.8	...	21.4_{-1}	TJK
...	...	...	...	...	...	...	...	...	34_{-1}	...	100_{-2}	...	...	...	...	...	2.7	...	20.4	TKM
...	70_{-2}	...	...	...	14_{-1}	...	19_{-1}	...	95	...	100	75	100	100_{+1}	100	5.5	5.5	24.5	21.4_{-2}	UZB

PROGRESS SINCE 2015: SELECTED INDICATORS: Continued

	Participation/Completion														Gender	
	A		B						C						D	
			Out-of-school rate (%)						Completion rate (%)							
	Adjusted net enrolment rate one year before primary entry (%)		Primary		Lower secondary		Upper secondary		Primary		Lower secondary		Upper secondary		Gender gap in upper secondary completion rate (Female −Male)	
Country or territory	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
SDG indicator	4.2.2		4.1.4						4.1.2							
Eastern and South-eastern Asia																
Brunei Darussalam	92	73	-	-	0.2	0.1	19	20	...	...	...	...	...	...	...	...
Cambodia	44$_{i}$	67	8	25	19	31	59	49	69	81	37	57	18	24	0.2	2.8
China	...	...	3	5	3	7	16	12	97	99	90	94	67	87	10.9	18.0
China, Hong Kong SAR	99$_{+1i}$	100	0.4	10	0.2	4	5	8	...	...	...	...	...	...	...	...
DPR Korea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Indonesia	...	91	5	3	10	9	33	42	97	99	84	90	55	41	2.2	1.8
Japan	98$_{i}$	97$_{-2i}$	0.1	0.2	0.2	0.3	1	1	100	100	...	...	...	...	...	...
Lao PDR	56	90	10	7	19	30	46	49	62	68	45	50	27	31	-1.3	3.4
Macao, China	99$_{i}$	84$_{i}$	9	9	6	8	13	7	...	...	...	...	...	...	...	...
Malaysia	88$_{+1}$	86	3	1	11	4	39	39	99	100	96	98	50	61	12.9	19.0
Mongolia	83	90	6	3	2	6	7	29	99	100	95	99	78	92	11.2	6.7
Myanmar	...	...	8	10	31	14	55	21	76	87	48	56	20	23	5.6	8.3
Philippines	81	72	4	5	9	9	20	19	90	96	71	81	69	72	15.0	16.0
Republic of Korea	93$_{i}$	97$_{-1i}$	1	1	1	1	2	5	100	100	100	100	99	99	-0.1	-0.1
Singapore	...	99$_{-1i}$	2	2	1	3	1	3	...	...	...	...	...	...	...	...
Thailand	...	97	2	1	5	6	15	13	98	100	86	90	58	68	14.4	15.3
Timor-Leste	74	60$_{-3}$	7	7	13	6	28	17	71	80	56	65	50	55	2.7	9.1
Viet Nam	97$_{-1i}$	97$_{-1}$	1	1	7	5	35	25	96	98	83	90	60	53	8.1	6.6
Oceania																
Australia	88$_{i}$	92$_{-1i}$	1	1	1	1	5	6	99	100	98	99	86	88	5.3	5.8
Cook Islands	90	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fiji	52$_{+1}$	93	0.5	0.4	2	1	22	15	98	99	92	95	86	93	5.4	2.5
Kiribati	...	99	2	4	9	15	42	24	93	94	77	80	14	20	5.7	9.3
Marshall Islands	70	91$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Micronesia, F. S.	72$_{+1}$	58$_{-1}$	12	16	22	19	36	31	...	...	...	...	...	...	...	...
Nauru	96	84	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Zealand	94$_{i}$	81$_{-1i}$	0.1	0.1	1	0.2	5	2	...	...	...	...	...	...	...	...
Niue	66	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Palau	91$_{-1}$	86$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Papua New Guinea	68$_{+1}$	...	18	21	17	41	38	57	61	65	27	30	13	15	-2.8	-1.3
Samoa	28	38	1	2	1	2	12	13	98	98	96	97	53	59	16.7	21.3
Solomon Is	62	47	7	7	3	6	28	27	...	...	...	...	...	...	...	...
Tokelau	90$_{+1}$	93	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tonga	...	75	2	2	6	7	33	27	98	99	83	87	83	86	10.3	9.9
Tuvalu	96$_{+1}$	96	...	...	...	...	...	...	98	98	76	80	47	55	14.9	20.1
Vanuatu	...	72	12	2	10	24	41	56	78	80	40	45	9	11	-2.3	-1.8

Learning								Digital		Teachers						Finance				
E								F		G						H		I		
Minimum proficiency level (%)										Trained teachers (%)										
End of primary				End of lower secondary				Upper secondary schools with access to Internet for pedagogical purposes (%)		Primary		Lower secondary		Upper secondary		Government expenditure on education as a percentage of GDP (%)		Government expenditure on education as a percentage of total government spending (%)		Country code
Reading		Mathematics		Reading		Mathematics														
2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	
4.1.1								4.a.1		4.c.1								1.a.2		
...	...	...	...	...	58_{-1}	...	58_{-1}	...	...	82	85	92	89	90	92	3.4_{-1}	...	10.0_{-1}	...	BRN
...	...	...	...	...	8_{-1}	...	12_{-1}	...	60	100	100	100	100	...	100_{-2}	1.7	3.0	15.3	15.7_{-2}	KHM
...	...	...	...	...	...	...	...	96_{+1}	98	...	...	...	...	...	...	4.2	4.0_{-1}	12.3	10.5_{-1}	CHN
99_{+1}	98_{-2}	98	...	91	83_{-1}	91	86_{-1}	94_{+1j}	100	96	94	...	...	...	...	3.3	3.8	16.8	14.9_{-2}	PRK
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.7_{+1}	HKG
...	...	18	...	45	25_{-1}	31	18_{-1}	...	96	...	35	...	37	...	37	3.6	1.3	16.7	13.9_{-1}	IDN
...	...	...	...	...	86_{-1}	...	88_{-1}	...	...	...	...	...	...	...	...	3.3	3.2_{-1}	8.4	7.5_{-1}	JPN
...	...	...	...	...	...	...	...	...	...	98	66	99	94_{-1}	99_{i}	94_{-1}	2.7	1.2	10.5	9.8	LAO
98_{+1}	96_{-2}	...	...	88	87_{-1}	93	92_{-1}	100_{+1}	100	96	99	87	94	87	95	3.0	6.2_{-1}	14.7	10.1_{-1}	MAC
...	...	...	...	63	42_{-1}	...	41_{-1}	100_{+1}	97	100	90	...	...	...	87	4.7	3.6	21.3	17.1	MYS
...	...	...	...	...	36_{-1}	...	49_{-1}	89_{+1}	100	100_{-1}	98	...	38	...	...	4.4	3.7	3.6_{+1}	10.0_{-2}	MNG
...	...	...	...	...	...	...	...	...	...	100_{-1}	...	93_{-1}	...	95_{-1}	...	2.2	2.0_{-4}	8.7	9.8_{-4}	MMR
...	...	...	...	...	24_{-1}	...	16_{-1}	73	65_{-2}	100	100_{-1}	100_{+1}	100_{-1}	100_{+1}	100_{-1}	2.8	3.6	15.1	16.7	PHL
...	...	97	...	86	85_{-1}	85	84_{-1}	100	100_{-1}	100	100_{-1}	100	100_{-1}	100	100_{-1}	4.5	4.9_{-2}	...	...	KOR
97_{+1}	97_{-2}	93	...	89	89_{-1}	94	92_{-1}	100_{+1}	100_{-1}	99_{+1j}	98_{-1}	...	...	...	...	2.9	2.2	16.4	10.1_{-1}	SGP
...	...	...	...	50	35_{-1}	46	32_{-1}	...	100	100	100	100	100	100	100	3.9	2.5	17.1	11.2_{-1}	THA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.3	3.0_{-2}	7.5	7.5_{-2}	TLS
...	...	...	...	86	77_{-1}	81	72_{-1}	...	92	99	83	100	90	...	100_{-1}	3.4	2.9_{-1}	15.0	15.4_{-1}	VNM
...	...	64	...	82	79_{-1}	78	74_{-1}	100	100_{-2}	...	...	...	...	...	...	5.5	5.2_{-1}	14.9	13.9_{-1}	AUS
...	75_{-2}	...	63_{-2}	...	...	...	...	100_{+1}	100	99	100	...	95	...	100	3.9	4.1	10.2	6.8_{+1}	COK
...	60_{-2}	...	66_{-2}	...	...	...	...	...	90	...	96	...	...	...	93	4.8	4.2	17.4	11.6_{+1}	FJI
...	14_{-2}	...	53_{-2}	...	...	...	...	...	100	79	92	87_{-1}	77	...	52	12.1	14.2_{-2}	13.7	16.1_{-1}	KIR
...	40_{-2}	...	38_{-2}	...	...	...	...	...	72_{-2}	...	52_{-1}	...	68_{-1}	...	80_{-1}	...	7.5_{-1}	24.7_{+1}	11.3_{-1}	MHL
...	39_{-2}	...	45_{-2}	...	...	...	...	...	69_{-1}	...	28_{-2}	6	32_{-2}	2	30_{-2}	13.6	10.5_{-3}	24.1	18.6_{-3}	FSM
...	...	...	...	...	...	...	...	...	100	100_{+1}	16	100_{+1}	100_{-1}	100_{+1}	57_{-1}	6.3	7.8_{-1}	10.2	...	NRU
90_{+1}	90_{-2}	59	...	83	79_{-1}	78	71_{-1}	...	...	...	...	...	...	...	...	5.7	5.2_{-1}	16.6	13.1_{-1}	NZL
...	81_{-2}	...	82_{-2}	...	...	...	...	100_{+1}	100	100	100_{-1}	100	100_{-1}	100	16	...	...	...	7.0_{+1}	NIU
...	94_{-2}	...	92_{-2}	...	...	...	...	...	100	...	94	...	95	...	89	...	3.4	...	9.5	PLW
...	48_{-2}	...	55_{-2}	...	...	...	...	...	...	...	...	...	...	...	...	1.7	1.3_{-2}	4.8	3.9_{-2}	PNG
...	...	...	...	...	...	...	...	100_{+1}	62	...	...	...	...	100_{-1}	55_{-3}	4.6	6.1	14.0	12.9_{+1}	WSM
...	53_{-2}	...	86_{-2}	...	...	...	...	15_{+1}	...	59	...	80	...	63	...	...	8.3	...	25.9	SLB
...	72_{-2}	...	67_{-2}	...	...	...	...	...	100	67_{+1}	44	75_{+1}	100	...	92	...	...	...	...	TKL
...	20_{-2}	...	75_{-2}	...	...	...	...	...	91	92	93	...	...	...	...	...	5.1	...	9.3_{+1}	TON
...	32_{-2}	...	55_{-2}	...	...	...	...	50_{+1j}	100	77_{+1}	65	52_{+1}	29_{-1}	35_{+1}	28_{-1}	...	12.8	...	10.5	TUV
...	...	...	...	...	...	...	...	...	...	...	100_{-1}	21	...	...	...	5.6	10.6	12.7	20.9	VUT

PROGRESS SINCE 2015: SELECTED INDICATORS: Continued

	Participation/Completion														Gender	
	A		B						C						D	
			Out-of-school rate (%)						Completion rate (%)							
	Adjusted net enrolment rate one year before primary entry (%)		Primary		Lower secondary		Upper secondary		Primary		Lower secondary		Upper secondary		Gender gap in upper secondary completion rate (Female −Male)	
Country or territory	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
SDG indicator	4.2.2		4.1.4						4.1.2							
Latin America and the Caribbean																
Anguilla	...	88$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	94$_{-1}$	...	3	2	6	3	17	16	...	...	...	...	...	...	...	...
Argentina	98	95$_{-1}$	1	0.4	1	1	9	6	96	97	75	76	62	66	12.5	13.7
Aruba	...	...	0.2	0.1	1	0.3	2	1	...	...	...	...	...	...	...	...
Bahamas	37	37	21	32	23	20	28	30	...	...	...	...	...	...	...	...
Barbados	99	75	1	11	1	2	2	1	99	99	99	99	94	95	7.5	6.5
Belize	88	53	2	12	11	8	37	27	81	85	37	42	15	17	5.5	7.9
Bolivia, P. S.	85$_{i}$	87$_{i}$	10	4	10	6	17	18	97	98	88	93	66	75	-1.0	1.1
Brazil	86$_{i}$	90$_{-1i}$	5	3	4	2	12	9	88	92	79	88	60	71	12.3	8.8
British Virgin Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	93$_{-2}$	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chile	93$_{i}$	92$_{-1i}$	2	1	1	0.3	5	2	98	96	96	97	79	84	5.6	4.5
Colombia	87$_{-1i}$	...	3	2	4	2	15	6	92	95	77	81	68	66	7.2	5.4
Costa Rica	91$_{i}$	91$_{-1i}$	1	1	4	1	12	2	96	99	67	73	51	55	9.3	10.3
Cuba	100	98	3	2	3	5	21	26	99	99	96	96	74	71	5.2	8.8
Curaçao	...	97$_{i}$	6	18	12	20	20	22	...	...	...	...	...	...	...	...
Dominica	71	94	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dominican Republic	86$_{i}$	84	7	9	4	12	21	30	90	94	84	90	54	60	14.6	19.1
Ecuador	98$_{i}$	94$_{-1i}$	1	9	3	4	23	20	95	99	85	95	65	75	6.1	7.8
El Salvador	86	80	9	16	9	23	30	46	88	93	65	72	34	35	4.2	7.5
Grenada	78	49$_{-1i}$	0.5	0.3	1	-	6	0.2	...	...	...	...	...	...	...	...
Guatemala	81	86	11	9	28	35	58	67	78	86	48	57	33	39	-0.5	0.9
Guyana	...	83	4	10	13	18	36	33	98	99	86	90	60	69	13.2	14.8
Haiti	...	...	7	8	4	8	24	20	41	49	32	39	15	19	-0.2	2.3
Honduras	70	65	18	18	34	38	53	59	86	92	58	69	44	51	9.1	9.9
Jamaica	...	93	12	29	15	26	26	22	99	99	96	98	93	95	3.0	2.2
Mexico	...	98$_{-1i}$	1	3	6	10	29	31	97	98	85	89	50	58	3.0	4.5
Montserrat	85	88$_{-3}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nicaragua	...	81	9	9	7	12	18	36	71	76	45	50	34	38	9.1	11.5
Panama	79	73	8	8	13	16	31	29	94	95	74	78	59	63	11.5	12.7
Paraguay	76$_{+1}$	77	15	19	16	26	33	37	91	94	73	81	61	67	5.7	8.2
Peru	98	100	3	1	4	1	16	6	95	98	85	93	77	86	-0.6	0.3
Saint Kitts and Nevis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saint Lucia	95	48	1	1	9	7	21	21	99	100	95	98	84	92	16.4	13.0
Saint Vincent/Grenadines	96	58$_{-1}$	0.4	0.3	4	3	23	19	...	...	...	...	...	...	...	...
Sint Maarten	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suriname	90	50	11	14	17	24	43	62	85	87	55	58	28	32	12.4	14.8
Trinidad and Tobago	...	32	6	16	7	20	18	33	97	98	93	95	84	84	9.5	11.0
Turks and Caicos Islands	91$_{-1}$	99	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uruguay	100$_{i}$	98$_{-1i}$	1	1	3	2	17	6	98	98	70	71	40	43	9.9	10.6
Venezuela, B. R.	93	...	3	1	9	2	26	14	87	88	81	85	40	44	16.4	18.9

Learning								Digital		Teachers						Finance				Country code
E								F		G						H		I		
Minimum proficiency level (%)										Trained teachers (%)										
End of primary				End of lower secondary				Upper secondary schools with access to Internet for pedagogical purposes (%)		Primary		Lower secondary		Upper secondary		Government expenditure on education as a percentage of GDP (%)		Government expenditure on education as a percentage of total government spending (%)		
Reading		Mathematics		Reading		Mathematics														
2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	
4.1.1								4.a.1		4.c.1								1.a.2		
...	...	...	...	...	...	...	...	...	100_{-1}	75	...	...	...	...	...	3.0	3.5_{-2}	12.5	10.1_{-1}	AIA
...	...	...	...	...	...	...	...	...	...	65	...	...	...	...	...	2.1	3.6_{-1}	7.6	9.8	ATG
32_{-2}	...	21_{-2}	...	...	45_{-1}	...	27_{-1}	58	70_{-1}	...	...	...	...	...	...	5.8	4.8_{-1}	14.0	12.7_{-1}	ARG
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.9	4.4_{-4}	23.2	19.4_{-4}	ABW
...	...	...	...	...	...	...	...	...	...	90	92	83	91	86	91	2.3	2.8_{-1}	12.4	11.6	BHS
...	...	...	...	...	...	...	...	...	...	66	75	52	51	52	51	5.2	4.0	17.8	12.5	BRB
...	...	...	...	...	...	...	...	...	...	68	89	50	75	40	68	5.4	4.3	21.6	18.5	BLZ
...	...	...	...	...	...	...	...	22_{-2}	...	85	90	...	...	...	...	8.1	7.6_{-1}	18.3	23.1_{-2}	BOL
37_{-2}	...	17_{-2}	...	49	50_{-1}	30	27_{-1}	...	...	...	93_{-2}	...	78_{-2}	...	86_{-2}	6.2	5.5_{-2}	12.7	12.8_{-2}	BRA
...	...	...	...	...	...	...	...	100_{+1}	100_{-1}	92	50_{-1}	...	...	...	...	4.7	2.5_{-1}	13.3	10.9_{+1}	VGB
...	...	...	...	...	...	...	...	...	100	88_{-2}	98	...	98	...	99	...	1.5_{-1}	...	15.0_{-4}	CYM
58_{-2}	...	44_{-2}	...	72	66_{-1}	28	44_{-1}	...	...	...	...	...	...	...	...	4.9	5.0_{-2}	19.6	14.9_{-2}	CHL
39_{-2}	...	15_{-2}	...	57	49_{-1}	34	29_{-1}	83_{+1}	84_{-1}	94	98_{-1}	97	98_{-1}	98	98_{-1}	...	...	...	...	COL
50_{-2}	...	21_{-2}	...	60	53_{-1}	38	28_{-1}	51_{+1}	83_{-3}	94	94_{-3}	97	97_{-3}	96	97_{-3}	6.9	6.2_{-2}	23.4	31.2_{-2}	CRI
...	...	...	...	...	...	...	...	...	66	100	100	100	100	100	100	9.0	9.4_{-2}	15.3	17.0_{-1}	CUB
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.1_{-2}	...	19.5	12.4_{-1}	CUW
...	...	...	...	...	...	...	...	93_{+1}	100	64	66	46_{-1}	...	46_{-1}	...	3.4	4.7	10.2	7.1_{+1}	DMA
8_{-2}	...	2_{-2}	...	28	25_{-1}	9	8_{-1}	...	73	87	100_{-2}	88	100_{-2}	79	100_{-2}	3.6	3.9_{-1}	21.5_{-1}	21.9_{+1}	DOM
24_{-2}	...	14_{-2}	...	...	...	...	...	76_{+1}	79	...	90	...	80	...	75	5.1	3.9	11.6	9.7	ECU
...	...	...	...	...	28_{-1}	...	11_{-1}	...	...	96	98	93	97	90	93	3.9	3.2	17.2	12.0_{-2}	SLV
...	...	...	...	...	...	...	...	...	100_{-1}	64	60_{-1}	42	...	42	...	4.2	3.9_{-1}	9.9	14.5_{+1}	GRD
19_{-2}	...	9_{-2}	...	...	32_{-1}	...	13_{-1}	59_{+1}	...	...	...	...	...	...	...	3.0	3.2	20.4	18.9_{-1}	GTM
...	...	...	...	...	...	...	...	...	...	77	66	...	...	...	...	3.9	...	17.9	...	GUY
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	1.3_{-1}	14.6	10.3_{+1}	HTI
16_{-2}	...	7_{-2}	...	...	...	...	...	...	...	...	...	...	...	...	...	6.4	4.0	24.6	15.4	HND
...	...	...	...	...	50_{-1}	...	26_{-1}	100_{+1}	56	93	95	...	...	...	...	5.5	5.7	20.1	16.9_{-1}	JAM
43_{-2}	...	45_{-2}	...	58	53_{-1}	43	34_{-1}	51_{+1}	53_{-2}	84	91_{-2}	...	...	...	...	5.1	4.2_{-2}	19.0	15.9_{-2}	MEX
...	...	...	...	...	...	...	...	100_{+1}	...	72_{-1}	...	...	...	...	...	6.0	7.6_{-1}	5.5	7.7_{+1}	MSR
15_{-2}	...	3_{-2}	...	...	...	...	...	...	18_{-1}	...	59	...	...	...	...	4.1_{i}	3.8_{-1}	22.3_{i}	17.7	NIC
21_{-2}	...	4_{-2}	...	...	42_{-1}	...	16_{-1}	...	39	99	...	94	...	98_{-1}	...	3.4	3.4_{-1}	15.2	11.9	PAN
16_{-2}	...	6_{-2}	...	...	34_{-1}	...	15_{-1}	28_{+1}	...	...	...	...	...	...	...	3.3	3.4	18.2_{+1}	22.0	PRY
31_{-2}	...	23_{-2}	...	...	50_{-1}	...	34_{-1}	71_{+1}	80	...	13	...	...	...	...	4.0	4.2	17.6	19.2_{+1}	PER
...	...	...	...	...	...	...	...	100_{+1}	100_{-2}	72	68_{-2}	...	...	...	...	2.5	3.6_{-1}	8.8	10.2_{+1}	KNA
...	...	...	...	...	...	...	...	...	100	...	77	...	70	...	66	3.9	3.7_{-1}	16.5	16.3_{-1}	LCA
...	...	...	...	...	...	...	...	100_{+1}	...	84	79	...	...	...	...	5.0	7.2_{-1}	17.2	12.6_{+1}	VCT
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.2_{-1}	...	23.0	SXM
...	...	...	...	...	...	...	...	...	...	98	100	84	82_{-2}	50	...	5.5	2.9	11.4	8.6_{+1}	SUR
80_{+1}	...	...	...	58	...	48	...	...	...	...	81	...	...	...	...	4.5	2.9_{-1}	12.3	8.9_{+1}	TTO
...	...	...	...	...	...	...	...	...	100	89_{-1}	80	...	...	...	...	3.0	3.1	12.8	9.3	TCA
44_{-2}	...	38_{-2}	...	61	59_{-1}	48	43_{-1}	100	100_{-1}	100	100_{-1}	...	...	...	...	4.2	4.5_{-1}	14.7	15.4	URY
...	...	...	...	...	...	...	...	...	...	...	88	...	88	...	88	...	...	...	-	VEN

PROGRESS SINCE 2015: SELECTED INDICATORS: Continued

	Participation/Completion														Gender	
	A		B						C						D	
			Out-of-school rate (%)						Completion rate (%)							
	Adjusted net enrolment rate one year before primary entry (%)		Primary		Lower secondary		Upper secondary		Primary		Lower secondary		Upper secondary		Gender gap in upper secondary completion rate (Female – Male)	
Country or territory	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023
SDG indicator	4.2.2		4.1.4						4.1.2							
Europe and Northern America																
Albania	86$_{i}$	94$_{i}$	2	10	3	3	11	9	98	97	96	97	75	87	2.6	4.8
Andorra	89	94	11	7	15	4	21	9	...	...	...	...	...	...	...	...
Austria	97$_{i}$	97$_{-1i}$	1	1	1	1	7	6	100	100	99	98	85	86	3.4	5.7
Belarus	97	98	2	4	0.2	0.4	2	1	100	100	99	99	90	93	3.4	2.1
Belgium	98$_{i}$	99$_{-1i}$	1	1	1	1	1	2	99	99	87	91	83	86	8.1	8.1
Bermuda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bosnia and Herzegovina	18$_{+1}$	32	10	10	3	13	23	27	100	100	98	99	60	65	9.2	11.3
Bulgaria	94$_{i}$	94$_{-1i}$	2	5	3	5	11	9	99	99	94	94	85	87	0.1	0.8
Canada	...	95$_{-1i}$	0.1	-	0.3	0.2	11	9	100	100	99	99	86	88	6.0	6.4
Croatia	98$_{i}$	100$_{-1i}$	-	-	-	-	9	6	100	100	99	99	96	98	0.7	0.5
Czechia	91$_{i}$	94$_{-1i}$	2	1	0.3	1	4	4	100	100	96	96	90	90	1.3	1.8
Denmark	99$_{i}$	98$_{-1i}$	0.3	0.2	1	1	9	6	100	100	100	100	75	76	10.3	11.1
Estonia	93$_{i}$	94$_{-1i}$	2	2	1	2	6	7	99	100	97	97	84	85	7.6	8.5
Finland	98$_{i}$	96$_{-1i}$	1	2	1	2	4	3	100	100	100	100	88	89	2.6	2.7
France	100$_{i}$	100$_{-1i}$	1	0.1	2	0.2	5	2	99	100	98	98	84	87	4.1	5.1
Germany	98$_{i}$	96$_{-1i}$	1	1	1	1	10	10	100	100	92	92	80	82	3.9	5.3
Greece	96$_{i}$	100$_{-1i}$	2	0.1	3	1	7	3	99	99	95	96	91	95	3.3	3.2
Hungary	91$_{i}$	96$_{-1i}$	4	4	2	5	9	19	99	99	96	96	84	86	1.5	2.8
Iceland	98$_{i}$	97$_{-1i}$	1	1	1	1	15	13	97	97	97	98	65	66	12.4	17.1
Ireland	97$_{i}$	93$_{-1i}$	-	-	-	-	0.4	-	100	100	98	99	92	95	3.5	2.2
Italy	98$_{i}$	95$_{-1i}$	1	2	0.4	2	7	5	100	100	99	99	81	86	6.5	4.9
Latvia	97$_{i}$	98$_{-1i}$	1	1	0.2	0.4	3	1	100	100	98	98	84	86	9.7	9.3
Liechtenstein	98$_{i}$	98$_{-2i}$	1	0.2	6	1	11	5	...	...	...	...	...	...	...	...
Lithuania	100$_{i}$	100$_{-1i}$	-	-	3	0.1	6	1	100	100	99	99	90	91	5.3	5.2
Luxembourg	99$_{i}$	99$_{-1i}$	3	1	4	2	16	13	99	99	86	89	78	81	6.5	7.4
Malta	99$_{i}$	89$_{-1i}$	1	7	1	2	13	10	98	98	98	98	74	82	10.6	11.3
Monaco	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Montenegro	65$_{i}$	84$_{i}$	0.1	0.1	0.2	0.1	3	1	99	99	97	98	84	88	4.2	5.3
Netherlands (Kingdom of the)	99$_{i}$	99$_{-1i}$	0.2	0.1	0.3	0.3	1	2	100	100	89	89	77	79	9.3	9.2
North Macedonia	42$_{i}$	50$_{-1i}$	4	3	8	7	30	12	99	99	96	98	77	85	0.6	2.5
Norway	98$_{i}$	98$_{-1i}$	0.3	0.3	1	1	7	5	100	100	100	100	78	81	7.3	7.6
Poland	96$_{-1i}$	100$_{-1i}$	4	1	3	1	4	2	100	100	98	99	91	91	4.8	4.6
Portugal	97$_{i}$	100$_{-1i}$	-	-	0.1	-	1	0.1	99	99	89	93	71	81	11.3	9.1
Republic of Moldova	99$_{i}$	...	6	0.2	14	1	37	8	99	99	95	96	79	81	6.8	7.1
Romania	89$_{i}$	81$_{-1i}$	7	14	9	14	19	26	99	99	93	93	79	81	-0.9	-1.0
Russian Federation	89$_{i}$	83$_{i}$	4	0.3	2	0.3	1	2	100	100	99	100	90	91	2.4	2.8
San Marino	...	98$_{i}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Serbia	96$_{i}$	87$_{-1i}$	1	2	1	2	10	14	100	100	98	99	75	82	11.5	10.2
Slovakia	81$_{i}$	91$_{-1i}$	6	3	3	4	10	9	100	100	99	99	93	93	0.5	0.2
Slovenia	92$_{i}$	95$_{-1i}$	2	1	2	1	3	1	99	100	99	99	91	93	4.9	4.9
Spain	98$_{i}$	97$_{-1i}$	1	2	1	3	5	7	98	99	92	95	70	74	11.5	12.5
Sweden	98$_{i}$	99$_{-1i}$	0.3	0.2	0.4	0.4	2	1	100	100	99	99	88	89	2.3	3.3
Switzerland	98$_{i}$	98$_{-1i}$	0.2	0.1	2	1	18	16	100	100	98	99	92	93	1.6	2.4
Ukraine	69$_{i}$	76$_{-2i}$	3	2	1	1	3	2	100	100	99	99	95	97	2.6	2.0
United Kingdom	99$_{-1i}$	...	2	3	1	1	2	5	100	100	100	100	88	90	3.2	3.2
United States	91$_{i}$	87$_{-1i}$	3	3	2	2	7	4	100	100	99	99	92	94	2.8	2.5

Learning								Digital		Teachers						Finance				Country code
E								F		G						H		I		
Minimum proficiency level (%)										Trained teachers (%)										
End of primary				End of lower secondary				Upper secondary schools with access to Internet for pedagogical purposes (%)		Primary		Lower secondary		Upper secondary		Government expenditure on education as a percentage of GDP (%)		Government expenditure on education as a percentage of total government spending (%)		
Reading		Mathematics		Reading		Mathematics														
2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	2015	2023	
4.1.1								4.a.1		4.c.1								1.a.2		
...	92$_{-2}$	...	...	50	26$_{-1}$	47	26$_{-1}$	...	67$_{-2}$	...	62$_{-2}$	...	71$_{-2}$	...	61$_{-2}$	3.4	2.7$_{-1}$	10.4	9.8$_{-2}$	ALB
...	...	...	...	...	...	...	...	100$_{+1}$	100	100	100	...	...	...	...	3.3	1.9	10.4	12.8	AND
98$_{+1}$	96$_{-2}$	...	...	77	75$_{-1}$	78	75$_{-1}$	100	100$_{-1}$	...	...	...	...	...	...	5.5	4.8$_{-1}$	9.7	9.0$_{-1}$	AUT
...	...	...	...	...	...	...	...	87$_{+1}$	100	99	99	98	98	91	95	4.8	5.0	13.1	12.8$_{-1}$	BLR
97$_{+1}$	94$_{-2}$	88	...	80	75$_{-1}$	80	75$_{-1}$	100	...	...	...	...	...	...	...	6.5	6.4$_{-2}$	11.7	11.3$_{-2}$	BEL
...	...	...	...	...	...	...	...	100$_{+1}$	...	100$_{-1}$	...	100$_{-1}$	...	100$_{-1}$	...	1.5	1.9	9.0	...	BMU
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.0	4.1$_{-2}$	10.3$_{+1}$	10.4$_{-2}$	BIH
95$_{+1}$	93$_{-2}$	75	...	59	47$_{-1}$	58	46$_{-1}$	...	...	...	...	...	...	...	...	3.9	4.7$_{-2}$	9.7	10.6$_{-2}$	BGR
96$_{+1}$	99$_{-2}$	69	...	89	82$_{-1}$	86	78$_{-1}$	...	...	...	...	...	...	...	...	4.7	4.1$_{-1}$	12.7	11.1$_{-1}$	CAN
...	98$_{-2}$	67	...	80	77$_{-1}$	68	67$_{-1}$	...	...	...	...	...	...	...	...	5.0	4.1$_{-2}$	10.5	10.7$_{-2}$	HRV
97$_{+1}$	96$_{-2}$	78	...	78	79$_{-1}$	78	74$_{-1}$	99	99$_{-1}$	...	...	...	...	...	...	5.8	4.8$_{-2}$	10.5	10.9$_{-2}$	CZE
...	...	...	...	85	81$_{-1}$	86	80$_{-1}$	100	100$_{-3}$	...	...	...	...	...	...	7.0	5.3$_{-1}$	12.9	11.8$_{-1}$	DNK
...	...	...	...	89	86$_{-1}$	89	85$_{-1}$	100	100$_{-2}$	...	...	...	...	...	...	5.1	5.3$_{-2}$	15.0	14.3$_{-2}$	EST
98$_{+1}$	96$_{-2}$	82	...	89	79$_{-1}$	86	75$_{-1}$	100	100$_{-2}$	...	...	...	...	...	...	7.0	6.5$_{-2}$	11.0	10.2$_{-2}$	FIN
94$_{+1}$	94$_{-2}$	58	...	79	73$_{-1}$	77	71$_{-1}$	...	...	...	...	...	...	...	...	5.4	5.4$_{-2}$	9.6	8.9$_{-2}$	FRA
95$_{+1}$	94$_{-2}$	77	...	84	74$_{-1}$	83	70$_{-1}$	...	...	...	...	...	...	...	...	4.9	4.5$_{-1}$	9.6	9.2$_{-1}$	DEU
...	...	...	...	73	62$_{-1}$	64	53$_{-1}$	...	...	...	...	...	...	...	...	3.7	4.1$_{-2}$	7.7	7.1$_{-2}$	GRC
97$_{+1}$	94$_{-2}$	75	...	73	74$_{-1}$	67	70$_{-1}$	100	...	...	...	...	...	...	...	4.5	4.7$_{-2}$	10.3	10.4$_{-2}$	HUN
...	...	...	...	78	60$_{-1}$	76	66$_{-1}$	...	...	...	...	...	...	...	...	7.5	7.1$_{-1}$	15.6	14.9$_{-1}$	ISL
...	...	...	...	90	89$_{-1}$	85	81$_{-1}$	...	...	...	...	...	...	...	...	3.7	3.0$_{-2}$	11.9	12.0$_{-2}$	IRL
98$_{+1}$	97$_{-2}$	69	...	79	79$_{-1}$	62	70$_{-1}$	92$_{+1|i}$	...	...	...	...	...	...	...	4.1	4.2$_{-2}$	7.9	7.4$_{-2}$	ITA
99$_{+1}$	94$_{-2}$	...	...	82	77$_{-1}$	79	78$_{-1}$	100$_{+1}$	...	100	100$_{-2}$	100	100$_{-2}$	100	100$_{-2}$	5.3	4.6$_{-2}$	15.2	12.7$_{-2}$	LVA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LIE
97$_{+1}$	97$_{-2}$	81	...	75	75$_{-1}$	75	72$_{-1}$	...	91$_{-1}$	95	91$_{-3}$	...	...	...	...	4.2	4.3$_{-2}$	14.4	12.7$_{-2}$	LTU
...	...	...	...	74	...	74	...	100	100$_{-2}$	...	...	...	...	...	...	3.8	4.7$_{-1}$	11.2	10.7$_{-1}$	LUX
73$_{+1}$	90$_{-2}$	...	...	64	64$_{-1}$	71	67$_{-1}$	...	...	85	84$_{-2}$	...	...	...	...	5.0	5.4$_{-2}$	13.2	12.7$_{-2}$	MLT
...	...	...	...	...	...	...	...	100$_{+1}$	100	...	77	...	68	...	75	1.0$_{-1}$	1.2$_{-1}$	5.0$_{-1}$	7.7	MCO
...	87$_{-2}$	...	...	58	47$_{-1}$	48	41$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	MNE
99$_{+1}$	96$_{-2}$	83	...	82	65$_{-1}$	83	73$_{-1}$	100	100$_{-1}$	...	...	...	...	...	...	5.3	5.1$_{-1}$	11.8	11.6$_{-1}$	NLD
...	70$_{-2}$	...	...	29	26$_{-1}$	30	34$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	MKD
...	...	70	...	85	73$_{-1}$	83	68$_{-1}$	100	100$_{-1}$	...	...	...	...	...	...	7.5	4.0$_{-1}$	11.1	10.1$_{-1}$	NOR
98$_{+1}$	97$_{-2}$	80	...	86	78$_{-1}$	83	77$_{-1}$	100	100$_{-2}$	100	...	99	...	98	...	4.8	4.7$_{-2}$	12.7	11.2$_{-2}$	POL
97$_{+1}$	94$_{-2}$	82	...	83	77$_{-1}$	76	70$_{-1}$	100	97$_{-2}$	100	100$_{-3}$	...	100$_{-3}$	...	100$_{-3}$	4.9	4.8$_{-2}$	10.5	9.7$_{-2}$	PRT
...	...	...	...	54	51$_{-1}$	50	44$_{-1}$	88$_{+1}$	99	...	100	...	100	...	100	5.8	6.3	18.2	15.8$_{-1}$	MDA
...	...	...	...	61	58$_{-1}$	60	51$_{-1}$	...	...	...	...	...	...	...	...	3.1	3.3$_{-2}$	8.5	8.1$_{-2}$	ROU
99$_{+1}$	98$_{-2}$	89	...	84	...	81	...	...	...	99$_{|i}$	96	...	...	...	...	3.8	4.1$_{-1}$	2.2	8.9$_{-3}$	RUS
...	...	...	...	...	...	...	...	...	100	...	35	...	...	...	...	3.1	3.4$_{-1}$	...	7.5$_{-1}$	SMR
...	93$_{-2}$	72	...	...	64$_{-1}$	...	57$_{-1}$	...	...	...	...	...	...	...	...	3.6$_{+1}$	3.2$_{-1}$	8.7$_{+1}$	7.4$_{-1}$	SRB
93$_{+1}$	94$_{-2}$	65	...	68	65$_{-1}$	72	67$_{-1}$	100	100$_{-1}$	96$_{-1|i}$	98$_{-1}$	96$_{-1|i}$	98$_{-1}$	95$_{-1|i}$	98$_{-1}$	4.6	4.8$_{-2}$	9.1	9.4$_{-2}$	SVK
96$_{+1}$	94$_{-2}$	75	...	85	74$_{-1}$	84	75$_{-1}$	100	100$_{-1}$	...	...	...	...	...	...	4.9	5.4$_{-2}$	11.5	11.5$_{-2}$	SVN
97$_{+1}$	95$_{-2}$	67	...	84	76$_{-1}$	78	73$_{-1}$	100	100$_{-2}$	100	100$_{-1}$	100	100$_{-1}$	100	100$_{-1}$	4.3	4.3$_{-1}$	9.4	9.2$_{-1}$	ESP
98$_{+1}$	95$_{-2}$	75	...	82	76$_{-1}$	79	73$_{-1}$	...	100$_{-2}$	...	...	...	...	...	...	7.4	7.6$_{-2}$	13.0	13.5$_{-2}$	SWE
...	...	...	...	80	75$_{-1}$	84	81$_{-1}$	100	...	...	...	...	...	...	...	5.0	4.9$_{-1}$	15.4	15.4$_{-1}$	CHE
...	...	...	...	...	59$_{-1}$	...	58$_{-1}$	96$_{+1}$	98	86$_{+1}$	90	...	...	...	...	5.7	5.9$_{-1}$	13.5	8.5$_{-1}$	UKR
97$_{+1}$	97$_{-2}$	80	...	82	80$_{-1}$	78	76$_{-1}$	...	...	...	...	...	...	...	...	5.6	5.0$_{-1}$	12.3	10.6$_{-1}$	GBR
96$_{+1}$	95$_{-2}$	79	...	81	80$_{-1}$	71	66$_{-1}$	100	...	100	100$_{-1}$	100	100$_{-1}$	100	100$_{-1}$	4.9	5.4$_{-2}$	16.1	12.7$_{-3}$	USA

TABLE 1: Education system characteristics and education expenditure

	Education systems																	
	A Compulsory		B Free		C	D Duration (years)				E School-age population (000)				F Enrolment (000)				
	1 year of pre-primary	9 years of primary-secondary	1 year of pre-primary	12 years of primary-secondary	Official primary school starting age	Pre-primary	Primary	Lower secondary	Upper secondary	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	
SDG indicator	4.2.5	4.1.7	4.2.5	4.1.7														
Reference year	2023																	
Region	% of countries				Median					Sum								
World	24	75	52	56	6	3	6	3	3	351	758	832	610	203$_i$	771$_i$	641$_i$	264$_i$	
Sub-Saharan Africa	4	46	20	25	6	3	6	3	3	85	192	166	113	21$_i$	191$_i$	74$_i$	10$_i$	
Northern Africa and Western Asia	8	92	58	75	6	3	6	3	3	26	64	66	46	9$_i$	61$_i$	54$_i$	23$_i$	
Northern Africa	-	83	50	50	6	2	6	3	3	11	34	30	21	4	32	24$_i$	8	
Western Asia	11	94	61	83	6	3	6	3	3	15	30	35	25	5$_i$	29$_i$	30$_i$	15$_i$	
Central and Southern Asia	14	64	50	50	6	3	5	4	3	99	188	261	187	53	201	190	57	
Central Asia	20	100	100	40	7	4	4	5	2	6	6	10	6	3$_i$	6$_i$	9$_i$	3$_i$	
Southern Asia	11	44	22	56	6	2	5	3	4	93	181	251	181	50	195	181	54	
Eastern and South-eastern Asia	22	78	44	44	6	3	6	3	3	76	185	182	144	66	188$_i$	166$_i$	89	
Eastern Asia	29	100	71	57	6	3	6	3	3	53	120	114	90	51	119	108	67	
South-eastern Asia	18	64	22	33	6	3	6	3	3	23	65	68	54	15$_i$	69$_i$	57$_i$	22	
Oceania	18	65	55$_i$	64$_i$	6	2	6	4	3	2	4$_i$	4$_i$	3$_i$	1$_i$	5$_i$	4$_i$	2$_i$	
Latin America and the Caribbean	54	83	71	58	6	2	6	3	3	27	59	65	53	21$_i$	61$_i$	63$_i$	31$_i$	
Caribbean	27	82	53	58	5	2	6	3	2	...	...	...	...	...	...	...	...	
Central America	100	86	86	57	6	3	6	3	3	...	...	...	...	...	...	...	...	
South America	75	83	92	58	6	3	6	3	3	...	...	...	...	...	...	...	...	
Europe and Northern America	33	93	64	74	6	3	5	3	3	37	67	88	64	32$_i$	66$_i$	89$_i$	51$_i$	
Europe	35	93	61	72	6	3	5	4	3	24	39	59	39	23$_i$	39$_i$	61$_i$	31$_i$	
Northern America	-	100	100	100	6	3	6	3	3	13	27	29	24	9$_i$	26$_i$	28$_i$	19$_i$	
Low income	4	46	30	25	6	3	6	3	3	58	113	101	69	12$_i$	114$_i$	41$_i$	6$_i$	
Middle income	22	67	46	47	6	3	6	3	3	255	565	636	467	158$_i$	577$_i$	502$_i$	199	
Lower middle	18	55	34	30	6	3	6	3	3	146	321	383	274	73$_i$	330$_i$	260$_i$	74	
Upper middle	26	79	57	63	6	3	6	3	3	102	236	241	185	79$_i$	239$_i$	230$_i$	119	
High income	35	93	67	75	6	3	6	3	3	44	85	104	78	37$_i$	84$_i$	107$_i$	62$_i$	

A Years of compulsory education, by level.
B Years of free education, by level.
C Official primary school starting age.
D Official duration of education levels in years.
E Official school-age population by level (for tertiary: the five years following upper secondary).
F Total absolute enrolment by level.
G Initial government expenditure on education as % of GDP.
H Initial government expenditure on education as a % of total government expenditure.
I Initial government expenditure per pupil by level, in constant PPP US$ and as % of GDP per capita.

Note: PPP = purchasing power parity.
Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.
Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.
(-) Magnitude nil or negligible.
(...) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).
(i) Estimate and/or partial coverage.

	Finance									
	G	H	I							
			Government education expenditure per pupil							
			Constant PPP US$				% of GDP per capita			
	Government education expenditure (% of GDP)	Education share of total government expenditure (%)	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary
		1.a.2	4.5.4							
	2023									
	Median									
	4.1	12.5	3,477$_i$	3,442$_i$	4,194$_i$	5,835$_i$	14$_i$	17$_i$	19$_i$	24$_i$
	3.7	14.8	...	...	...	...	...	...	...	...
	4.0	12.4	1,889$_i$	3,167$_i$	3,333$_i$	6,038$_i$	9$_i$	15$_i$	16$_i$	16$_i$
	6.0$_i$	17.8$_i$	...	...	...	...	...	...	...	...
	3.7	10.8	2,626$_i$	4,748$_i$	4,979$_i$	6,038$_i$	10$_i$	15$_i$	16$_i$	16$_i$
	4.1	17.2	209$_i$	1,016$_i$	1,126$_i$	2,900$_i$	3$_i$	11$_i$	14$_i$	20$_i$
	5.5	21.4	2,066$_i$	911$_i$	...	2,253	28$_i$	11$_i$	...	14
	3.3	12.2	140$_i$	1,016$_i$	1,093	3,103$_i$	1$_i$	11$_i$	14	26$_i$
	3.1	10.8	...	8,684$_i$	...	8,043$_i$	...	16$_i$	...	17$_i$
	3.9	10.3	6,813$_i$	12,175$_i$	...	12,271$_i$	14$_i$	20$_i$	...	22$_i$
	2.7	12.6	...	...	...	...	...	...	...	...
	6.1	11.6	...	...	...	...	...	19$_i$	16$_i$	...
	3.9	12.8	1,685$_i$	2,450$_i$	3,165$_i$	2,649$_i$	12$_i$	13	15	18$_i$
	3.7	12.0	...	2,450$_i$	3,359$_i$	...	6$_i$	12$_i$	18$_i$	...
	3.8	15.9	1,345	1,767	1,568	2,601	11	13	14	14
	4.5	15.2	2,978	2,645	2,420	3,268$_i$	15	14	17	19$_i$
	4.7	10.7	9,255	10,641	11,746	12,882	19	21	23	27
	4.7	10.6	9,342	10,418	11,370	12,746	19	21	23	27
	4.1	11.9	9,169$_i$	14,274$_i$	15,044$_i$	19,039	14$_i$	22$_i$	23$_i$	22
	3.8$_i$	15.7$_i$	...	...	...	...	...	...	...	...
	3.9	13.6	1,327$_i$	1,767$_i$	1,958$_i$	2,637$_i$	11$_i$	14$_i$	16$_i$	18$_i$
	3.6	15.1	...	797$_i$	...	...	...	...	...	...
	4.2	12.8	1,995$_i$	2,405$_i$	2,977$_i$	2,798$_i$	11$_i$	15$_i$	17$_i$	17$_i$
	4.5	11.1	8,949$_i$	10,755	11,355	13,248	18$_i$	20	22	25

TABLE 1: Continued

Country or territory	Education systems																	
	A Compulsory		B Free		C	D Duration (years)				E School-age population (000)				F Enrolment (000)				
	1 year of pre-primary	9 years of primary-secondary	1 year of pre-primary	12 years of primary-secondary	Official primary school starting age	Pre-primary	Primary	Lower secondary	Upper secondary	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	
SDG indicator	4.2.5	4.1.7	4.2.5	4.1.7														
Reference year	2023																	
Sub-Saharan Africa																		
Angola	1	9	1	9	6	3	6	3	3	3,507	6,225	5,077	3,352	799	5,248	2,464	332	
Benin	-	6	-	6	6	2	6	4	3	825	2,186	2,101	1,243	170	2,398	929	129	
Botswana	-	-	...	...	6	3	7	3	2	177	398	263	235	42	382	176	51	
Burkina Faso	-	10	-	10	6	3	6	4	3	2,088	3,921	3,833	2,165	142	2,836	1,185	220	
Burundi	-	-	...	...	7	3	6	3	3	1,205	2,369	1,885	1,123	126	2,302	741	70	
Cabo Verde	-	10	-	8	6	3	6	3	3	30	63	64	52	24	61	55	...	
Cameroon	-	6	-	6	6	2	6	4	3	1,695	4,577	4,522	2,640	628	5,156	2,007	417	
Central African Republic	-	10	-	13	6	3	6	4	3	568	1,028	1,042	591	...	...	...	...	
Chad	-	10	-	10	6	3	6	4	3	1,859	3,220	2,972	1,646	33	2,955	750	68	
Comoros	-	6	-	6	6	3	6	4	3	68	127	123	75	15	120	68	...	
Congo	-	10	3	13	6	3	6	4	3	503	989	972	531	26	881	...	55	
Côte d'Ivoire	-	10	-	10	6	3	6	4	3	2,474	4,558	4,692	2,846	263	4,633	3,098	317	
D. R. Congo	-	6	-	6	6	3	6	2	4	10,320	17,630	13,951	9,324	838	21,146	7,928	564	
Djibouti	-	10	1	12	6	2	5	4	3	...	...	...	113	7	70	69	...	
Equat. Guinea	-	6	-	6	7	3	6	4	2	134	249	208	124	...	118	...	7	
Eritrea	-	8	-	8	6	2	5	3	4	190	477	659	402	56	398	267	...	
Eswatini	-	7	-	7	6	3	7	3	2	83	196	132	116	...	222	...	...	
Ethiopia	-	8	-	8	7	3	6	4	2	10,177	18,403	17,043	12,635	4,042	15,545	...	...	
Gabon	-	10	-	10	6	3	5	4	3	183	295	349	207	78	284	232	29	
Gambia	-	9	-	9	7	4	6	3	3	323	457	390	262	136	428	370	...	
Ghana	2	9	2	9	6	2	6	3	3	1,687	4,999	4,378	3,194	1,962	4,760	3,290	702	
Guinea	-	6	-	6	7	3	6	4	3	1,209	2,202	2,190	1,348	230	2,072	750	88	
Guinea-Bissau	-	9	...	...	6	3	6	3	3	174	338	301	214	...	...	...	...	
Kenya	-	12	-	12	6	3	6	2	4	4,098	8,037	7,949	5,670	2,739	6,413	...	528_{i}	
Lesotho	-	7	-	7	6	3	7	3	2	162	361	235	223	47	312	...	...	
Liberia	-	6	-	6	6	3	6	3	3	440	854	786	543	543	570	275	...	
Madagascar	-	5	3	12	6	3	5	4	3	2,455	3,766	4,820	2,961	1,052	5,294	1,624	190	
Malawi	-	8	-	8	6	3	6	4	2	1,794	3,414	3,174	2,185	...	4,624	990	...	
Mali	-	9	3	12	7	3	6	3	3	2,263	3,995	3,274	2,130	166	2,973	1,305	84	
Mauritania	-	9	3	13	6	3	6	4	3	409	771	801	455	...	862	258	24	
Mauritius	-	12	-	13	5	2	6	3	4	26_{i}	80_{i}	115_{i}	96_{i}	24	89	114	43	
Mozambique	-	-	...	...	6	3	7	3	2	3,093	6,455	3,866	3,341	...	7,747	1,419	217	
Namibia	-	7	-	7	7	2	7	3	2	130	420	249	234	50	548	...	68	
Niger	-	-	...	...	7	3	6	4	3	$2,592_{i}$	$4,411_{i}$	$3,975_{i}$	$2,165_{i}$	190	3,023	910	87	
Nigeria	-	9	-	9	6	1	6	3	3	6,567	36,346	31,221	21,507	525	30,456	13,948	...	
Rwanda	-	6	-	9	6	3	6	3	3	$1,010_{i}$	$1,869_{i}$	$1,816_{i}$	$1,347_{i}$	541	2,838	819	120	
Sao Tome and Principe	-	6	-	6	6	3	6	3	3	18	37	33	23	12	38	28	3	
Senegal	-	11	-	10	6	3	6	4	3	1,521	2,834	2,820	1,655	303	2,340	1,283	286	
Seychelles	-	11	-	11	6	2	6	3	4	3_{i}	10_{i}	11_{i}	7_{i}	3	10	8	1	
Sierra Leone	-	9	-	9	6	3	6	3	4	698	1,318	1,388	868	172	2,017	946	...	
Somalia	-	8	...	...	6	3	4	4	4	1,847	2,192	3,517	1,739	18	465	116	...	
South Africa	-	9	-	12	7	4	7	2	3	4,612	7,925	5,209	4,487	792	7,631	5,381	1,224	
South Sudan	-	8	-	8	6	3	6	2	4	864	2,094	1,781	1,199	173	1,703	...	...	
Togo	-	10	-	5	6	3	6	4	3	750	1,384	1,402	834	240	1,664	915	115	
Uganda	-	7	...	...	6	3	7	4	2	4,530	9,490	7,054	5,037	...	...	...	...	
United Republic of Tanzania	-	7	1	13	7	1	7	4	2	1,973	12,279	8,924	6,029	1,680	11,429	2,831	252	
Zambia	-	7	-	7	7	4	7	2	3	2,395	3,827	2,354	1,965	259	3,416	...	...	
Zimbabwe	-	7	...	...	6	2	7	2	4	904	3,104	2,250	1,705	655	2,943	...	149	

Finance										
G	H	I								
		Government education expenditure per pupil								
		Constant PPP US$				% of GDP per capita				
Government education expenditure (% of GDP)	Education share of total government expenditure (%)	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	Country code
	1.a.2	4.5.4								
	2023									
	2.3$_{-1}$	6.4$_{+1}$	...	...	...	...	...	...	...	...	AGO
	3.4$_{-1}$	19	...	...	...	...	...	...	...	...	BEN
	8.1$_{-3}$	21.5$_{-3}$	...	...	...	...	...	...	...	...	BWA
	5.3$_{-1}$	20.3	...	...	...	...	...	...	...	...	BFA
	4.8$_{-1}$	15.7	...	...	...	...	...	...	...	...	BDI
	4.7$_{-1}$	13.4$_{+1}$	43$_{-4}$	1,642$_{-4}$	1,148$_{-4}$	2,673	1$_{-4}$	20$_{-4}$	14$_{-4}$	36	CPV
	2.6$_{-1}$	13.1	...	...	...	...	...	...	...	...	CMR
	2.1$_{-1}$	10.0	...	...	...	...	...	...	...	...	CAF
	2.5$_{-1}$	16.5	3$_{-2}$	129	264	2,120$_{-3}$	0.2$_{-2}$	7	14	115$_{-3}$	TCD
	2.4$_{-1}$	10.5$_{-1}$	...	...	...	...	...	...	...	...	COM
	3.0$_{-1}$	14.7	...	...	...	...	...	...	...	...	COG
	3.4	15.9	370	610	744	3,444	5	9	11	49	CIV
	3.0$_{-1}$	...	...	...	...	...	...	...	...	...	COD
	...	...	...	...	...	...	...	...	...	...	DJI
	...	...	...	...	...	...	...	...	...	...	GNQ
	...	...	...	...	...	...	...	...	...	...	ERI
	6.3	16.6$_{-1}$	...	...	...	...	...	...	...	...	SWZ
	3.7$_{-1}$	23.0$_{-1}$	...	...	...	...	...	...	...	...	ETH
	2.2$_{-1}$	13.6	...	...	...	...	...	...	...	...	GAB
	2.7	17.5	...	...	...	...	...	...	...	...	GMB
	2.9$_{-1}$	12.0	...	...	...	...	...	...	...	...	GHA
	2.0$_{-1}$	10.0	...	229$_{-3}$	...	...	...	6$_{-3}$	...	...	GIN
	...	...	...	...	...	...	...	...	...	...	GNB
	4.0	17.9$_{-3}$	...	...	...	...	...	...	...	...	KEN
	6.7	10.4$_{+1}$	...	705	1,021	1,521	...	24	35	52	LSO
	2.3$_{-1}$	7.4$_{-2}$	...	...	...	...	...	...	...	...	LBR
	3.1$_{-1}$	18.0$_{-4}$	...	...	...	...	...	...	...	...	MDG
	...	...	...	...	...	...	...	...	...	...	MWI
	4.0$_{-1}$	19.1	36	310	645	...	1	13	26	...	MLI
	2.6	10.2$_{+1}$	...	382$_{-3}$	532$_{-3}$	3,752$_{-3}$	...	6$_{-3}$	9$_{-3}$	62$_{-3}$	MRT
	4.6	12.2$_{-1}$	933	3,549	6,777$_{-2}$	2,535$_{-1}$	4	15	32$_{-2}$	12$_{-1}$	MUS
	6.2$_{-1}$	18.8$_{-2}$	...	...	...	...	...	...	...	...	MOZ
	9.0	25.0	...	...	...	...	...	...	...	...	NAM
	4.1$_{-1}$	12.8	179	145	176	2,874	12	10	12	186	NER
	0.3$_{-1}$	4.4	...	...	...	...	...	...	...	...	NGA
	4.9	14.8	121$_{-2}$	287$_{-2}$	745$_{-1}$	2,805	5$_{-2}$	13$_{-2}$	30$_{-1}$	108	RWA
	5.2$_{-1}$	18.3	...	...	...	...	...	...	...	...	STP
	6.0$_{-1}$	22.5	259$_{-1}$	611$_{-1}$	1,350$_{-1}$	4,546$_{-1}$	6$_{-1}$	14$_{-1}$	31$_{-1}$	105$_{-1}$	SEN
	4.7$_{-1}$	6.7$_{-3}$	...	...	...	...	...	...	...	...	SYC
	6.8	29.4$_{-1}$	-$_{-1}$	307$_{-2}$	208$_{-2}$	...	-$_{-1}$	19$_{-2}$	13$_{-2}$	...	SLE
	...	4.2$_{-4}$	...	...	...	...	...	...	...	...	SOM
	6.1	18.6$_{-1}$	1,042	2,642	2,969	9,049	8	19	22	66	ZAF
	...	...	...	...	...	...	...	...	...	...	SSD
	3.8$_{-1}$	11.6$_{+1}$	...	...	...	1,451	...	...	...	59	TGO
	2.6	8.6	...	...	...	...	...	...	...	...	UGA
	3.3	13.4$_{+1}$	...	...	...	...	...	...	...	...	TZA
	3.6$_{-1}$	15.4$_{+1}$	...	482	...	...	...	13	...	...	ZMB
	...	15.7$_{-3}$	...	...	...	...	...	...	...	...	ZWE

TABLE 1: Continued

Country or territory	Education systems																	
	A		B		C	D				E				F				
	Compulsory		Free			Duration (years)				School-age population (000)				Enrolment (000)				
	1 year of pre-primary	9 years of primary-secondary	1 year of pre-primary	12 years of primary-secondary	Official primary school starting age	Pre-primary	Primary	Lower secondary	Upper secondary	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	
SDG indicator	4.2.5	4.1.7	4.2.5	4.1.7														
Reference year	2023																	
Northern Africa and Western Asia																		
Algeria	-	10	1	12	6	1	5	4	3	992	4,770	5,433	2,953	538	5,188	5,580	1,640	
Armenia	-	12	3	12	6	3	4	5	3	111	167	289	156	77	156	275	95	
Azerbaijan	-	9	3	11	6	3	4	5	2	400$_i$	615$_i$	1,149$_i$	673$_i$	206	627	1,066	279	
Bahrain	-	9	-	12	6	3	6	3	3	60	126	111	75	32	118	110	54	
Cyprus	1	9	1	12	6	3	6	3	3	29$_i$	60$_i$	59$_i$	53$_i$	26	57	58	53	
Egypt	-	12	-	12	6	2	6	3	3	5,007	15,306	12,674	9,406	1,237	13,822	10,311	3,704	
Georgia	-	9	-	12	6	4	6	3	3	207	334	290	205	149	345	303	165	
Iraq	-	6	2	12	6	2	6	3	3	2,237	6,917	5,935	4,360	...	...	...	...	
Israel	3	12	3	12	6	3	6	3	3	536	1,029	894	686	577	1,017	903	412	
Jordan	-	10	1	12	6	2	6	4	2	409$_i$	1,124$_i$	1,095$_i$	1,147$_i$	162	1,105	1,007	379	
Kuwait	-	9	-	12	6	2	5	4	3	108	326	418	209	60	265	...	122	
Lebanon	-	10	3	9	6	3	6	3	3	262	657	627	441	208	524	405	265	
Libya	-	9	2	12	6	2	6	3	3	249	785	803	607	...	...	...	...	
Morocco	-	9	-	9	6	2	6	3	3	1,330	4,091	3,824	2,946	887	4,683	3,434	1,405	
Oman	-	10	-	12	6	2	4	6	2	186	364	531	259	106	348	513	118	
Qatar	-	12	-	12	6	3	6	3	3	97$_i$	176$_i$	129$_i$	126$_i$	49	173	144	46	
Saudi Arabia	-	9	-	12	6	3	6	3	3	1,677$_i$	3,224$_i$	2,837$_i$	2,132$_i$	486	3,311	3,403	1,572	
State of Palestine (the)	-	10	1	12	6	2	4	5	3	284	559	977	514	170	515	868	220	
Sudan	-	8	2	11	6	2	6	3	3	2,759	7,434	6,308	4,461	...	...	...	...	
Syrian Arab Republic	-	9	3	12	6	3	6	3	3	1,118	2,727	3,505	2,728	145	2,172	1,354	...	
Tunisia	-	9	-	11	6	3	6	3	4	629	1,292	1,271	796	...	1,338	...	306	
Türkiye	-	12	3	12	6	3	4	4	4	3,881$_i$	5,302$_i$	10,200$_i$	6,503$_i$	1,860	5,434	11,837	8,297	
United Arab Emirates	-	12	2	12	6	2	4	4	4	250$_i$	522$_i$	844$_i$	554$_i$	242	555	860	340	
Yemen	-	9	-	9	6	3	6	3	3	2,792	5,286	4,711	3,398	...	...	...	...	
Central and Southern Asia																		
Afghanistan	-	9	1	12	7	1	6	3	3	1,224	6,759	5,930	4,334	...	6,778	...	431	
Bangladesh	-	5	-	5	6	3	5	3	4	8,751	14,564	21,906	16,728	3,464	16,253	15,662	3,977	
Bhutan	-	-	-	11	6	3	6	4	2	31	73	80	73	11	79	73	11	
India	-	8	-	8	6	3	5	3	4	67,810$_i$	117,198$_i$	170,347$_i$	124,945$_i$	34,674	131,298	134,342	41,377	
Iran, Islamic Republic of	-	9	-	9	6	1	6	3	3	1,547	9,009	7,586	5,534	1,025	8,670	6,122	3,341	
Kazakhstan	-	9	3	11	6	3	4	5	2	1,181	1,565	2,445	1,257	970	1,566	2,502	733	
Kyrgyzstan	1	9	4	11	7	4	4	5	2	647	632	899	508	278	620	874	287	
Maldives	-	7	-	12	6	3	7	3	2	23	54	34	30	21	46	33	17	
Nepal	1	8	1	12	5	2	5	3	4	1,176	2,936	4,127	3,251	1,215	3,519	3,669	579	
Pakistan	-	12	-	12	5	2	5	3	4	11,752	28,874	38,158	24,503	8,554	23,849	15,873	2,749	
Sri Lanka	-	11	-	13	5	2	5	4	4	621	1,656	2,844	1,681	432	1,623	2,549	381	
Tajikistan	-	9	4	11	7	4	4	5	2	1,011	989	1,438	881	105	1,008	1,289	304	
Turkmenistan	-	12	3	12	6	3	4	6	2	415	570	947	485	155	623	870	89	
Uzbekistan	-	12	4	12	7	4	4	5	3	2,932$_i$	2,721$_i$	4,752$_i$	2,548$_i$	2,292	2,642	4,195	1,439	
Eastern and South-eastern Asia																		
Brunei Darussalam	-	9	...	...	6	3	6	2	5	19	41	46	35	12	39	41	13	
Cambodia	-	-	-	9	6	3	6	3	3	970	1,973	1,886	1,400	386	2,198	1,133	252	
China	-	9	-	9	6	3	6	3	3	48,127	108,272	102,197	79,409	46,281	107,540	96,323	59,417	
DPR Korea	1	11	1	11	7	2	5	3	3	674	1,602	1,947	1,770	...	...	...	...	
Hong Kong, China	-	9	-	12	6	3	6	3	3	147$_i$	350$_i$	339$_i$	283$_i$	146	338	334	284	
Indonesia	-	9	-	12	7	2	6	3	3	9,102	28,554	27,667	21,828	4,976	28,619	26,883	9,852	
Japan	-	9	3$_{-1}$	9$_{-1}$	6	3	6	3	3	2,831$_i$	6,177$_i$	6,510$_i$	6,022$_i$	2,779	6,310	6,663	3,892	
Lao PDR	-	9	-	9	6	3	5	4	3	471	767	1,043	717	179	740	568	38	
Macao, China	1	9	3	12	6	3	6	3	3	20$_i$	44$_i$	33$_i$	38$_i$	17	38	30	50	
Malaysia	-	6	-	11	6	2	6	3	3	1,038	3,128	3,075	2,753	957	3,092	2,629	1,136	
Mongolia	-	12	4	12	6	4	5	4	3	304	399	416	223	258	382	412	145	
Myanmar	-	5	-	5	5	2	5	4	2	1,790	4,446	5,330	4,575	...	...	...	...	
Philippines	1	12	1	12	6	1	6	4	2	2,349	13,867	13,562	10,583	2,148	12,953	12,594	4,792	
Republic of Korea	-	9	3	12	6	3	6	3	3	1,010	2,665	2,709	2,639	1,006	2,674	2,632	2,826	
Singapore	-	6	...	...	6	3	6	2	2	111$_i$	237$_i$	162$_i$	203$_i$	107	236	167	199	
Thailand	-	9	3	12	6	3	6	3	3	2,129$_i$	4,456$_i$	4,678$_i$	4,487$_i$	1,632	4,501	5,098	2,018	
Timor-Leste	-	9	-	9	6	3	6	3	3	94	185	187	152	27	228	162	47	
Viet Nam	1	9	-	5	6	3	5	4	3	4,427	7,505	9,876	6,910	4,250	9,193	9,615	2,900	

	Finance										
	G	H	I								
			Government education expenditure per pupil								
			Constant PPP US$				% of GDP per capita				
	Government education expenditure (% of GDP)	Education share of total government expenditure (%)	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	Country code
		1.a.2	4.5.4								
			2023								
	5.6	14.4$_{+1}$	...	...	...	...	...	...	...	...	DZA
	...	9.7$_{-1}$	318	235	233	136	2	1	1	1	ARM
	3.6	10.8$_{-2}$	2,626$_{-1}$	1,903$_{-1}$	3,178$_{-1}$	4,828$_{-1}$	12$_{-1}$	9$_{-1}$	15$_{-1}$	23$_{-1}$	AZE
	2.0$_{-1}$	9.3$_{-1}$	...	...	...	...	...	...	...	...	BHR
	5.2$_{-2}$	12.7$_{-2}$	4,971$_{-2}$	14,077$_{-2}$	16,640$_{-2}$	7,248$_{-2}$	10$_{-2}$	29$_{-2}$	34$_{-2}$	15$_{-2}$	CYP
	...	...	1,151$_{-1}$	987$_{-1}$	1,462$_{-2}$	...	7$_{-1}$	6$_{-1}$	9$_{-2}$	...	EGY
	3.7	12.2$_{-1}$	...	...	...	1,153$_{-2}$	...	...	...	6$_{-2}$	GEO
	...	...	...	...	...	...	...	...	...	...	IRQ
	6.5$_{-1}$	17.5$_{-1}$	6,282$_{-2}$	10,971$_{-2}$	9,170$_{-2}$	7,628$_{-2}$	14$_{-2}$	24$_{-2}$	20$_{-2}$	17$_{-2}$	ISR
	3.2$_{-1}$	9.7$_{-1}$	96$_{-1}$	1,400$_{-1}$	1,495$_{-1}$	646$_{-1}$	1$_{-1}$	15$_{-1}$	16$_{-1}$	7$_{-1}$	JOR
	5.0	12.6	...	...	...	...	...	...	...	...	KWT
	1.7$_{-3}$	9.9$_{-3}$	...	...	...	...	...	...	...	...	LBN
	...	...	...	...	...	...	...	...	...	...	LBY
	6.0	23.3$_{+1}$	...	...	...	...	...	...	...	...	MAR
	4.2$_{-1}$	14.2$_{-1}$	762$_{-1}$	6,328$_{-1}$	6,624$_{-1}$	30,082$_{-3}$	2$_{-1}$	16$_{-1}$	17$_{-1}$	80$_{-3}$	OMN
	3.2$_{-3}$	9.3$_{-3}$	...	...	...	...	...	...	...	...	PSE
	5.1	...	...	...	...	...	...	...	...	...	QAT
	5.4$_{-2}$	...	...	...	...	385$_{-2}$	...	...	...	7$_{-2}$	SAU
	...	...	...	...	...	...	...	...	...	...	SDN
	...	...	...	...	...	...	...	...	...	...	SYR
	6.7	17.8$_{+1}$	...	...	...	...	...	...	...	...	TUN
	2.6$_{-1}$	8.8$_{-1}$	3,112$_{-2}$	3,167$_{-2}$	3,333$_{-2}$	8,857$_{-2}$	10$_{-2}$	10$_{-2}$	11$_{-2}$	28$_{-2}$	TUR
	3.9$_{-2}$	14.8$_{-2}$	...	13,312$_{-3}$	17,058$_{-3}$	13,477$_{-3}$	...	20$_{-3}$	26$_{-3}$	20$_{-3}$	ARE
	...	...	...	...	...	...	...	...	...	...	YEM
	...	...	-	319	351	...	-	11	12	...	AFG
	1.8	11.6$_{+1}$	...	...	420$_{-3}$	1,075$_{-3}$	...	...	7$_{-3}$	17$_{-3}$	BGD
	5.8	17.2$_{+1}$	...	...	...	...	...	...	...	...	BTN
	4.1$_{-1}$	14.2$_{-1}$	209$_{-3}$	1,016$_{-2}$	1,256$_{-2}$	3,947$_{-2}$	3$_{-3}$	15$_{-2}$	18$_{-2}$	56$_{-2}$	IND
	2.9	18.8$_{-1}$	140$_{-3}$	1,514$_{-3}$	2,219$_{-3}$	2,595$_{-1}$	1$_{-3}$	11$_{-3}$	16$_{-3}$	18$_{-1}$	IRN
	4.5$_{-1}$	24.1$_{-2}$	...	88$_{-4}$	...	2,900$_{-4}$	...	0.3$_{-4}$	...	8$_{-4}$	KAZ
	6.8	21.0$_{-1}$	1,327	...	...	185$_{-2}$	22	...	...	3$_{-2}$	KGZ
	5.2	10.7$_{+1}$	2,362$_{-4}$	3,148$_{-4}$	4,316$_{-4}$	...	11$_{-4}$	15$_{-4}$	20$_{-4}$	...	MDV
	3.7	12.8$_{-2}$	...	...	...	...	...	...	...	...	NPL
	1.9	8.3	...	...	...	3,103	...	...	...	63	PAK
	1.8	7.2$_{+1}$	-$_{-4}$	922$_{-4}$	931	3,908	-$_{-4}$	6$_{-4}$	6	26	LKA
	5.8	21.4$_{-1}$	...	...	...	...	...	...	...	...	TJK
	2.7	20.4	...	...	...	4,608$_{-1}$	...	...	...	24$_{-1}$	TKM
	5.5	21.4$_{-2}$	2,804$_{-2}$	1,733$_{-2}$	1,126$_{-2}$	1,605$_{-2}$	34$_{-2}$	21$_{-2}$	14$_{-2}$	20$_{-2}$	UZB
	...	...	...	...	...	...	...	...	...	...	BRN
	3.0	15.7$_{-2}$	...	...	...	...	...	...	...	...	KHM
	4.0$_{-1}$	10.5$_{-1}$	...	...	...	...	...	...	...	...	CHN
	...	13.7$_{+1}$	...	...	...	...	...	...	...	...	PRK
	3.8	14.9$_{-2}$	6,813	12,175	15,335	16,500	11	20	25	27	HKG
	1.3	13.9$_{-1}$	...	...	...	...	...	...	...	...	IDN
	3.2$_{-1}$	7.5$_{-1}$	...	...	...	...	...	...	...	...	JPN
	1.2	9.8	...	...	...	...	...	...	...	...	LAO
	6.2$_{-1}$	10.1$_{-1}$	...	...	...	19,247$_{-1}$	...	...	...	34$_{-1}$	MAC
	3.6	17.1	1,327$_{-3}$	5,193$_{-3}$	6,155$_{-3}$	4,969$_{-3}$	4$_{-3}$	17$_{-3}$	21$_{-3}$	17$_{-3}$	MYS
	3.7	10.0$_{-2}$	1,995	1,899	...	460	14	13	...	3	MNG
	2.0$_{-4}$	9.8$_{-4}$	...	437	576	933	...	8	10	17	MMR
	3.6	16.7	...	...	...	...	...	...	...	...	PHL
	4.9$_{-2}$	...	10,410$_{-2}$	14,250$_{-2}$	18,542$_{-2}$	8,043$_{-2i}$	21$_{-2}$	29$_{-2}$	38$_{-2}$	17$_{-2i}$	KOR
	2.2	10.1$_{-1}$	...	16,860$_{-1}$	20,015$_{-1}$	18,726$_{-1}$	...	15$_{-1}$	17$_{-1}$	16$_{-1}$	SGP
	2.5	11.2$_{-1}$	...	...	...	...	...	...	...	...	THA
	3.0$_{-2}$	7.5$_{-2}$	...	...	...	...	...	...	...	...	TLS
	2.9$_{-1}$	15.4$_{-1}$	...	...	...	...	...	...	...	...	VNM

TABLE 1: Continued

Country or territory	Education systems																	
	A		B		C	D				E				F				
	Compulsory		Free			Duration (years)				School-age population (000)				Enrolment (000)				
	1 year of pre-primary	9 years of primary-secondary	1 year of pre-primary	12 years of primary-secondary	Official primary school starting age	Pre-primary	Primary	Lower secondary	Upper secondary	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	
SDG indicator	4.2.5	4.1.7	4.2.5	4.1.7														
Reference year	2023																	
Oceania																		
Australia	-	11	1	13	5	2	7	4	2	610$_i$	2,267$_i$	1,917$_i$	1,562$_i$	588	2,248	2,555	1,659	
Cook Islands	-	12	2	13	5	2	6	4	3	1	2	2	1	0.4	2	2	...	
Fiji	-	-	...	...	6	3	6	4	3	53	107	118	75	19	115	114	45	
Kiribati	-	9	-	9	6	3	6	3	4	10	19	18	11	9	18	17	...	
Marshall Islands	1	12	1	12	6	1	6	2	4	1	6	5	3	1	6	6	2	
Micronesia, F. S.	-	8	-	8	6	3	6	2	4	7	14	14	11	2	13	...	...	
Nauru	2	12	2	12	6	2	6	4	2	1	2	2	1	0.3	2	1	...	
New Zealand	-	10	2	13	5	2	6	4	3	122	384	466	330	101	376	532	244	
Niue	-	11	1	12	5	1	6	4	3	-	0.2	0.3	0.1	-	0.2	0.2	...	
Palau	-	12	-	12	6	3	6	2	4	1	1	1	1	1	1	1	0.4	
Papua New Guinea	-	-	...	...	7	4	6	4	2	954	1,366	1,264	970	...	...	...	...	
Samoa	-	8	-	8	5	2	6	2	5	12	34	34	19	5	35	...	3	
Solomon Is	-	-	...	...	6	3	6	3	4	60	113	111	67	40	96	...	...	
Tokelau	-	11	...	...	5	2	6	5	3	0.1	0.2	0.3	0.2	-	0.2	0.1	...	
Tonga	2	13	-	8	6	2	6	5	2	4$_i$	16$_i$	16$_i$	9$_i$	2	16	16	5	
Tuvalu	-	9	...	...	6	3	6	4	3	1	1	1	1	1	1	1	...	
Vanuatu	-	-	...	...	6	2	6	4	3	18	52	50	28	15	55	58	...	
Latin America and the Caribbean																		
Anguilla	-	12	-	12	5	2	7	3	2	0.3	1	1	1	0.3	1	1	...	
Antigua and Barbuda	-	11	-	11	5	2	7	3	2	2	8	7	6	...	10	...	...	
Argentina	2	12	3	12	6	3	6	3	3	2,027	4,405	4,252	3,467	1,611	4,787	4,876	3,721	
Aruba	2	11	2	11	6	2	6	2	3	2$_i$	7$_i$	7$_i$	6$_i$	3	8	9	...	
Bahamas	-	12	2	12	5	2	6	3	3	9	30	37	33	4	23	29	...	
Barbados	-	11	2	11	5	2	6	3	2	6	18	18	18	4	17	19	...	
Belize	-	8	2	8	5	2	6	4	2	15	46	45	39	7	45	37	9	
Bolivia, P. S.	2	12	2	12	6	2	6	2	4	471$_i$	1,409$_i$	1,399$_i$	1,123$_i$	346	1,394	1,292	...	
Brazil	2	12	2	12	6	2	5	4	3	6,114$_i$	14,697$_i$	20,867$_i$	16,177$_i$	5,093	15,280	22,125	9,769	
British Virgin Islands	-	12	-	12	5	2	7	3	3	0.5	2	3	2	0.4	2	2	1	
Cayman Islands	1	11	2	12	5	2	6	3	3	2	5	4	3	1	5	4	1	
Chile	-	12	2	12	6	3	6	2	4	688	1,469	1,448	1,272	582	1,545	1,604	1,292	
Colombia	1	11	3	11	6	3	5	4	2	2,205	3,684	4,519	4,124	1,901	4,140	4,849	2,466	
Costa Rica	2	11	2	11	6	2	6	3	2	137	430	372	372	133	482	501	222	
Cuba	-	9	3	12	6	3	6	3	3	340	738	717	669	358	727	685	327	
Curaçao	2	12	...	...	6	2	6	2	4	3$_i$	11$_i$	10$_i$	7$_i$	3	12	13	1	
Dominica	-	12	-	12	5	2	7	3	2	2	6	5	6	1	6	4	...	
Dominican Republic	3	12	3	12	6	3	6	3	3	610	1,230	1,185	969	326	1,165	856	512	
Ecuador	3	12	3	12	6	3	6	3	3	862$_i$	1,822$_i$	1,951$_i$	1,610$_i$	607	1,773	1,823	963	
El Salvador	3	9	3	12	7	3	6	3	3	308	670	673	622	203	610	442	201	
Grenada	-	12	2	12	5	2	7	3	2	4	...	...	9	3	12	9	...	
Guatemala	3	9	3	12	7	3	6	3	3	1,191	2,342	2,264	1,850	673	2,414	1,078	505	
Guyana	-	6	-	6	6	2	6	3	2	31	92	74	72	31	91	63	...	
Haiti	-	6	-	6	6	3	6	3	4	759	1,478	1,641	1,104	...	...	...	...	
Honduras	1	11	3	11	6	3	6	3	2	631	1,241	1,054	1,069	208	1,074	581	237	
Jamaica	-	6	-	6	6	3	6	3	2	101	231	214	227	97	195	185	...	
Mexico	2	12	2	12	6	3	6	3	3	6,475$_i$	13,197$_i$	13,300$_i$	10,938$_i$	4,161	13,502	13,113	5,069	
Montserrat	-	12	-	12	5	2	7	3	2	0.1	0.2	0.3	0.3	0.1	0.3	0.3	...	
Nicaragua	1	6	-	11	6	3	6	3	2	419	831	666	646	264	880	464	191	
Panama	2	9	2	12	6	2	6	3	3	155	469	444	355	88	443	361	204	
Paraguay	1	12	3	12	6	3	6	3	3	408	778	731	596	220	719	581	...	
Peru	3	11	3	11	6	3	6	3	2	1,744	3,513	3,031	2,851	1,605	3,776	3,210	...	
Saint Kitts and Nevis	-	12	-	12	5	2	7	3	2	1	4	3	3	1	5	4	...	
Saint Lucia	-	10	-	10	5	2	7	3	2	4	15	12	13	2	15	11	2	
Saint Vincent/Grenadines	-	12	2	12	5	2	7	3	2	3	11	8	7	3	12	10	2	
Sint Maarten	2	11	2	11	6	3	6	2	3	1	2	3	5	0.2	4	...	0.2	
Suriname	-	6	...	...	6	2	6	4	3	22	64	76	54	12	43	58	3	
Trinidad and Tobago	-	7	...	...	5	2	7	3	2	37	139	102	97	27	129	88	...	
Turks and Caicos Islands	2	11	2	11	6	2	6	3	2	1	3	3	3	1	4	3	1	
Uruguay	2	12	2	12	6	3	6	3	3	119	282	284	244	122	301	347	196	
Venezuela, B. R.	3	11	3	11	6	3	6	3	2	1,465	3,265	2,825	2,548	1,667	3,541	2,696	...	

Finance										
G	H	I								
		Government education expenditure per pupil								
		Constant PPP US$				% of GDP per capita				
Government education expenditure (% of GDP)	Education share of total government expenditure (%)	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	Country code
	1.a.2	4.5.4								
	2023									
5.2$_{-1}$	13.9$_{-1}$	7,558$_{-2}$	11,216$_{-2}$	10,961$_{-2}$	9,902$_{-2}$	13$_{-2}$	20$_{-2}$	19$_{-2}$	17$_{-2}$	AUS
4.1	6.8$_{+1}$	...	...	...	...	16	15	15	...	COK
4.2	11.6$_{+1}$	...	...	...	...	...	...	...	...	FJI
14.2$_{-2}$	16.1$_{-1}$	...	...	...	...	...	...	...	...	KIR
7.5$_{-1}$	11.3$_{-1}$	1,887$_{-1}$	1,459$_{-1}$	1,054$_{-1}$	884$_{-1}$	29$_{-1}$	22$_{-1}$	16$_{-1}$	13$_{-1}$	MHL
10.5$_{-3}$	18.6$_{-3}$	...	...	...	...	...	...	...	...	FSM
7.8$_{-1}$	...	...	...	...	...	...	...	...	...	NRU
5.2$_{-1}$	13.1$_{-1}$	8,503$_{-1}$	8,672$_{-1}$	8,242$_{-1}$	12,263$_{-1}$	17$_{-1}$	18$_{-1}$	17$_{-1}$	25$_{-1}$	NZL
...	7.0$_{+1}$	...	...	...	-	...	...	...	-	NIU
3.4	9.5	...	...	...	...	...	...	...	...	PLW
1.3$_{-2}$	3.9$_{-2}$	...	...	...	...	...	...	...	...	PNG
6.1	12.9$_{+1}$	...	...	...	...	...	...	...	...	WSM
8.3	25.9	...	...	...	...	...	...	...	...	SLB
...	...	...	...	...	...	...	...	...	...	TKL
5.1	9.3$_{+1}$	...	...	...	...	...	...	...	...	TON
12.8	10.5	854	1,184	1,329	...	16	23	26	...	TUV
10.6	20.9	...	87$_{-3}$	351$_{-3}$	...	...	3$_{-3}$	11$_{-3}$	...	VUT
3.5$_{-2}$	10.1$_{-1}$	...	...	...	...	...	...	...	...	AIA
3.6$_{-1}$	9.8	...	...	...	...	...	...	...	...	ATG
4.8$_{-1}$	12.7$_{-1}$	4,209$_{-1}$	3,814$_{-1}$	4,728$_{-1}$	3,268$_{-1}$	16$_{-1}$	14$_{-1}$	17$_{-1}$	12$_{-1}$	ARG
4.4$_{-4}$	19.4$_{-4}$	...	...	...	...	...	...	...	...	ABW
2.8$_{-1}$	11.6	...	...	...	...	...	...	...	...	BHS
4.0	12.5	...	3,933	3,279	...	...	24	20	...	BRB
4.3	18.5	2,113	2,113	2,066	2,113	18	18	17	18	BLZ
7.6$_{-1}$	23.1$_{-2}$	1,187$_{-1}$	2,645$_{-1}$	2,144$_{-1}$	...	12$_{-1}$	...	...	...	BOL
5.5$_{-2}$	12.8$_{-2}$	...	3,296$_{-2}$	3,624$_{-2}$	4,165$_{-2}$	...	19$_{-2}$	21$_{-2}$	24$_{-2}$	BRA
2.5$_{-1}$	10.9$_{+1}$	...	...	...	...	-$_{-1}$	11$_{-1}$	13$_{-1}$	39$_{-1}$	VGB
1.5$_{-1}$	15.0$_{-4}$	...	7,570$_{-1}$	10,136$_{-1}$	...	...	10$_{-1}$	13$_{-1}$	...	CYM
5.0$_{-2}$	14.9$_{-2}$	5,957$_{-2}$	5,168$_{-2}$	5,217$_{-2}$	5,691$_{-2}$	21$_{-2}$	18$_{-2}$	18$_{-2}$	20$_{-2}$	CHL
...	...	...	...	...	...	...	...	...	...	COL
6.2$_{-2}$	31.2$_{-2}$	2,037$_{-2}$	5,112$_{-2}$	5,163$_{-2}$	13,156$_{-2}$	9$_{-2}$	22$_{-2}$	22$_{-2}$	56$_{-2}$	CRI
9.4$_{-2}$	17.0$_{-1}$	...	...	...	...	...	...	...	...	CUB
...	12.4$_{-1}$	...	...	...	...	...	...	...	...	CUW
4.7	7.1$_{+1}$	458$_{-3}$	2,450$_{-3}$	3,788$_{-3}$	-$_{-3}$	3$_{-3}$	16$_{-3}$	25$_{-3}$	-$_{-3}$	DMA
3.9$_{-1}$	21.9$_{+1}$	2,346	4,448	3,165	...	10	19	14	...	DOM
3.9	9.7	3,843$_{-1}$	1,410$_{-1}$	848$_{-1}$	2,697$_{-1}$	27$_{-1}$	10$_{-1}$	6$_{-1}$	19$_{-1}$	ECU
3.2	12.0$_{-2}$	1,188	1,767	1,568	1,222	11	16	14	11	SLV
3.9$_{-1}$	14.5$_{+1}$	998	1,389	1,851	883	6	9	12	6	GRD
3.2	18.9$_{-1}$	1,501	1,682	828	1,633	12	13	7	13	GTM
...	...	...	...	...	...	...	...	...	...	GUY
1.3$_{-1}$	10.3$_{+1}$	...	...	...	...	...	...	...	...	HTI
4.0	15.4	1,162	1,253	1,173	-	18	19	18	-	HND
5.7	16.9$_{-1}$	754$_{-1}$	2,363$_{-1}$	2,985$_{-1}$	...	8$_{-1}$	25$_{-1}$	32$_{-1}$	...	JAM
4.2$_{-2}$	15.9$_{-2}$	2,548$_{-3}$	2,692$_{-2}$	2,944$_{-2}$	4,693$_{-2}$	13$_{-3}$	13$_{-2}$	14$_{-2}$	22$_{-2}$	MEX
7.6$_{-1}$	7.7$_{+1}$	...	...	...	...	28$_{-4}$	12$_{-4}$	26$_{-4}$	...	MSR
3.8$_{-1}$	17.7	243	797	435	2,601	3	11	6	36	NIC
3.4$_{-1}$	11.9	...	3,442$_{-1}$	3,438	4,663$_{-1}$	...	10$_{-1}$	11	14$_{-1}$	PAN
3.4	22.0	1,685	1,879	2,108	...	11	12	13	...	PRY
4.2	19.2$_{+1}$	2,093	1,896	2,420	1,619	14	13	16	11	PER
3.6$_{-1}$	10.2$_{+1}$	...	1,812$_{-2}$	3,479$_{-2}$	...	...	7$_{-2}$	13$_{-2}$	...	KNA
3.7$_{-1}$	16.3$_{-1}$	-$_{-1}$	2,590$_{-3}$	4,139$_{-3}$	-$_{-1}$	-$_{-1}$	13$_{-3}$	21$_{-3}$	-$_{-1}$	LCA
7.2$_{-1}$	12.6$_{+1}$	...	2,446	2,814	...	...	15	18	...	VCT
4.2$_{-1}$	23.0	...	...	...	...	...	...	...	...	SXM
2.9	8.6$_{+1}$	...	...	...	...	...	...	...	...	SUR
2.9$_{-1}$	8.9$_{+1}$	190$_{-2}$	2,472$_{-2}$	3,827$_{-2}$	...	1$_{-2}$	9$_{-2}$	14$_{-2}$	...	TTO
3.1	9.3	6,931$_{-2}$	1,804$_{-1}$	3,359$_{-1}$	7,797$_{-1}$	42$_{-2}$	10$_{-1}$	19$_{-1}$	44$_{-1}$	TCA
4.5$_{-1}$	15.4	3,903$_{-1}$	3,982$_{-1}$	4,194$_{-1}$	6,125$_{-1}$	13$_{-1}$	13$_{-1}$	14$_{-1}$	20$_{-1}$	URY
...	-	...	...	...	...	...	...	...	...	VEN

TABLE 1: Continued

Country or territory	Education systems																	
	A		B		C	D				E				F				
	Compulsory		Free			Duration (years)				School-age population (000)				Enrolment (000)				
	1 year of pre-primary	9 years of primary-secondary	1 year of pre-primary	12 years of primary-secondary	Official primary school starting age	Pre-primary	Primary	Lower secondary	Upper secondary	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	
SDG indicator	4.2.5	4.1.7	4.2.5	4.1.7														
Reference year	2023																	
Europe and Northern America																		
Albania	-	9	3	12	6	3	5	4	3	82$_i$	157$_i$	225$_i$	187$_i$	70	147	216	121	
Andorra	-	11	-	10	6	3	6	4	2	2	4	5	4	2	4	5	3	
Austria	1	12	1	12	6	3	4	4	4	268$_i$	356$_i$	699$_i$	476$_i$	272	348	695	439	
Belarus	-	11	-	11	6	3	4	5	2	284	477	775	467	315	444	709	313	
Belgium	-	12	3	12	6	3	6	2	4	369$_i$	798$_i$	827$_i$	671$_i$	432	815	1,153	549	
Bermuda	-	13	1	13	5	1	6	3	4	1	4	5	3	1	3	3	1	
Bosnia and Herzegovina	-	9	-	9	6	3	5	4	4	95	162	269	171	29	142	227	77	
Bulgaria	2	9	4	12	7	4	4	3	5	237$_i$	244$_i$	507$_i$	277$_i$	215	234	484	227	
Canada	-	10	1	12	6	3	6	3	3	1,152	2,437	2,498	2,201	559	2,387	2,718	1,814	
Croatia	-	8	-	8	7	4	4	4	4	141$_i$	146$_i$	310$_i$	196$_i$	112	149	327	161	
Czechia	1	9	-	13	6	3	5	4	4	352$_i$	581$_i$	941$_i$	507$_i$	366	555	905	338	
Denmark	-	10	-	10	6	3	7	3	3	188$_i$	437$_i$	415$_i$	367$_i$	183	436	536	310	
Estonia	-	9	-	12	7	4	6	3	3	60$_i$	92$_i$	92$_i$	65$_i$	...	88	96	44	
Finland	-	11	1	12	7	4	6	3	3	203$_i$	368$_i$	374$_i$	303$_i$	190	367	533	316	
France	3	10	3	12	6	3	5	4	3	2,203$_i$	4,057$_i$	6,027$_i$	4,067$_i$	2,382	4,214	6,245	2,883	
Germany	-	13	-	13	6	3	4	6	3	2,467$_i$	3,238$_i$	6,993$_i$	4,371$_i$	2,580	3,079	6,828	3,363	
Greece	1	9	2	12	6	2	6	3	3	171$_i$	568$_i$	655$_i$	523$_i$	178	588	691	873	
Hungary	3	10	3	12	7	4	4	4	4	375$_i$	368$_i$	760$_i$	512$_i$	310	378	803	294	
Iceland	-	10	...	10	6	3	7	3	4	13$_i$	33$_i$	34$_i$	27$_i$	12	33	37	22	
Ireland	-	10	...	10	5	2	8	3	2	124$_i$	569$_i$	365$_i$	322$_i$	103	549	457	247	
Italy	-	12	-	8	6	3	5	3	5	1,343$_i$	2,535$_i$	4,575$_i$	2,919$_i$	1,319	2,629	4,640	2,146	
Latvia	2	9	4	12	7	4	6	3	3	83$_i$	124$_i$	122$_i$	88$_i$	82	119	124	77	
Liechtenstein	-	10	2	13	7	2	5	4	3	1$_i$	2$_i$	3$_i$	2$_i$	1	2	3	1	
Lithuania	1	10	1	12	7	4	4	6	2	116$_i$	118$_i$	228$_i$	134$_i$	109	116	235	104	
Luxembourg	2	10	3	13	6	3	6	3	4	21$_i$	43$_i$	49$_i$	37$_i$	19	41	51	8	
Malta	-	11	2	13	5	2	6	3	4	9$_i$	28$_i$	31$_i$	26$_i$	9	27	31	19	
Monaco	-	11	3	12	6	3	5	4	3	...	...	...	...	1	2	3	1	
Montenegro	-	9	-	13	6	3	5	4	4	22$_i$	37$_i$	60$_i$	38$_i$	18	39	57	21	
Netherlands (Kingdom of the)	1	12	2	12	6	3	6	3	3	523$_i$	1,098$_i$	1,171$_i$	1,138$_i$	480	1,142	1,615	988	
North Macedonia	-	13	-	13	6	3	5	4	4	60$_i$	109$_i$	167$_i$	106$_i$	28	106	153	56	
Norway	-	10	-	10	6	3	7	3	3	172$_i$	444$_i$	396$_i$	330$_i$	171	440	462	320	
Poland	1	8	4	12	7	4	4	4	4	1,556$_i$	1,517$_i$	3,030$_i$	1,763$_i$	1,473	1,533	3,226	1,366	
Portugal	-	12	2	12	6	3	6	3	3	264$_i$	535$_i$	613$_i$	548$_i$	259	588	740	417	
Republic of Moldova	1	9	4	12	7	4	4	5	3	141$_i$	131$_i$	232$_i$	139$_i$	114	137	228	80	
Romania	-	10	3	13	6	3	5	4	4	616$_i$	1,028$_i$	1,746$_i$	977$_i$	518	867	1,446	554	
Russian Federation	-	11	4	11	7	4	4	5	2	6,654$_i$	7,729$_i$	11,676$_i$	7,493$_i$	6,496	7,555	10,798	4,010	
San Marino	-	10	-	13	6	3	5	3	5	1$_i$	2$_i$	3$_i$	2$_i$	1	3	2	5	
Serbia	-	8	-	12	7	4	4	4	4	255$_i$	258$_i$	526$_i$	339$_i$	170	254	503	249	
Slovakia	1	10	1	13	6	3	4	5	4	180$_i$	235$_i$	503$_i$	262$_i$	179	233	457	140	
Slovenia	-	9	-	13	6	3	6	3	4	61$_i$	132$_i$	150$_i$	100$_i$	59	133	155	82	
Spain	-	10	3	10	6	3	6	3	3	1,178$_i$	2,780$_i$	3,095$_i$	2,531$_i$	1,192	2,871	3,637	2,309	
Sweden	1	9	1	12	7	4	6	3	3	486$_i$	754$_i$	736$_i$	585$_i$	471	878	1,009	484	
Switzerland	2	10	2	13	6	2	6	3	4	179$_i$	537$_i$	608$_i$	454$_i$	182	539	617	339	
Ukraine	-	11	-	11	6	3	4	5	2	1,090$_i$	1,828$_i$	3,160$_i$	1,879$_i$	827	1,524	2,645	1,441	
United Kingdom	-	11	2	13	5	2	6	3	4	1,480$_i$	4,751$_i$	5,566$_i$	3,903$_i$	1,636	4,865	6,303	3,129	
United States	-	12	1	12	6	3	6	3	3	11,637$_i$	24,254$_i$	25,853$_i$	22,505$_i$	8,297	23,520	25,200	17,860	

Finance										
G	H	I								
		Government education expenditure per pupil								
		Constant PPP US$				% of GDP per capita				
Government education expenditure (% of GDP)	Education share of total government expenditure (%)	Pre-primary	Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary	Tertiary	Country code
	1.a.2	4.5.4								
	2023									
2.7$_{-1}$	9.8$_{-2}$	...	5,790$_{-4}$	1,493$_{-4}$	2,193$_{-1}$	...	38$_{-4}$	10$_{-4}$	13$_{-1}$	ALB
1.9	12.8	6,881	5,714	6,055	2,326	11	9	9	4	AND
4.8$_{-1}$	9.0$_{-1}$	11,698$_{-2}$	15,008$_{-2}$	16,590$_{-2}$	23,994$_{-2}$	18$_{-2}$	24$_{-2}$	26$_{-2}$	38$_{-2}$	AUT
5.0	12.8$_{-1}$	9,342	...	...	7,390	34	...	...	27	BLR
6.4$_{-2}$	11.3$_{-2}$	11,528$_{-2}$	13,452$_{-2}$	15,113$_{-2}$	20,174$_{-2}$	19$_{-2}$	22$_{-2}$	24$_{-2}$	32$_{-2}$	BEL
1.9	...	...	...	...	19,344	...	...	...	20	BMU
4.1$_{-2}$	10.4$_{-2}$	2,608	2,118	5,446	5,835$_{-2}$	16	13	33	32$_{-2}$	BIH
4.7$_{-2}$	10.6$_{-2}$	9,612$_{-2}$	7,624$_{-2}$	8,033$_{-2}$	7,265$_{-2}$	33$_{-2}$	26$_{-2}$	27$_{-2}$	25$_{-2}$	BGR
4.1$_{-1}$	11.1$_{-1}$	...	...	...	10,817$_{-2}$	...	...	...	22$_{-2}$	CAN
4.1$_{-2}$	10.7$_{-2}$	...	7,506$_{-2}$	...	6,331$_{-2}$	...	20$_{-2}$	...	17$_{-2}$	HRV
4.8$_{-2}$	10.9$_{-2}$	8,949$_{-2}$	8,472$_{-2}$	12,924$_{-2}$	13,830$_{-2}$	18$_{-2}$	17$_{-2}$	27$_{-2}$	29$_{-2}$	CZE
5.3$_{-1}$	11.8$_{-1}$	10,732$_{-2}$	14,900$_{-2}$	15,579$_{-2}$	31,477$_{-2}$	15$_{-2}$	21$_{-2}$	22$_{-2}$	45$_{-2}$	DNK
5.3$_{-2}$	14.3$_{-2}$	...	9,496$_{-2}$	8,421$_{-2}$	13,019$_{-2}$	...	21$_{-2}$	19$_{-2}$	29$_{-2}$	EST
6.5$_{-2}$	10.2$_{-2}$	12,122$_{-2}$	12,062$_{-2}$	14,359$_{-2}$	15,862$_{-2}$	21$_{-2}$	21$_{-2}$	25$_{-2}$	27$_{-2}$	FIN
5.4$_{-2}$	8.9$_{-2}$	10,347$_{-2}$	10,195$_{-2}$	13,571$_{-2}$	14,569$_{-2}$	19$_{-2}$	19$_{-2}$	25$_{-2}$	27$_{-2}$	FRA
4.5$_{-1}$	9.2$_{-1}$	13,818$_{-2}$	12,633$_{-2}$	15,687$_{-2}$	20,695$_{-2}$	22$_{-2}$	20$_{-2}$	25$_{-2}$	33$_{-2}$	DEU
4.1$_{-2}$	7.1$_{-2}$	6,013$_{-4}$	7,233$_{-4}$	6,666$_{-4}$	3,269$_{-4}$	18$_{-4}$	22$_{-4}$	20$_{-4}$	10$_{-4}$	GRC
4.7$_{-2}$	10.4$_{-2}$	7,153$_{-2}$	7,260$_{-2}$	6,834$_{-2}$	17,104$_{-2}$	19$_{-2}$	19$_{-2}$	18$_{-2}$	44$_{-2}$	HUN
7.1$_{-1}$	14.9$_{-1}$	18,596$_{-2}$	16,629$_{-2}$	13,649$_{-2}$	14,661$_{-2}$	30$_{-2}$	27$_{-2}$	22$_{-2}$	24$_{-2}$	ISL
3.0$_{-2}$	12.0$_{-2}$	...	10,869$_{-2}$	12,122$_{-2}$	17,878$_{-2}$	...	10$_{-2}$	11$_{-2}$	16$_{-2}$	IRL
4.2$_{-2}$	7.4$_{-2}$	9,368$_{-2}$	12,732$_{-2}$	11,370$_{-2}$	11,911$_{-2}$	19$_{-2}$	26$_{-2}$	23$_{-2}$	24$_{-2}$	ITA
4.6$_{-2}$	12.7$_{-2}$	7,419$_{-2}$	6,966$_{-2}$	8,038$_{-2}$	6,196$_{-2}$	20$_{-2}$	19$_{-2}$	22$_{-2}$	17$_{-2}$	LVA
...	...	...	...	...	...	...	...	...	...	LIE
4.3$_{-2}$	12.7$_{-2}$	9,827$_{-2}$	8,115$_{-2}$	8,220$_{-2}$	8,572$_{-2}$	21$_{-2}$	17$_{-2}$	18$_{-2}$	18$_{-2}$	LTU
4.7$_{-1}$	10.7$_{-1}$	24,470$_{-2}$	24,268$_{-2}$	28,782$_{-2}$	53,195$_{-2}$	18$_{-2}$	18$_{-2}$	21$_{-2}$	39$_{-2}$	LUX
5.4$_{-2}$	12.7$_{-2}$	11,676$_{-2}$	11,514$_{-2}$	17,773$_{-2}$	20,927$_{-2}$	22$_{-2}$	22$_{-2}$	33$_{-2}$	39$_{-2}$	MLT
1.2$_{-1}$	7.7	...	...	...	...	6$_{-1}$	4$_{-1}$	8$_{-1}$	1$_{-1}$	MCO
...	...	...	...	...	...	...	...	...	...	MNE
5.1$_{-1}$	11.6$_{-1}$	9,008$_{-2}$	12,767$_{-2}$	16,046$_{-2}$	21,412$_{-2}$	13$_{-2}$	19$_{-2}$	24$_{-2}$	32$_{-2}$	NLD
...	...	...	...	...	...	...	...	...	...	MKD
4.0$_{-1}$	10.1$_{-1}$	17,210$_{-2}$	17,907$_{-2}$	21,052$_{-2}$	29,270$_{-2}$	19$_{-2}$	20$_{-2}$	24$_{-2}$	33$_{-2}$	NOR
4.7$_{-2}$	11.2$_{-2}$	8,087$_{-2}$	10,641$_{-2}$	7,979$_{-2}$	12,195$_{-2}$	20$_{-2}$	26$_{-2}$	20$_{-2}$	30$_{-2}$	POL
4.8$_{-2}$	9.7$_{-2}$	6,270$_{-2}$	9,794$_{-2}$	11,355$_{-2}$	8,297$_{-2}$	16$_{-2}$	25$_{-2}$	29$_{-2}$	21$_{-2}$	PRT
6.3	15.8$_{-1}$	4,838$_{-1}$	3,206$_{-1}$	3,299$_{-1}$	3,873$_{-1}$	32$_{-1}$	21$_{-1}$	22$_{-1}$	25$_{-1}$	MDA
3.3$_{-2}$	8.1$_{-2}$	5,009$_{-2}$	3,321$_{-2}$	7,013$_{-2}$	9,786$_{-2}$	13$_{-2}$	9$_{-2}$	18$_{-2}$	26$_{-2}$	ROU
4.1$_{-1}$	8.9$_{-3}$	...	...	...	6,872	...	...	...	19	RUS
3.4$_{-1}$	7.5$_{-1}$	15,337$_{-2}$	14,173$_{-2}$	13,876$_{-2}$	5,260$_{-2}$	23$_{-2}$	22$_{-2}$	21$_{-2}$	8$_{-2}$	SMR
3.2$_{-1}$	7.4$_{-1}$	...	...	...	5,681$_{-1}$	...	...	...	24$_{-1}$	SRB
4.8$_{-2}$	9.4$_{-2}$	6,979$_{-2}$	9,203$_{-2}$	8,910$_{-2}$	13,538$_{-2}$	18$_{-2}$	24$_{-2}$	24$_{-2}$	36$_{-2}$	SVK
5.4$_{-2}$	11.5$_{-2}$	8,990$_{-2}$	11,678$_{-2}$	11,290$_{-2}$	12,746$_{-2}$	19$_{-2}$	25$_{-2}$	24$_{-2}$	27$_{-2}$	SVN
4.3$_{-1}$	9.2$_{-1}$	7,944$_{-2}$	8,357$_{-2}$	9,446$_{-2}$	9,968$_{-2}$	18$_{-2}$	19$_{-2}$	22$_{-2}$	23$_{-2}$	ESP
7.6$_{-2}$	13.5$_{-2}$	15,086$_{-2}$	14,064$_{-2}$	14,295$_{-2}$	21,792$_{-2}$	24$_{-2}$	22$_{-2}$	23$_{-2}$	34$_{-2}$	SWE
4.9$_{-1}$	15.4$_{-1}$	16,869$_{-2}$	20,450$_{-2}$	18,814$_{-2}$	27,639$_{-2}$	21$_{-2}$	25$_{-2}$	23$_{-2}$	34$_{-2}$	CHE
5.9$_{-1}$	8.5$_{-1}$	6,669$_{-2}$	4,883$_{-2}$	4,663$_{-2}$	6,534$_{-2}$	37$_{-2}$	27$_{-2}$	26$_{-2}$	36$_{-2}$	UKR
5.0$_{-1}$	10.6$_{-1}$	4,531$_{-2}$	12,387$_{-2}$	12,129$_{-2}$	18,666$_{-2}$	9$_{-2}$	26$_{-2}$	25$_{-2}$	39$_{-2}$	GBR
5.4$_{-2}$	12.7$_{-3}$	9,169$_{-2}$	14,274$_{-2}$	15,044$_{-2}$	19,039$_{-2}$	14$_{-2}$	22$_{-2}$	23$_{-2}$	30$_{-2}$	USA

TABLE 2: SDG 4, Target 4.1 – Primary and secondary education

By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

	Participation/completion																	
	A						B			C		D	E	F	G	H	I	J
	Out-of-school (000,000)			Out-of-school rate (%)			Completion rate (%)			Over-age for grade (%)								
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	GER primary (%)	NERA primary (%)	GIR last primary (%)	Transition from primary to lower secondary (%)	NERT lower secondary (%)	GIR last lower secondary grade (%)	NERT upper secondary (%)
SDG indicator				4.1.4			4.1.2			4.1.5				4.1.3			4.1.3	
Reference year	2023																	
Region	Sum			Weighted average														
World	71	57	122	10	14	30	88	78	59	9_{i}	10_{i}	102_{i}	90_{i}	88_{i}	88	84_{i}	75_{i}	67_{i}
Sub-Saharan Africa	36	29	35	19	33	46	67	47	28	26_{-1i}	35_{-2i}	99_{i}	79_{-1i}	70_{i}	70	64_{-3i}	45_{-2i}	44_{-3i}
Northern Africa and Western Asia	7	3	6	11	10	21	89	71	59	7_{i}	10_{i}	95_{i}	88_{i}	89_{i}	79	87_{i}	75_{i}	71_{i}
Northern Africa	4	2	3	11	11	22	90	69	59	7_{i}	13_{i}	94	88_{-1i}	91_{-1i}	77	91_{-1i}	75_{-1i}	72_{-1i}
Western Asia	3	2	3	11	10	21	89	73	58	6_{i}	7_{i}	96_{i}	89_{i}	85_{i}	82	83_{i}	74_{i}	70_{i}
Central and Southern Asia	15	14	57	8	12	39	89	81	56	5	4	107	92	90	92	84	79	57
Central Asia	0.2	0.1	0.5	4	2	16	100	99	95	1_{i}	1_{-2i}	98_{i}	94_{i}	98_{-1i}	99	96_{i}	92_{-2i}	79_{-2i}
Southern Asia	15	14	57	8	13	40	88	81	55	5	4	108	92	89	92	83	78	56
Eastern and South-eastern Asia	8	7	16	5	8	19	98	90	72	5_{i}	9_{-4i}	102_{i}	96_{-1i}	98_{-1i}	92	94_{-1i}	91_{-1i}	87_{-1i}
Eastern Asia	5	4	6	5	6	11	99	94	87	...	...	99	97_{-1i}	95_{-1i}	95	96_{-1i}	100_{-1i}	94_{-1i}
South-eastern Asia	3	4	10	4	10	33	96	84	50	3_{-2i}	9_{-2i}	106_{-2i}	95_{-2i}	103_{-2i}	88	90_{-2i}	82_{-2i}	73_{-2i}
Oceania	0.3	0.2	1	8	9	29	87	72	61	15_{i}	13_{i}	103_{i}	99_{i}	92_{-4i}	83	88_{i}	69_{-4i}	76_{i}
Latin America and the Caribbean	2	2	5	4	7	19	93	84	64	6_{i}	10_{i}	105_{i}	96_{i}	95_{i}	90	93_{i}	74_{i}	80_{i}
Caribbean	0.4	0.2	1	9	10	25	78	73	52	6_{i}	9_{i}	...	...	...	93	...	...	...
Central America	1	1	3	6	15	35	95	81	54	4	5	...	...	...	85	...	...	...
South America	1	1	2	3	3	10	94	86	69	4	10	...	...	...	92	...	...	...
Europe and Northern America	2	1	2	2	2	5	100	98	89	2_{i}	3_{i}	99_{i}	97_{i}	97_{i}	98	98_{i}	92_{i}	90_{i}
Europe	1	0.5	1	2	1	6	100	97	87	1_{i}	2_{i}	100_{i}	97_{i}	97_{i}	98	98_{i}	92_{i}	88_{i}
Northern America	1	0.2	1	3	2	4	100	99	93	3_{i}	4_{i}	97_{i}	96_{i}	96_{i}	99	99_{i}	93_{i}	94_{i}
Low income	26	21	24	23	38	55	60	36	20	25_{-1i}	28_{-3i}	101_{i}	77_{-1i}	65_{i}	59	64_{-4i}	41_{-2i}	39_{-4i}
Middle income	43	35	96	8	12	30	91	82	61	7_{i}	9_{i}	102_{i}	92_{i}	91_{i}	89	86_{i}	78_{i}	67_{i}
Lower middle	33	28	81	10	15	38	88	77	52	10_{i}	10_{i}	103_{i}	89_{i}	87_{i}	87	80_{i}	69_{i}	56_{i}
Upper middle	10	7	15	5	6	14	97	90	76	4_{-2i}	8_{i}	101_{i}	96_{-1i}	96_{-1i}	92	94_{i}	89_{-1i}	86_{-1i}
High income	2	1	3	2	2	5	100	98	89	2_{i}	3_{i}	99_{i}	97_{i}	98_{i}	98	99_{i}	94_{i}	92_{i}

A Out-of-school children, total number and out-of-school rate as percentage of the corresponding age group - model data [*Source:* UIS and GEM Report analysis of administrative data and household surveys available at https://education-estimates.org/].

B Education completion rate by level - model data [*Source:* UIS and GEM Report analysis of administrative data and household surveys available at https://education-estimates.org/].

C Percentage of pupils who are at least two years over-age for their current grade, by level.

D Gross enrolment ratio (GER) in primary education.

E Primary adjusted net enrolment rate (NERA) (%).

F Gross intake ratio (GIR) to last grade of primary education (%).

G Effective transition rate from primary to lower secondary general education (%).

H Lower secondary total net enrolment rate (NERT) (%).

I Gross intake ratio (GIR) to last grade of lower secondary education (%).

J Upper secondary total net enrolment rate (NERT) (%).

K Administration of nationally representative learning assesssment in early grades (grade 2 or 3), or final grade of primary or lower secondary.

L Percentage of students achieving at least a minimum proficiency level in reading and mathematics.

Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.

Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.

(-) Magnitude nil or negligible.

(...) Data not available or category not applicable.

(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).

(i) Estimate and/or partial coverage.

	Learning									
	K Administration of nationally representative learning assessment						L Achieving minimum proficiency (%)			
	Early grades		End of primary		End of lower secondary		End of primary		End of lower secondary	
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics
	4.1.6									
	2023									
	% of countries						Weighted average			
	57	56	67	68	52	54	58 [-2i]	44 [-2i]	64 [-2i]	51 [-2i]
	71	71	54	54	17	19	30 [-4i]	11 [-4i]	...	...
	21	17	62	67	50	71	...	32 [-4i]	63 [-4i]	31 [-4i]
	-	-	50	33	17	33	...	...	...	...
	28	22	67	78	61	83	...	...	...	...
	79	64	43	50	43	57	...	...	...	...
	80	40	40	40	40	40	...	...	...	...
	78	78	44	56	44	67	...	...	...	...
	50	50	72	78	78	78	...	...	55 [-4i]	47 [-4i]
	43	43	43	57	86	86	...	...	...	...
	55	55	91	91	73	73	...	...	...	...
	100	100	100	100	47	47	...	64 [-4i]	81 [-4i]	76 [-4i]
	57	55	57	57	40	40	43 [-4i]	36 [-4i]	52 [-4i]	36 [-4i]
	30	30	35	35	13	13	...	...	...	...
	100	100	100	100	86	86	...	...	...	...
	83	75	75	75	67	67	...	...	...	...
	50	50	83	85	87	89	97 [-4i]	77 [-4i]	81 [-4i]	75 [-4i]
	51	51	84	86	88	91	...	...	...	...
	33	33	67	67	67	67	...	...	...	...
	62	62	42	42	19	19	17 [-4i]	10 [-4i]	...	...
	64	62	66	69	47	52	...	...	...	...
	76	73	63	63	31	39	54 [-4i]	...	...	39 [-4i]
	53	53	70	75	62	64	52 [-4i]	46 [-4i]	56 [-4i]	44 [-4i]
	49	48	77	78	70	75	93 [-4i]	72 [-4i]	81 [-4i]	71 [-4i]

TABLE 2: Continued

Country or territory	Participation/completion																		
	A						B			C		D	E	F	G	H	I	J	
	Out-of-school (000,000)			Out-of-school rate (%)			Completion rate (%)			Over-age for grade (%)		GER primary (%)	NERA primary (%)	GIR last primary (%)	Transition from primary to lower secondary (%)	NERT lower secondary (%)	GIR last lower secondary grade (%)	NERT upper secondary (%)	
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary								
SDG indicator				4.1.4			4.1.2			4.1.5				4.1.3			4.1.3		
Reference year	2023																		
Sub-Saharan Africa																			
Angola	1,531	1,012	1,345	24	36	54	62	38	19	...	...	87_{-1}	...	61_{-1}	62	...	44_{-2}	...	
Benin	278	464	538	13	38	64	69	40	20	12_{-1}	25_{-1}	113_{-1}	95_{-1}	65_{-1}	57	55_{-1}	29_{-1}	33_{-1}	
Botswana	40	20	25	11	13	26	98	96	63	11_{-1}	19_{-1}	97_{-1}	90_{-1}	91_{-1}	97	85_{-1}	88_{-1}	71_{-1}	
Burkina Faso	1,369	1,068	955	36	47	63	68	41	15	26	52	72	58	52	60	45	28	24	
Burundi	157	299	504	7	32	61	57	31	9	29_{-3}	50_{-3}	105_{-3}	82_{-3}	49_{-3}	55	67_{-3}	29_{-3}	38_{-3}	
Cabo Verde	5	4	7	9	13	23	...	...	...	7_{-2}	29_{-2}	96_{-2}	89_{-2i}	88_{-2}	...	83_{-2i}	90_{-2}	74_{-2i}	
Cameroon	395	1,299	1,253	9	47	67	78	47	21	13	21	113	96	71	61	52	35	35	
Central African Republic	365	267	251	44	50	66	32	17	9	...	...	...	...	...	54	...	...	...	
Chad	722	1,024	882	23	57	72	34	18	6	28	35	92	76	44_{-2}	54	43	19_{-2}	27	
Comoros	25	19	19	18	22	34	84	61	34	23	43	95	78	...	73	67	50_{-2}	42	
Congo	119	183	228	13	32	59	90	60	31	12	21	89	84	72	66	...	...	...	
Côte d'Ivoire	973	844	757	22	32	41	76	40	16	9	23	102	96	80	53	72	80	52	
D. R. Congo	2,966	680	2,428	17	14	27	60	49	22	16_{-3}	...	120	...	77	82	...	57_{-3}	...	
Djibouti	33	31	28	33	42	53	88	64	33	5	16	...	...	...	73	...	...	...	
Equat. Guinea	109	70	42	52	57	72	72	32	8	...	...	51_{-4}	...	...	44	...	...	...	
Eritrea	213	126	196	45	44	51	...	...	...	56_{-1}	76_{-1}	83_{-1}	55_{-1}	57_{-1}	...	58_{-1}	49_{-1}	52_{-1}	
Eswatini	15	11	13	8	13	24	...	81	55	39_{-4}	66_{-4}	114	90_{-4}	90	101	...	75_{-4}	...	
Ethiopia	3,093	4,685	3,398	17	42	64	61	30	15	16	22	84	77	56	49	49	22	31	
Gabon	14	6	7	5	3	6	74	46	22	35_{-4}	64_{-4}	100_{-2}	72_{-4}	82_{-2}	62	64_{-4}	52_{-2}	53_{-4}	
Gambia	67	31	53	16	17	31	72	56	32	29_{-2}	39_{-2}	94	77_{-2}	76	77	75_{-2}	54_{-2}	51_{-2}	
Ghana	462	271	909	10	12	34	78	64	44	32_{-2}	42_{-3}	97_{-1}	89_{-2}	92_{-1}	82	91_{-2}	74_{-4}	66_{-2}	
Guinea	427	619	606	19	46	64	59	41	24	14_{-2}	27_{-2}	98_{-2}	82_{-2}	63_{-2}	69	47_{-2}	35_{-2}	27_{-2}	
Guinea-Bissau	125	56	70	37	37	50	27	14	11	...	...	...	...	...	54	...	...	...	
Kenya	1,176	309	943	14	11	18	86	61	37	...	...	79_{-4}	...	...	70	...	...	...	
Lesotho	31	19	36	10	15	43	83	38	24	26	36	86	73	71	46	71	42	42	
Liberia	212	90	89	26	23	24	29	22	14	60_{-1}	66_{-1}	67_{-1}	62_{-1}	58_{-1}	74	56_{-1}	45_{-1}	54_{-1}	
Madagascar	691	1,030	1,295	18	37	66	53	28	14	28_{+1}	32_{+1}	138_{+1}	97_{-3}	63_{+1}	54	63_{+1}	32_{+1}	32_{+1}	
Malawi	429	509	549	13	24	56	50	27	15	32	...	135	98_{-1}	68	53	70	22_{-1}	21	
Mali	1,048	946	1,133	28	56	75	57	28	12	1	9	74	67	50	50	...	29	...	
Mauritania	251	138	159	33	31	52	51	41	22	39_{-4}	42_{-4}	112	69_{-4}	66_{-4}	80	67_{-4}	44_{-4}	38_{-4}	
Mauritius	0.2	1	9	0.3	2	14	100	93	59	10	35	111_{i}	98_{i}	90_{i}	93	91_{-3i}	121_{i}	75_{-3i}	
Mozambique	341	758	992	5	31	64	52	14	5	37_{-3}	55_{-3}	120	99_{-1}	58	28	59_{-1}	32	42_{-1}	
Namibia	5	2	7	1	1	7	85	55	36	22_{-1}	43_{-1}	134_{-1}	...	...	64	100_{-3}	...	88_{-1}	
Niger	2,085	1,903	1,464	43	72	85	73	34	5	3	16	69_{i}	62_{i}	48_{i}	47	28_{i}	15_{i}	12_{i}	
Nigeria	8,576	4,055	5,541	23	25	37	81	73	64	...	...	87_{-2}	...	...	90	...	...	...	
Rwanda	96	122	352	5	13	40	67	33	21	62	82	152_{i}	100_{i}	59_{i}	49	95_{i}	32_{i}	62_{i}	
Sao Tome and Principe	2	1	2	5	5	14	90	87	53	10_{-2}	33_{-2}	106_{-2}	94_{-2}	88_{-4}	97	93_{-2}	66_{-4}	73_{-2}	
Senegal	843	563	617	28	32	53	55	32	11	7	14	83	73	61	59	35	39	18	
Seychelles	-	-	1	-	0.2	11	...	...	...	1	1	97_{i}	97_{i}	94_{i}	...	98_{i}	93_{i}	82_{i}	
Sierra Leone	160	104	292	12	17	38	67	45	14	...	...	153	97_{-2}	97	67	88	55_{-2}	70	
Somalia	...	...	...	...	...	...	28	22	9	...	...	21	...	...	81	...	...	...	
South Africa	1,056	170	631	13	8	20	98	90	51	6_{-1}	13_{-1}	96_{-1}	88_{-1}	92_{-1}	91	99_{-1}	89_{-1}	91_{-2}	
South Sudan	1,084	285	569	58	50	53	...	13	2	...	...	82_{-2}	...	...	168	...	...	...	
Togo	44	197	313	3	23	54	85	46	21	10	20	120	99	91	55	75	58	46	
Uganda	1,516	1,648	1,704	15	33	75	35	28	17	...	...	...	...	...	79	...	...	...	
United Republic of Tanzania	1,852	2,427	2,144	15	40	79	75	33	11	9	16	93	84	86	43	49	35	15	
Zambia	409	188	681	11	19	49	69	47	29	...	...	95_{-3}	...	...	68	...	...	...	
Zimbabwe	130	94	597	4	12	42	87	74	8	22_{-1}	25_{-1}	96_{-1}	94_{-1}	86_{-1}	85	85_{-1}	72_{-2}	52_{-1}	

	Learning										
	K Administration of nationally representative learning assessment						L Achieving minimum proficiency (%)				
	Early grades		End of primary		End of lower secondary		End of primary		End of lower secondary		Country code
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	
	4.1.6										
	2023										
	No	No	No	No	No	No	...	...	...	...	AGO
	Yes	Yes	Yes	Yes	No	No	46$_{-4}$	19$_{-4}$	...	...	BEN
	No	No	No	No	No	No	...	...	...	...	BWA
	Yes	Yes	Yes	Yes	Yes	Yes	33$_{-4}$	25$_{-4}$	...	...	BFA
	Yes	Yes	Yes	Yes	No	No	4$_{-4}$	18$_{-4}$	...	...	BDI
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	CPV
	Yes	Yes	Yes	Yes	No	No	30$_{-4}$	11$_{-4}$	...	...	CMR
	No	No	No	No	No	No	...	...	...	...	CAF
	Yes	Yes	Yes	Yes	No	No	8$_{-4}$	2$_{-4}$	...	...	TCD
	Yes	Yes	No	No	No	No	...	...	...	...	COM
	Yes	Yes	Yes	Yes	No	No	34$_{-4}$	8$_{-4}$	...	...	COG
	Yes	Yes	Yes	Yes	No	Yes	22$_{-4}$	3$_{-4}$	...	...	CIV
	Yes	Yes	Yes	Yes	No	No	9$_{-4}$	3$_{-4}$	...	...	COD
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	DJI
	No	No	No	No	No	No	...	...	...	...	GNQ
	No	No	No	No	No	No	...	...	...	...	ERI
	Yes	Yes	No	No	No	No	...	...	...	...	SWZ
	Yes	Yes	No	No	Yes	Yes	...	...	...	...	ETH
	Yes	Yes	Yes	Yes	No	No	76$_{-4}$	23$_{-4}$	...	...	GAB
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	GMB
	Yes	Yes	No	No	No	No	...	...	...	...	GHA
	Yes	Yes	Yes	Yes	No	No	22$_{-4}$	7$_{-4}$	...	...	GIN
	No	No	No	No	No	No	...	...	...	...	GNB
	Yes	Yes	Yes	Yes	Yes	Yes	26	37	...	...	KEN
	No	No	Yes	Yes	No	No	11	20	...	...	LSO
	Yes	Yes	No	No	No	No	...	...	...	...	LBR
	Yes	Yes	Yes	Yes	No	No	6$_{-4}$	6$_{-4}$	...	...	MDG
	Yes	Yes	No	No	No	No	...	...	...	...	MWI
	No	No	No	No	No	No	...	...	...	...	MLI
	No	No	No	No	No	No	...	...	...	...	MRT
	No	No	No	No	Yes	Yes	...	...	...	...	MUS
	Yes	Yes	No	No	No	No	...	...	...	...	MOZ
	No	No	Yes	Yes	No	No	...	...	...	...	NAM
	Yes	Yes	Yes	Yes	No	No	14$_{-4}$	8$_{-4}$	...	...	NER
	Yes	Yes	No	No	No	No	...	...	...	...	NGA
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	RWA
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	STP
	Yes	Yes	Yes	Yes	No	No	41$_{-4}$	27$_{-4}$	...	...	SEN
	No	No	No	No	No	No	...	...	...	...	SYC
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	SLE
	No	No	No	No	No	No	...	...	...	...	SOM
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	ZAF
	No	No	No	No	No	No	...	...	...	...	SSD
	Yes	Yes	Yes	Yes	No	No	19$_{-4}$	16$_{-4}$	...	...	TGO
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	UGA
	Yes	Yes	No	No	No	No	...	...	...	...	TZA
	Yes	Yes	Yes	Yes	No	No	10	16	...	...	ZMB
	Yes	Yes	No	No	No	No	...	...	...	...	ZWE

TABLE 2: Continued

Country or territory	Participation/completion																	
	A						B			C		D	E	F	G	H	I	J
	Out-of-school (000,000)			Out-of-school rate (%)			Completion rate (%)			Over-age for grade (%)								
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	GER primary (%)	NERA primary (%)	GIR last primary (%)	Transition from primary to lower secondary (%)	NERT lower secondary (%)	GIR last lower secondary grade (%)	NERT upper secondary (%)
SDG indicator				4.1.4			4.1.2			4.1.5				4.1.3			4.1.3	
Reference year	2023																	
Northern Africa and Western Asia																		
Algeria	49	155	389	1	5	18	96	71	48	5	18	109	99	100	74	97	84	87
Armenia	13	23	17	8	11	15	99	98	90	1	1	94	92	93	98	98	101	96
Azerbaijan	62	40	2	9	5	0.5	98	94	...	2	4	102_{i}	98_{i}	96_{i}	96	91_{i}	88_{i}	84_{i}
Bahrain	19	3	5	14	5	10	...	...	...	1	1	94	93	89	...	96	96	96
Cyprus	-	0.1	1	0.1	0.2	2	99	94	93	0.4_{-1}	1_{-1}	97_{-1i}	99_{-1i}	99_{-1i}	95	100_{-1i}	104_{-1i}	99_{-1i}
Egypt	233	63	447	2	1	8	96	87	87	1_{-2}	2_{-2}	90	100_{-2}	97_{-2}	91	95_{-2}	86_{-2}	72_{-2}
Georgia	0.2	0.1	0.4	0.1	-	0.3	100	99	93	1	1	103	98	107	99	99_{-1}	95	99
Iraq	757	287	731	12	10	28	78	49	...	...	...	...	...	...	62	...	...	...
Israel	-	-	-	-	-	-	100	99	95	0.4_{-1}	1_{-1}	96_{-1i}	96_{-1i}	95_{-1i}	99	97_{-1i}	94_{-1i}	96_{-1i}
Jordan	209	167	153	16	19	36	99	92	60	1	2	98_{i}	97_{i}	97_{i}	94	95_{i}	93_{i}	83_{i}
Kuwait	...	...	...	...	...	...	...	...	...	1_{-2}	3_{-2}	...	...	...	...	...	90_{-2}	...
Lebanon	147	85	158	23	28	53	...	...	...	9	9	80	76	68	...	68	54	47
Libya	278	155	186	35	40	51	...	...	...	...	...	...	...	...	...	...	...	...
Morocco	70	77	367	2	4	20	82	46	26	10	25	114	99	105	56	98	74	79
Oman	3	36	36	1	8	30	...	...	...	0.2	2	96	96	94	...	92	95	77
Qatar	2	5	24	1	7	30	99	97	86	1	3	95_{-1i}	92_{-1i}	95_{-1i}	98	95_{-1i}	95_{-1i}	87_{-1i}
Saudi Arabia	427	165	212	12	10	14	...	...	...	4_{-2}	6_{-2}	103_{-1i}	98_{-1i}	120_{-1i}	...	99_{-1i}	116_{-1i}	99_{-1i}
State of Palestine (the)	43	41	77	8	6	22	100	98	83	0.3	1	92	91	91	98	94	90	75
Sudan	2,852	1,217	1,497	40	37	48	76	41	33	...	...	...	...	...	54	...	...	...
Syrian Arab Republic	277	232	620	11	21	58	98	51	36	1	3	80	76	62	52	48	42	27
Tunisia	35	29	115	3	5	18	96	92	58	6	17	104	98	97_{-2}	96	...	80_{-2}	...
Türkiye	86	25	141	2	0.5	3	98	97	70	2_{-1}	3_{-1}	102_{-1i}	100_{-1i}	102_{-1i}	99	100_{-1i}	92_{-1i}	94_{-1i}
United Arab Emirates	4	3	11	1	1	3	...	...	...	-	-	106_{i}	100_{i}	99_{i}	...	100_{i}	104_{i}	100_{i}
Yemen	1,020	600	1,025	21	27	50	73	57	38	...	...	...	...	...	78	...	...	...
Central and Southern Asia																		
Afghanistan	3,427	2,111	2,357	53	67	79	71	54	37	...	14_{-4}	110_{-4}	...	86_{-4}	76	...	60_{-4}	...
Bangladesh	691	271	3,118	5	3	26	88	71	35	5	4	112	95	108	81	84	78	80
Bhutan	3	5	5	4	9	19	91	86	73	20_{-1}	42_{-1}	106_{-1}	95_{-1}	78_{-1}	94	87_{-1}	62_{-1}	78_{-1}
India	4,625	8,455	42,210	4	12	42	96	89	63	2	3	112	99	93	93	85	85	57
Iran, Islamic Republic of	61	24	457	1	1	9	96	91	73	2_{-3}	2_{-3}	104_{-3}	98_{-3}	98_{-3}	94	95_{-3}	89_{-3}	81_{-3}
Kazakhstan	3	3	4	0.2	0.1	1	100	100	99	1_{+1}	2_{+1}	100_{+1}	96_{+1}	95_{+1}	100	98_{+1}	95_{+1}	100_{+1}
Kyrgyzstan	11	11	33	2	2	15	99	98	97	0.3_{+1}	0.4_{+1}	97_{+1}	96_{+1}	95_{+1}	99	93_{+1}	99_{+1}	64_{+1}
Maldives	1	3	5	3	12	37	99	97	38	0.4	1	98	90	98	98	99	100	66
Nepal	217	93	781	8	6	34	88	79	49	21_{+1}	25_{+1}	120_{+1}	96_{+1}	109_{+1}	90	94_{+1}	101_{+1}	80_{+1}
Pakistan	5,437	2,825	7,621	20	19	41	56	50	26	65_{-1}	67_{-1}	83_{-1}	75_{-1}	68_{-1}	89	72_{-1}	48_{-1}	52_{-1}
Sri Lanka	6	8	96	0.3	1	7	...	...	...	0.4_{-1}	1_{-1}	96_{-1}	99_{-1}	96_{-1}	...	96_{-1}	96_{-1}	79_{-1}
Tajikistan	151	68	45	15	6	13	99	98	78	...	...	100_{+1}	...	...	99	...	...	...
Turkmenistan	8	19	49	1	3	25	100	100	95	...	...	110_{-1}	99_{-1}	108_{-1}	100	99_{-1}	...	83_{-1}
Uzbekistan	12	25	343	0.4	1	21	100	98	...	$-_{+1}$	0.1_{+1}	95_{+1}	99_{+1}	98_{+1}	99	99_{+1}	101_{+1}	78_{+1}

	Learning										
	K Administration of nationally representative learning assessment						L Achieving minimum proficiency (%)				
	Early grades		End of primary		End of lower secondary		End of primary		End of lower secondary		
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Country code
	4.1.6										
	2023										
	No	No	Yes	Yes	No	No	...	...	...	...	DZA
	No	No	No	Yes	Yes	Yes	...	64$_{-4}$	...	...	ARM
	No	No	Yes	Yes	Yes	Yes	67$_{-2}$	72$_{-4}$	31$_{-1}$	38$_{-1}$	AZE
	No	No	Yes	Yes	No	Yes	71$_{-2}$	54$_{-4}$	...	55$_{-4}$	BHR
	No	No	Yes	Yes	Yes	Yes	92$_{-2}$	77$_{-4}$	39$_{-1}$	47$_{-1}$	CYP
	No	No	Yes	No	No	Yes	45$_{-2}$	...	...	27$_{-4}$	EGY
	No	No	Yes	Yes	Yes	Yes	87$_{-2}$	56$_{-4}$	33$_{-1}$	34$_{-1}$	GEO
	No	No	No	Yes	No	No	...	...	...	...	IRQ
	No	No	Yes	No	Yes	Yes	88$_{-2}$	...	70$_{-1}$	63$_{-1}$	ISR
	Yes	Yes	Yes	Yes	Yes	Yes	47$_{-2}$	...	20$_{-1}$	17$_{-1}$	JOR
	No	No	No	Yes	No	Yes	...	21$_{-4}$	...	21$_{-4}$	KWT
	Yes	Yes	Yes	Yes	No	Yes	...	...	...	27$_{-4}$	LBN
	No	No	No	No	No	No	...	...	...	...	LBY
	No	No	Yes	Yes	Yes	Yes	41$_{-2}$	18$_{-4}$	19$_{-1}$	18$_{-1}$	MAR
	No	No	Yes	Yes	No	Yes	62$_{-2}$	33$_{-4}$	...	27$_{-4}$	OMN
	Yes	Yes	Yes	Yes	Yes	Yes	80$_{-2}$	40$_{-4}$	53$_{-1}$	44$_{-1}$	PSE
	Yes	No	Yes	Yes	Yes	Yes	71$_{-2}$	23$_{-4}$	37$_{-1}$	30$_{-1}$	QAT
	Yes	Yes	No	No	Yes	Yes	...	...	23$_{-1}$	20$_{-1}$	SAU
	No	No	No	No	No	No	...	...	...	...	SDN
	No	No	No	No	No	No	...	...	...	...	SYR
	No	No	No	No	No	No	...	...	...	...	TUN
	No	No	Yes	Yes	Yes	Yes	86$_{-2}$	70$_{-4}$	71$_{-1}$	61$_{-1}$	TUR
	No	No	Yes	Yes	Yes	Yes	75$_{-2}$	53$_{-4}$	52$_{-1}$	51$_{-1}$	ARE
	No	No	No	No	No	No	...	...	...	...	YEM
	Yes	Yes	No	No	No	No	...	...	...	...	AFG
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	BGD
	Yes	Yes	No	No	No	No	...	...	...	...	BTN
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	IND
	No	No	Yes	Yes	No	Yes	59$_{-2}$	39$_{-4}$	...	37$_{-4}$	IRN
	No	No	Yes	Yes	Yes	Yes	91$_{-2}$	71$_{-4}$	36$_{-1}$	50$_{-1}$	KAZ
	Yes	No	No	No	No	No	...	...	...	...	KGZ
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	MDV
	Yes	Yes	No	No	Yes	Yes	...	...	...	...	NPL
	Yes	Yes	No	Yes	Yes	Yes	...	8$_{-4}$	...	...	PAK
	No	No	No	No	No	Yes	...	...	...	...	LKA
	Yes	No	No	No	No	No	...	...	...	...	TJK
	Yes	Yes	No	No	No	No	...	...	...	...	TKM
	Yes	Yes	Yes	Yes	Yes	Yes	70$_{-2}$	...	14$_{-1}$	19$_{-1}$	UZB

TABLE 2: Continued

Country or territory	Participation/completion																	
	A						B			C		D	E	F	G	H	I	J
	Out-of-school (000,000)			Out-of-school rate (%)			Completion rate (%)			Over-age for grade (%)								
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	GER primary (%)	NERA primary (%)	GIR last primary (%)	Transition from primary to lower secondary (%)	NERT lower secondary (%)	GIR last lower secondary grade (%)	NERT upper secondary (%)
SDG indicator				4.1.4			4.1.2			4.1.5				4.1.3			4.1.3	
Reference year	2023																	
Eastern and South-eastern Asia																		
Brunei Darussalam	-	-	6	-	0.1	20	...	...	...	1	2	93	96	96	...	97	94	73
Cambodia	530	315	463	25	31	49	81	57	24	20	26	111	96	90	71	89	62	53
China	5,195	3,573	5,846	5	7	12	99	94	87	...	...	99	...	...	95	...	...	...
DPR Korea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hong Kong, China	39	7	14	10	4	8	...	...	...	1_{-1}	5	101_{-1i}	99_{-1i}	86	...	99_{-1i}	112_{-3i}	76
Indonesia	796	1,299	5,778	3	9	42	99	90	41	-	2	100	99	102	91	96	99	77
Japan	10	10	22	0.2	0.3	1	100	...	...	...	...	102_{-1i}	100_{-1i}	...	...	100_{-1i}	...	98_{-1i}
Lao PDR	52	184	221	7	30	49	68	50	31	5_{+1}	8_{+1}	96_{+1}	91_{+1}	89_{+1}	74	65_{+1}	51_{+1}	36_{+1}
Macao, China	4	1	1	9	8	7	...	...	...	1	6	86_{i}	86_{i}	90_{i}	...	90_{i}	93_{i}	86_{i}
Malaysia	26	58	776	1	4	39	100	98	61	$-_{-2}$	$-_{-2}$	99	98	99	99	91	88	67
Mongolia	10	14	46	3	6	29	100	99	92	0.3	1	96	95	95	100	96	95	96
Myanmar	425	517	405	10	14	21	87	56	23	...	...	...	...	...	64	...	...	...
Philippines	691	755	832	5	9	19	96	81	72	8	10	93	90	81	85	91	93	80
Republic of Korea	19	18	69	1	1	5	100	100	99	0.1_{-1}	0.2_{-1}	99_{-1i}	99_{-1i}	96_{-1i}	100	100_{-1i}	99_{-1i}	96_{-1i}
Singapore	6	3	3	2	3	3	...	...	...	0.3_{-1}	1_{-1}	100_{-1i}	99_{-1i}	100_{-1i}	...	100_{-1i}	101_{-1i}	98_{-1i}
Thailand	64	135	322	1	6	13	100	90	68	2_{+1}	2_{+1}	100_{+1}	98_{+1}	96_{+1}	91	95_{+1}	135_{+1}	78_{+1}
Timor-Leste	14	6	16	7	6	17	80	65	55	18	29_{-3}	123	95_{-3}	91	82	87_{-3}	89_{-3}	74_{-3}
Viet Nam	89	280	1,059	1	5	25	98	90	53	1	1	122	98_{-2}	116_{-1}	92	99	101	70
Oceania																		
Australia	14	20	38	1	1	6	100	99	88	0.1_{-1}	0.4_{-1}	99_{-1i}	100_{-1i}	...	99	98_{-1i}	...	94_{-1i}
Cook Islands	...	...	...	...	...	...	...	...	...	0.4	0.2	96	99	118	...	...	128	85
Fiji	0.4	1	7	0.4	1	15	99	95	93	1	2	108	98	112	96	98	93	77
Kiribati	1	1	2	4	15	24	94	80	20	2	10	93	88	103	86	90	98	89
Marshall Islands	...	...	...	...	...	...	...	...	...	7_{-1}	11_{-1}	105_{-1}	98_{-1}	95_{-1}	...	...	49_{-1}	...
Micronesia, F. S.	2	1	3	16	19	31	...	...	...	10_{-1}	14_{-1}	92_{-1}	84_{-1}	87_{-1}	...	83_{-1}	76_{-1}	62_{-1}
Nauru	...	...	...	...	...	...	...	...	...	2	0.3	101	96	111	...	90	80	69
New Zealand	0.3	1	4	0.1	0.2	2	...	...	...	0.2_{-1}	0.1_{-1}	97_{-1i}	97_{-1i}	...	...	98_{-1i}	...	93_{-1i}
Niue	...	...	...	...	...	...	...	...	...	-	-	87	87	74	...	92	103_{-1}	83
Palau	...	...	...	...	...	...	...	...	...	9	12	96	87	91	...	94	95	83
Papua New Guinea	305	166	441	21	41	57	65	30	15	...	...	...	...	...	46	...	...	...
Samoa	1	0.2	3	2	2	13	98	97	59	11	10	102	97	101	99	99	94	77
Solomon Is	8	3	16	7	6	27	...	...	...	77	84	85	71	72	...	82	61	69
Tokelau	...	...	...	...	...	...	...	...	...	-	-	79	82	79_{-2}	...	61	...	20
Tonga	0.2	1	1	2	7	27	99	87	86	1	1	103	99	95	89	99	96	67
Tuvalu	...	...	...	...	...	...	98	80	55	-	0.1	102	99	92	81	87	80	53
Vanuatu	1	7	12	2	24	56	80	45	11	35	63	107	91	107	56	76	58	84

	Learning										
	K Administration of nationally representative learning assessment						L Achieving minimum proficiency (%)				
	Early grades		End of primary		End of lower secondary		End of primary		End of lower secondary		
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Country code
	4.1.6										
	2023										
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	58$_{-1}$	58$_{-1}$	BRN
	No	No	Yes	Yes	Yes	Yes	11$_{-4}$	18$_{-4}$	8$_{-1}$	12$_{-1}$	KHM
	Yes	Yes	No	No	Yes	Yes	...	...	...	...	CHN
	No	No	No	No	No	No	...	...	...	...	PRK
	Yes	Yes	Yes	Yes	Yes	Yes	98$_{-2}$	96$_{-4}$	83$_{-1}$	86$_{-1}$	HKG
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	25$_{-1}$	18$_{-1}$	IDN
	No	No	Yes	Yes	Yes	Yes	...	...	86$_{-1}$	88$_{-1}$	JPN
	Yes	Yes	Yes	Yes	No	No	2$_{-4}$	8$_{-4}$	...	...	LAO
	No	No	Yes	Yes	Yes	Yes	96$_{-2}$	...	87$_{-1}$	92$_{-1}$	MAC
	No	No	Yes	Yes	Yes	Yes	58$_{-4}$	64$_{-4}$	42$_{-1}$	41$_{-1}$	MYS
	Yes	Yes	No	No	Yes	Yes	...	...	36$_{-1}$	49$_{-1}$	MNG
	No	No	Yes	Yes	No	No	11$_{-4}$	12$_{-4}$	...	...	MMR
	Yes	Yes	Yes	Yes	Yes	Yes	10$_{-4}$	17$_{-4}$	24$_{-1}$	16$_{-1}$	PHL
	No	No	No	Yes	Yes	Yes	...	95$_{-4}$	85$_{-1}$	84$_{-1}$	KOR
	No	No	Yes	Yes	Yes	Yes	97$_{-2}$	96$_{-4}$	89$_{-1}$	92$_{-1}$	SGP
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	35$_{-1}$	32$_{-1}$	THA
	No	No	No	No	No	No	...	...	...	...	TLS
	Yes	Yes	Yes	Yes	Yes	Yes	82$_{-4}$	91$_{-4}$	77$_{-1}$	72$_{-1}$	VNM
	Yes	Yes	Yes	Yes	Yes	Yes	...	68$_{-4}$	79$_{-1}$	74$_{-1}$	AUS
	Yes	Yes	Yes	Yes	No	No	75$_{-2}$	63$_{-2}$	...	...	COK
	Yes	Yes	Yes	Yes	No	No	60$_{-2}$	66$_{-2}$	...	...	FJI
	Yes	Yes	Yes	Yes	Yes	Yes	14$_{-2}$	53$_{-2}$	...	...	KIR
	Yes	Yes	Yes	Yes	Yes	Yes	40$_{-2}$	38$_{-2}$	...	...	MHL
	Yes	Yes	Yes	Yes	No	No	39$_{-2}$	45$_{-2}$	...	...	FSM
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	NRU
	Yes	Yes	Yes	Yes	Yes	Yes	90$_{-2}$	56$_{-4}$	79$_{-1}$	71$_{-1}$	NZL
	Yes	Yes	Yes	Yes	No	No	81$_{-2}$	82$_{-2}$	...	...	NIU
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	92$_{-2}$	...	...	PLW
	Yes	Yes	Yes	Yes	No	No	48$_{-2}$	55$_{-2}$	...	...	PNG
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	WSM
	Yes	Yes	Yes	Yes	No	No	53$_{-2}$	86$_{-2}$	...	...	SLB
	Yes	Yes	Yes	Yes	No	No	72$_{-2}$	67$_{-2}$	...	...	TKL
	Yes	Yes	Yes	Yes	No	No	20$_{-2}$	75$_{-2}$	...	...	TON
	Yes	Yes	Yes	Yes	No	No	32$_{-2}$	55$_{-2}$	...	...	TUV
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	VUT

TABLE 2: Continued

Country or territory	Participation/completion																	
	A						B			C		D	E	F	G	H	I	J
	Out-of-school (000,000)			Out-of-school rate (%)			Completion rate (%)			Over-age for grade (%)								
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	GER primary (%)	NERA primary (%)	GIR last primary (%)	Transition from primary to lower secondary (%)	NERT lower secondary (%)	GIR last lower secondary grade (%)	NERT upper secondary (%)
SDG indicator				4.1.4			4.1.2			4.1.5				4.1.3			4.1.3	
Reference year	2023																	
Latin America and the Caribbean																		
Anguilla	...	...	...	...	...	...	...	...	...	1_{-4}	1_{-4}	99_{-1}	96_{-1}	95_{-4}	...	97_{-1}	...	...
Antigua and Barbuda	0.2	0.1	0.4	2	3	16	...	...	...	2_{-4}	...	112_{-4}	100_{-4}	105_{-4}	...	100_{-4}	113_{-4}	95_{-4}
Argentina	16	22	129	0.4	1	6	97	76	66	2_{-1}	7_{-1}	109_{-1}	99_{-1}	103_{-1}	78	99_{-1}	99_{-1}	95_{-1}
Aruba	-	-	-	0.1	0.3	1	...	...	...	...	...	105_{-1i}	...	95_{-1i}	...	...	110_{-1i}	...
Bahamas	10	3	6	32	20	30	...	...	...	18_{-2}	...	78	71	...	...	87	...	70
Barbados	2	0.2	0.1	11	2	1	99	99	95	0.4	2	93	91	97	100	100	96	92
Belize	6	2	4	12	8	27	85	42	17	16	25	97	88	94	50	93	68	73
Bolivia, P. S.	54	29	166	4	6	18	98	93	75	3	6	99_{i}	96_{i}	96_{i}	94	93_{i}	88_{i}	81_{i}
Brazil	409	291	819	3	2	9	92	88	71	4_{-1}	11_{-1}	104_{-1i}	96_{-1i}	...	95	96_{-1i}	...	92_{-1i}
British Virgin Islands	...	...	...	...	...	...	...	...	...	3_{-2}	11_{-2}	101_{-1}	99_{-1}	74_{-3}	...	87_{-1}	78_{-2}	77_{-1}
Cayman Islands	...	...	...	...	...	...	...	...	...	0.3	1	88	86	94	...	95	114	87_{-1}
Chile	8	2	15	1	0.3	2	...	97	84	2_{-1}	8_{-1}	100_{-1i}	99_{-1i}	100_{-1i}	101	99_{-1i}	101_{-1i}	98_{-1i}
Colombia	70	74	97	2	2	6	95	81	66	12_{-1}	20_{-1}	105_{-1i}	93_{-1i}	97_{-1i}	85	96_{-1i}	83_{-1i}	87_{-1i}
Costa Rica	2	1	3	1	1	2	99	73	55	3_{-1}	11_{-1}	108_{-1i}	95_{-1i}	101_{-1i}	74	95_{-1i}	67_{-1i}	92_{-1i}
Cuba	18	17	94	2	5	26	99	96	71	0.5	0.3	98	95	93	96	93	89	77
Curaçao	2	1	2	18	20	22	...	...	...	9	20	109_{i}	97_{i}	...	...	100_{i}	...	95_{i}
Dominica	...	...	...	...	...	...	...	...	...	2	12	90	87	89	...	79	76	73
Dominican Republic	109	47	234	9	12	30	94	90	60	9	16	95	87	85	95	85	73	64
Ecuador	182	37	182	9	4	20	99	95	75	2	3	97_{i}	95_{i}	100_{i}	96	86_{i}	90_{i}	88_{i}
El Salvador	108	79	153	16	23	46	93	72	35	8	13	91	86	81	78	78	69	56
Grenada	-	-	-	0.3	-	0.2	...	...	...	3_{-2}	11_{-2}	83_{-2}	82_{-2}	86_{-2}	...	91_{-2}	93_{-2}	86_{-2}
Guatemala	217	405	517	9	35	67	86	57	39	11	17	103	93	86	66	63	50	37
Guyana	9	8	9	10	18	33	99	90	69	-	-	99	86	...	91	75	...	63
Haiti	121	54	182	8	8	20	49	39	19	...	...	...	...	...	80	...	...	...
Honduras	210	231	244	18	38	59	92	69	51	10	15	87	79	76	74	58	37	39
Jamaica	82	35	19	29	26	22	99	98	95	1	4	84	84	79	98	80	85	83
Mexico	420	663	2,037	3	10	31	98	89	58	1_{-1}	1_{-1}	102_{-1i}	100_{-1i}	102_{-1i}	90	92_{-1i}	93_{-1i}	69_{-1i}
Montserrat	...	...	...	...	...	...	...	...	...	$-_{-4}$	1	158	96_{-4}	109_{-4}	...	93_{-2}	127_{-4}	88_{-4}
Nicaragua	71	47	89	9	12	36	76	50	38	22	...	106	90	81_{-1}	65	83	...	63
Panama	38	36	64	8	16	29	95	78	63	4	8	95	90	93	82	...	77	...
Paraguay	159	105	148	19	26	37	94	81	67	5	9	92	88	90	86	83	72	72
Peru	28	24	65	1	1	6	98	93	86	2	4	107	100	104	95	99_{i}	94	87_{i}
Saint Kitts and Nevis	...	...	...	...	...	...	...	...	...	1_{-2}	1_{-2}	124_{-2}	99_{-2}	131_{-2}	...	...	...	95_{-2}
Saint Lucia	0.2	0.4	1	1	7	21	100	98	92	1	5	101	93	90	99	87_{-1}	85	80
Saint Vincent/Grenadines	-	0.2	1	0.3	3	19	...	...	...	1	11	110	99	107	...	98_{-3}	106	97
Sint Maarten	...	...	...	...	...	...	...	...	...	...	...	257	40	...	...	...	...	...
Suriname	9	10	19	14	24	62	87	58	32	7	33_{-2}	66	51	77_{-2}	66	...	41_{-2}	...
Trinidad and Tobago	21	12	12	16	20	33	98	95	84	6	6	93	66	85	97	67_{i}	72	97_{i}
Turks and Caicos Islands	...	...	...	...	...	...	...	...	...	3	7	126	94_{-1}	111_{-1}	...	90	99_{-1}	94
Uruguay	2	2	8	1	2	6	98	71	43	2_{-1}	16_{-1}	109_{-1i}	100_{-1i}	100_{-1i}	72	99_{-1i}	88_{-1i}	91_{-1i}
Venezuela, B. R.	25	36	152	1	2	14	88	85	44	8	13	108	99	101	96	98	...	77

	Learning										
	K Administration of nationally representative learning assessment						L Achieving minimum proficiency (%)				
	Early grades		End of primary		End of lower secondary		End of primary		End of lower secondary		
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Country code
	4.1.6										
	2023										
	No	No	No	No	No	No	...	...	...	...	AIA
	No	No	Yes	Yes	No	No	...	...	...	...	ATG
	Yes	Yes	Yes	Yes	Yes	Yes	32$_{-4}$	13$_{-4}$	45$_{-1}$	27$_{-1}$	ARG
	No	No	No	No	No	No	...	...	...	...	ABW
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	BHS
	No	No	No	No	No	No	...	...	...	...	BRB
	No	No	No	No	No	No	...	...	...	...	BLZ
	No	No	No	No	No	No	...	...	...	...	BOL
	Yes	Yes	Yes	Yes	Yes	Yes	44$_{-4}$	29$_{-4}$	50$_{-1}$	27$_{-1}$	BRA
	No	No	No	No	No	No	...	...	...	...	VGB
	No	No	Yes	Yes	No	No	...	...	...	...	CYM
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	66$_{-1}$	44$_{-1}$	CHL
	Yes	Yes	Yes	Yes	Yes	Yes	38$_{-4}$	17$_{-4}$	49$_{-1}$	29$_{-1}$	COL
	Yes	Yes	Yes	Yes	Yes	Yes	54$_{-4}$	21$_{-4}$	53$_{-1}$	28$_{-1}$	CRI
	Yes	Yes	Yes	Yes	Yes	Yes	44$_{-4}$	21$_{-4}$	...	...	CUB
	No	No	No	No	No	No	...	...	...	...	CUW
	No	No	Yes	Yes	No	No	...	...	...	...	DMA
	Yes	Yes	Yes	Yes	Yes	Yes	16$_{-4}$	2$_{-4}$	25$_{-1}$	8$_{-1}$	DOM
	Yes	Yes	Yes	Yes	Yes	Yes	26$_{-4}$	23$_{-4}$	...	...	ECU
	Yes	Yes	Yes	Yes	Yes	Yes	29$_{-4}$	8$_{-4}$	28$_{-1}$	11$_{-1}$	SLV
	No	No	No	No	No	No	...	...	...	...	GRD
	Yes	Yes	Yes	Yes	Yes	Yes	16$_{-4}$	7$_{-4}$	32$_{-1}$	13$_{-1}$	GTM
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	GUY
	No	No	No	No	No	No	...	...	...	...	HTI
	Yes	Yes	Yes	Yes	Yes	Yes	16$_{-4}$	11$_{-4}$	...	...	HND
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	50$_{-1}$	26$_{-1}$	JAM
	Yes	Yes	Yes	Yes	Yes	Yes	42$_{-4}$	38$_{-4}$	53$_{-1}$	34$_{-1}$	MEX
	No	No	No	No	No	No	...	...	...	...	MSR
	Yes	Yes	Yes	Yes	No	No	13$_{-4}$	3$_{-4}$	...	...	NIC
	Yes	Yes	Yes	Yes	Yes	Yes	18$_{-4}$	3$_{-4}$	42$_{-1}$	16$_{-1}$	PAN
	Yes	Yes	Yes	Yes	Yes	Yes	19$_{-4}$	6$_{-4}$	34$_{-1}$	15$_{-1}$	PRY
	Yes	Yes	Yes	Yes	Yes	Yes	49$_{-4}$	39$_{-4}$	50$_{-1}$	34$_{-1}$	PER
	No	No	No	No	No	No	...	...	...	...	KNA
	No	No	No	No	No	No	...	...	...	...	LCA
	Yes	Yes	No	No	No	No	...	...	...	...	VCT
	No	No	No	No	No	No	...	...	...	...	SXM
	No	No	No	No	No	No	...	...	...	...	SUR
	Yes	Yes	Yes	Yes	No	No	...	...	...	...	TTO
	Yes	Yes	No	No	No	No	...	...	...	...	TCA
	Yes	Yes	Yes	Yes	Yes	Yes	44$_{-4}$	38$_{-4}$	59$_{-1}$	43$_{-1}$	URY
	Yes	No	No	No	No	No	...	...	...	...	VEN

TABLE 2: Continued

Country or territory	Participation/completion																		
	A						B			C		D	E	F	G	H	I	J	
	Out-of-school (000,000)			Out-of-school rate (%)			Completion rate (%)			Over-age for grade (%)									
	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	Upper secondary	Primary	Lower secondary	GER primary (%)	NERA primary (%)	GIR last primary (%)	Transition from primary to lower secondary (%)	NERT lower secondary (%)	GIR last lower secondary grade (%)	NERT upper secondary (%)	
SDG indicator				4.1.4			4.1.2			4.1.5				4.1.3			4.1.3		
Reference year	2023																		
Europe and Northern America																			
Albania	17	4	9	10	3	9	97	97	87	2	3	94_{i}	89_{i}	95_{i}	100	95_{i}	92_{i}	89_{i}	
Andorra	...	...	...	7	4	9	...	...	...	2	3	98	100	69	...	98	100	84	
Austria	3	3	21	1	1	6	100	98	86	5_{-1}	9_{-1}	101_{-1i}	98_{-1i}	97_{-1i}	98	98_{-1i}	96_{-1i}	93_{-1i}	
Belarus	17	2	1	4	0.4	1	100	99	93	2	1	97_{+1}	96	93	99	93	93	90	
Belgium	8	3	9	1	1	2	99	91	86	1_{-1}	3_{-1}	102_{-1i}	99_{-1i}	...	92	99_{-1i}	93_{-1i}	98_{-1i}	
Bermuda	...	...	...	...	...	...	...	...	...	-	-	86	...	...	...	...	...	...	
Bosnia and Herzegovina	15	19	38	10	13	27	100	99	65	1	1	87	84	86	99	94	88	77	
Bulgaria	12	15	26	5	5	9	99	94	87	1_{-1}	4_{-1}	96_{-1i}	95_{-1i}	96_{-1i}	95	95_{-1i}	96_{-1i}	91_{-1i}	
Canada	1	3	118	-	0.2	9	100	99	88	...	...	96_{-1i}	96_{-1i}	...	99	99_{-1i}	...	86_{-1i}	
Croatia	-	-	10	-	-	6	100	99	98	0.3_{-1}	0.5_{-1}	101_{-1i}	98_{-1i}	100_{-1i}	99	...	102_{-1i}	94_{-1i}	
Czechia	4	4	20	1	1	4	100	96	90	4_{-1}	5_{-1}	101_{-1i}	100_{-1i}	103_{-1i}	96	100_{-1i}	93_{-1i}	96_{-1i}	
Denmark	1	2	12	0.2	1	6	100	100	76	0.2_{-1}	0.4_{-1}	100_{-1i}	99_{-1i}	100_{-1i}	100	99_{-1i}	100_{-1i}	93_{-1i}	
Estonia	2	1	3	2	2	7	100	97	85	1_{-1}	3_{-1}	99_{-1i}	98_{-1i}	99_{-1i}	97	98_{-1i}	100_{-1i}	94_{-1i}	
Finland	6	3	5	2	2	3	100	100	89	0.1_{-1}	0.4_{-1}	99_{-1i}	98_{-1i}	98_{-1i}	100	98_{-1i}	100_{-1i}	96_{-1i}	
France	4	5	44	0.1	0.2	2	100	98	87	...	0.4_{-1}	103_{-1i}	100_{-1i}	...	99	100_{-1i}	100_{-1i}	96_{-1i}	
Germany	33	49	227	1	1	10	100	92	82	...	...	100_{-1i}	98_{-1i}	98_{-1i}	92	99_{-1i}	62_{-1i}	89_{-1i}	
Greece	0.4	2	11	0.1	1	3	99	96	95	2_{-1}	4_{-1}	101_{-1i}	100_{-1i}	99_{-1i}	97	99_{-1i}	95_{-1i}	97_{-1i}	
Hungary	13	18	76	4	5	19	99	96	86	1_{-1}	2_{-1}	103_{-1i}	96_{-1i}	97_{-1i}	97	95_{-1i}	96_{-1i}	89_{-1i}	
Iceland	0.3	0.2	2	1	1	13	...	98	66	$-_{-1}$	$-_{-1}$	99_{-1i}	98_{-1i}	99_{-1i}	100	99_{-1i}	96_{-2i}	83_{-1i}	
Ireland	-	-	0.1	-	-	-	100	99	95	$-_{-1}$	0.1_{-1}	100_{-1i}	99_{-1i}	96_{-1i}	99	100_{-1i}	103_{-1i}	99_{-1i}	
Italy	42	31	151	2	2	5	100	99	86	0.2_{-1}	1_{-1}	102_{-1i}	97_{-1i}	97_{-1i}	99	98_{-1i}	96_{-1i}	95_{-1i}	
Latvia	1	0.3	1	1	0.4	1	100	98	86	1_{-1}	2_{-1}	99_{-1i}	99_{-1i}	98_{-1i}	99	99_{-1i}	95_{-1i}	94_{-1i}	
Liechtenstein	...	...	...	0.2	1	5	...	...	...	0.1_{-2}	1_{-2}	102_{-2i}	99_{-2i}	89_{-2i}	...	97_{-2i}	94_{-2i}	90_{-2i}	
Lithuania	-	0.2	1	-	0.1	1	100	99	91	0.2_{-1}	1_{-1}	102_{-1i}	100_{-1i}	101_{-1i}	99	99_{-1i}	100_{-1i}	99_{-1i}	
Luxembourg	0.4	0.4	4	1	2	13	99	89	81	2_{-1}	8_{-1}	99_{-1i}	100_{-1i}	78_{-1i}	90	98_{-1i}	98_{-1i}	86_{-1i}	
Malta	2	0.3	2	7	2	10	98	98	82	0.3_{-1}	0.2_{-1}	94_{-1i}	93_{-1i}	96_{-1i}	100	98_{-1i}	99_{-1i}	90_{-1i}	
Monaco	...	...	...	...	...	...	...	...	...	-	0.1	...	...	...	...	...	...	...	
Montenegro	-	-	0.3	0.1	0.1	1	99	98	88	1	1	106_{i}	100_{i}	107_{i}	99	100_{i}	97_{i}	87_{i}	
Netherlands (Kingdom of the)	1	2	10	0.1	0.3	2	100	89	79	...	...	104_{-1i}	100_{-1i}	...	89	100_{-1i}	...	95_{-1i}	
North Macedonia	3	6	11	3	7	12	99	98	85	1_{-1}	1_{-1}	97_{-1i}	97_{-1i}	93_{-1i}	98	...	93_{-1i}	...	
Norway	1	2	9	0.3	1	5	100	100	81	$-_{-1}$	$-_{-1}$	99_{-1i}	99_{-1i}	99_{-1i}	100	100_{-1i}	100_{-1i}	94_{-1i}	
Poland	16	16	18	1	1	2	100	99	91	1_{-1}	2_{-1}	101_{-1i}	100_{-1i}	98_{-1i}	99	100_{-1i}	133_{-1i}	100_{-1i}	
Portugal	0.1	0.1	0.4	-	-	0.1	99	93	81	3_{-1}	7_{-1}	110_{-1i}	100_{-1i}	104_{-1i}	94	100_{-1i}	103_{-1i}	99_{-1i}	
Republic of Moldova	0.3	2	7	0.2	1	8	99	96	81	0.2	0.3	107_{-1}	100_{-1}	104_{-3i}	97	100_{-1}	107_{-3i}	82_{-3i}	
Romania	135	112	223	14	14	26	99	93	81	3_{-1}	4_{-1}	85_{-1i}	84_{-1i}	83_{-1i}	94	84_{-1i}	79_{-1i}	75_{-1i}	
Russian Federation	26	29	50	0.3	0.3	2	100	100	91	...	...	98_{i}	95_{i}	100_{-4i}	100	100_{i}	97_{-4i}	55_{i}	
San Marino	...	...	...	...	...	...	...	...	...	0.1	-	194_{+1}	93_{i}	96_{i}	...	91_{i}	94_{i}	40_{i}	
Serbia	5	7	55	2	2	14	100	99	82	0.3_{-1}	0.5_{-1}	99_{-1i}	98_{-1i}	98_{-1i}	99	100_{-1i}	97_{-1i}	88_{-1i}	
Slovakia	7	10	20	3	4	9	100	99	93	8_{-1}	7_{-1}	100_{-1i}	97_{-1i}	95_{-1i}	99	97_{-1i}	82_{-1i}	91_{-1i}	
Slovenia	1	1	1	1	1	1	100	99	93	1_{-1}	1_{-1}	101_{-1i}	99_{-1i}	97_{-1i}	100	99_{-1i}	94_{-1i}	97_{-1i}	
Spain	42	41	106	2	3	7	99	95	74	0.2_{-1}	5_{-1}	102_{-1i}	98_{-1i}	98_{-1i}	96	98_{-1i}	91_{-1i}	94_{-1i}	
Sweden	1	1	4	0.2	0.4	1	100	99	89	0.1_{-1}	0.2_{-1}	116_{-1i}	99_{-1i}	100_{-1i}	99	100_{-1i}	100_{-1i}	97_{-1i}	
Switzerland	0.5	2	54	0.1	1	16	100	99	93	4_{-1}	8_{-1}	101_{-1i}	100_{-1i}	95_{-1i}	99	100_{-1i}	95_{-1i}	92_{-1i}	
Ukraine	45	35	22	2	1	2	100	99	97	1	1	93_{-1}	84_{-2i}	89_{-2i}	99	89_{-2i}	85_{-2i}	78_{-2i}	
United Kingdom	152	31	153	3	1	5	100	100	90	$-_{-1}$	$-_{-1}$	102_{-1i}	100_{-1i}	100_{-1i}	100	99_{-1i}	99_{-1i}	95_{-1i}	
United States	822	219	506	3	2	4	100	99	94	3_{-1}	4_{-1}	97_{-1i}	96_{-1i}	96_{-1i}	99	99_{-1i}	101_{-1i}	95_{-1i}	

	Learning										
	K Administration of nationally representative learning assessment						L Achieving minimum proficiency (%)				
	Early grades		End of primary		End of lower secondary		End of primary		End of lower secondary		
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Country code
	4.1.6										
	2023										
	Yes	Yes	Yes	Yes	Yes	Yes	92$_{-2}$	62$_{-4}$	26$_{-1}$	26$_{-1}$	ALB
	No	No	No	No	No	No	...	...	...	...	AND
	No	No	Yes	Yes	Yes	Yes	96$_{-2}$	84$_{-4}$	75$_{-1}$	75$_{-1}$	AUT
	Yes	Yes	No	No	Yes	Yes	...	...	...	...	BLR
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	80$_{-4}$	75$_{-1}$	75$_{-1}$	BEL
	No	No	No	No	No	No	...	...	...	...	BMU
	No	No	No	Yes	No	No	...	40$_{-4}$	...	...	BIH
	No	No	Yes	Yes	Yes	Yes	93$_{-2}$	71$_{-4}$	47$_{-1}$	46$_{-1}$	BGR
	No	No	Yes	Yes	Yes	Yes	99$_{-2}$	69$_{-4}$	82$_{-1}$	78$_{-1}$	CAN
	No	No	Yes	Yes	Yes	Yes	98$_{-2}$	70$_{-4}$	77$_{-1}$	67$_{-1}$	HRV
	No	No	Yes	Yes	Yes	Yes	96$_{-2}$	78$_{-4}$	79$_{-1}$	74$_{-1}$	CZE
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	81$_{-1}$	80$_{-1}$	DNK
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	86$_{-1}$	85$_{-1}$	EST
	Yes	Yes	Yes	Yes	Yes	Yes	96$_{-2}$	78$_{-4}$	79$_{-1}$	75$_{-1}$	FIN
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	57$_{-4}$	73$_{-1}$	71$_{-1}$	FRA
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	75$_{-4}$	74$_{-1}$	70$_{-1}$	DEU
	No	No	No	No	Yes	Yes	...	...	62$_{-1}$	53$_{-1}$	GRC
	No	No	Yes	Yes	Yes	Yes	94$_{-2}$	74$_{-4}$	74$_{-1}$	70$_{-1}$	HUN
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	60$_{-1}$	66$_{-1}$	ISL
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	89$_{-1}$	81$_{-1}$	IRL
	Yes	Yes	Yes	Yes	Yes	Yes	97$_{-2}$	73$_{-4}$	79$_{-1}$	70$_{-1}$	ITA
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	85$_{-4}$	77$_{-1}$	78$_{-1}$	LVA
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	LIE
	Yes	Yes	Yes	Yes	Yes	Yes	97$_{-2}$	81$_{-4}$	75$_{-1}$	72$_{-1}$	LTU
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	LUX
	No	No	Yes	Yes	Yes	Yes	90$_{-2}$	69$_{-4}$	64$_{-1}$	67$_{-1}$	MLT
	No	No	No	No	No	No	...	...	...	...	MCO
	No	No	Yes	Yes	Yes	Yes	87$_{-2}$	43$_{-4}$	47$_{-1}$	41$_{-1}$	MNE
	No	No	Yes	Yes	Yes	Yes	96$_{-2}$	84$_{-4}$	65$_{-1}$	73$_{-1}$	NLD
	No	No	Yes	Yes	Yes	Yes	70$_{-2}$	52$_{-4}$	26$_{-1}$	34$_{-1}$	MKD
	Yes	Yes	Yes	Yes	Yes	Yes	...	65$_{-4}$	73$_{-1}$	68$_{-1}$	NOR
	No	No	Yes	Yes	Yes	Yes	97$_{-2}$	73$_{-4}$	78$_{-1}$	77$_{-1}$	POL
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	74$_{-4}$	77$_{-1}$	70$_{-1}$	PRT
	No	No	Yes	Yes	Yes	Yes	...	...	51$_{-1}$	44$_{-1}$	MDA
	Yes	Yes	Yes	Yes	Yes	Yes	...	...	58$_{-1}$	51$_{-1}$	ROU
	No	No	Yes	Yes	No	Yes	98$_{-2}$	91$_{-4}$	...	...	RUS
	No	No	No	No	No	No	...	...	...	...	SMR
	No	No	Yes	Yes	Yes	Yes	93$_{-2}$	68$_{-4}$	64$_{-1}$	57$_{-1}$	SRB
	No	No	Yes	Yes	Yes	Yes	94$_{-2}$	71$_{-4}$	65$_{-1}$	67$_{-1}$	SVK
	Yes	Yes	Yes	Yes	Yes	Yes	94$_{-2}$	...	74$_{-1}$	75$_{-1}$	SVN
	Yes	Yes	Yes	Yes	Yes	Yes	95$_{-2}$	65$_{-4}$	76$_{-1}$	73$_{-1}$	ESP
	Yes	Yes	Yes	Yes	Yes	Yes	95$_{-2}$	74$_{-4}$	76$_{-1}$	73$_{-1}$	SWE
	No	No	No	No	Yes	Yes	...	...	75$_{-1}$	81$_{-1}$	CHE
	No	No	Yes	Yes	Yes	Yes	...	...	59$_{-1}$	58$_{-1}$	UKR
	Yes	Yes	Yes	Yes	Yes	Yes	97$_{-2}$	83$_{-4}$	80$_{-1}$	76$_{-1}$	GBR
	Yes	Yes	Yes	Yes	Yes	Yes	95$_{-2}$	77$_{-4}$	80$_{-1}$	66$_{-1}$	USA

TABLE 3: SDG 4, Target 4.2 – Early childhood

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

	A Children under 5 developmentally on track (%)	B Under-5 stunting (%)	C Stimulating home environment (%)	D Children under 5 with 3+ children's books (%)	E NER pre-primary (%)	F NERA one year before primary entry (%)
SDG indicator	**4.2.1**		**4.2.3**		**4.2.4**	**4.2.2**
Reference year	**2023**					
Region	**Weighted average**					
World	...	22$_{-2}$	...	...	52$_{i}$	75$_{i}$
Sub-Saharan Africa	...	31$_{-2}$	...	...	19$_{-1i}$	49$_{-1i}$
Northern Africa and Western Asia	...	18$_{-2}$	...	...	32$_{i}$	51$_{i}$
Northern Africa	...	22$_{-2}$	...	...	33$_{-1i}$	47$_{-1i}$
Western Asia	...	14$_{-2}$	...	...	30$_{i}$	56$_{i}$
Central and Southern Asia	...	29$_{-2}$	...	...	51	90$_{i}$
Central Asia	...	8$_{-2}$	...	...	43$_{i}$	62$_{i}$
Southern Asia	...	30$_{-2}$	...	...	51	91$_{i}$
Eastern and South-eastern Asia	...	14$_{-2}$	...	...	...	81$_{i}$
Eastern Asia	...	5$_{-2}$	...	...	...	...
South-eastern Asia	...	26$_{-2}$	...	...	58$_{-4i}$	84$_{-2i}$
Oceania	...	44$_{-2}$	...	...	44$_{i}$	81$_{i}$
Latin America and the Caribbean	...	12$_{-2}$	...	...	71$_{i}$	91$_{i}$
Caribbean	...	11$_{-2}$	...	...	69$_{i}$	86$_{i}$
Central America	...	17$_{-2}$	...	...	...	...
South America	...	9$_{-2}$	...	...	...	...
Europe and Northern America	...	4$_{-2}$	...	...	79$_{i}$	90$_{i}$
Europe	...	4$_{-2}$	...	...	89$_{i}$	91$_{i}$
Northern America	...	4$_{-2}$	...	...	60$_{i}$	87$_{i}$
Low income	...	34$_{-2}$	...	...	18$_{-1i}$	44$_{-1i}$
Middle income	...	22$_{-2}$	...	...	56$_{i}$	79$_{i}$
Lower middle	...	28$_{-2}$	...	...	45$_{i}$	76$_{i}$
Upper middle	...	8$_{-2}$	...	...	71$_{-1i}$	82$_{-2i}$
High income	...	4$_{-2}$	...	...	77$_{i}$	89$_{i}$

A Percentage of children aged 24 to 59 months who are developmentally on track in health, learning and psychosocial well-being [UNICEF Early Childhood Development Index (ECDI)].

B Under-5 moderate or severe stunting rate (%) [*Source:* UNICEF, WHO, World Bank Joint Child Malnutrition Estimates (JME)]. (Regional aggregates are weighted averages of statistical JME estimates for the reference year, not of the observed country values in the country table; Eastern Asia excludes Japan, Oceania excludes Australia and New Zealand, Northern America is based only on United States.)

C Percentage of children under 5 experiencing positive and stimulating home learning environments [*Source:* UNICEF].

D Percentage of children under age 5 living in households with three or more children's books [*Source:* UNICEF database].

E Gross enrolment ratio (GER) in pre-primary education.

F Adjusted net enrolment rate (NERA) one year before the official primary school entry age.

Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.

Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.

(-) Magnitude nil or negligible.

(...) Data not available or category not applicable.

(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).

(i) Estimate and/or partial coverage.

TABLE 3: Continued

Country or territory	A Children under 5 developmentally on track (%)	B Under-5 stunting (%)	C Stimulating home environment (%)	D Children under 5 with 3+ children's books (%)	E NER pre-primary (%)	F NERA one year before primary entry (%)	Country code
SDG indicator	4.2.1		4.2.3		4.2.4	4.2.2	
Reference year	2023						
Sub-Saharan Africa							
Angola	...	43$_{-2}$	...	...	...	...	AGO
Benin	41$_{-1}$	31$_{-2}$	...	...	...	...	BEN
Botswana	...	22$_{-2}$	...	...	18$_{-1}$	51$_{-1}$	BWA
Burkina Faso	...	22$_{-2}$	...	...	7	19	BFA
Burundi	...	56$_{-2}$	...	...	8$_{-3}$	46$_{-3}$	BDI
Cabo Verde	...	10$_{-2}$	...	...	68$_{-3}$	86$_{-3}$	CPV
Cameroon	...	27$_{-2}$	...	...	30	40	CMR
Central African Republic	36$_{-4}$	40$_{-2}$	...	0.4$_{-4}$	...	...	CAF
Chad	45$_{-4}$	33$_{-2}$	...	-$_{-4}$	2	18	TCD
Comoros	36$_{-1}$	20$_{-2}$	...	2$_{-1}$	20	37$_{-2}$	COM
Congo	...	17$_{-2}$	...	...	5	4	COG
Côte d'Ivoire	39$_{-2}$	21$_{-2}$	...	...	10	20	CIV
D. R. Congo	...	41$_{-2}$	...	...	6$_{-3}$	21$_{-3}$	COD
Djibouti	...	20$_{-2}$	...	...	...	...	DJI
Equat. Guinea	...	17$_{-2}$	...	...	...	...	GNQ
Eritrea	...	51$_{-2}$	...	...	26$_{-1}$	35$_{-1}$	ERI
Eswatini	48$_{-1}$	22$_{-2}$	...	2$_{-1}$	...	...	SWZ
Ethiopia	...	35$_{-2}$	...	...	39	42$_{-2}$	ETH
Gabon	...	14$_{-2}$	...	...	...	...	GAB
Gambia	...	14$_{-2}$	...	...	36	53$_{-2}$	GMB
Ghana	...	13$_{-2}$	...	...	73$_{-2}$	85$_{-2}$	GHA
Guinea	...	28$_{-2}$	...	...	13$_{-2}$	49$_{-2}$	GIN
Guinea-Bissau	73$_{-4}$	28$_{-2}$	...	-$_{-4}$	...	...	GNB
Kenya	78$_{-1}$	19$_{-2}$	...	...	...	...	KEN
Lesotho	...	32$_{-2}$	...	...	22$_{-3}$	32$_{-3}$	LSO
Liberia	...	27$_{-2}$	...	...	26$_{-1}$	66$_{-1}$	LBR
Madagascar	...	39$_{-2}$	...	...	40$_{+1}$	70$_{+1}$	MDG
Malawi	59$_{-3}$	35$_{-2}$	...	1$_{-3}$	...	...	MWI
Mali	...	24$_{-2}$	...	...	5	30	MLI
Mauritania	...	23$_{-2}$	...	...	...	...	MRT
Mauritius	...	9$_{-2}$	...	...	82$_{i}$	81$_{i}$	MUS
Mozambique	...	37$_{-2}$	...	...	...	...	MOZ
Namibia	...	17$_{-2}$	...	...	38$_{-1}$	77$_{-1}$	NAM
Niger	...	47$_{-2}$	...	...	7$_{i}$	23$_{i}$	NER
Nigeria	48$_{-2}$	34$_{-2}$	...	4$_{-2}$	...	...	NGA
Rwanda	82$_{-3}$	31$_{-2}$	...	2$_{-3}$	39$_{i}$	69$_{i}$	RWA
Sao Tome and Principe	63$_{-4}$	11$_{-2}$	...	6$_{-4}$	60$_{-2}$	73$_{-2}$	STP
Senegal	67$_{-4}$	17$_{-2}$	...	1$_{-4}$	19	21	SEN
Seychelles	...	7$_{-2}$	...	...	81$_{i}$	94$_{i}$	SYC
Sierra Leone	...	27$_{-2}$	...	...	23	59	SLE
Somalia	...	19$_{-2}$	...	...	...	...	SOM
South Africa	...	23$_{-2}$	...	...	17$_{-1}$	69$_{-1}$	ZAF
South Sudan	...	28$_{-2}$	...	...	...	...	SSD
Togo	...	23$_{-2}$	...	...	29	93$_{-4}$	TGO
Uganda	...	24$_{-2}$	...	...	...	...	UGA
United Republic of Tanzania	47$_{-1}$	31$_{-2}$	...	...	31	63	TZA
Zambia	...	32$_{-2}$	...	...	...	...	ZMB
Zimbabwe	71$_{-4}$	22$_{-2}$	37$_{-4}$	3$_{-4}$	39$_{-1}$	57$_{-1}$	ZWE
Northern Africa and Western Asia							
Algeria	77$_{-4}$	9$_{-2}$	...	8$_{-4}$	52	68	DZA
Armenia	...	8$_{-2}$	...	...	64	78	ARM
Azerbaijan	...	14$_{-2}$	...	...	50$_{i}$	96$_{i}$	AZE
Bahrain	...	5$_{-2}$	...	...	53	77	BHR
Cyprus	...	...	...	...	67$_{-1i}$	99$_{-1i}$	CYP

Country or territory	A Children under 5 developmentally on track (%)	B Under-5 stunting (%)	C Stimulating home environment (%)	D Children under 5 with 3+ children's books (%)	E NER pre-primary (%)	F NERA one year before primary entry (%)	Country code
SDG indicator	4.2.1		4.2.3		4.2.4	4.2.2	
Reference year	2023						
Northern Africa and Western Asia (continued)							
Egypt	...	21$_{-2}$	...	...	23$_{-2}$	33$_{-2}$	EGY
Georgia	...	5$_{-2}$	...	...	...	...	GEO
Iraq	...	10$_{-2}$	...	...	...	...	IRQ
Israel	...	...	...	...	100$_{-1i}$	97$_{-1i}$	ISR
Jordan	...	7$_{-2}$	...	...	39$_{i}$	67$_{i}$	JOR
Kuwait	...	7$_{-2}$	...	...	30$_{-2}$	44$_{-2}$	KWT
Lebanon	...	8$_{-2}$	...	...	74	82	LBN
Libya	...	51$_{-2}$	...	...	...	...	LBY
Morocco	...	13$_{-2}$	...	...	67	83	MAR
Oman	...	13$_{-2}$	...	...	45	82	OMN
Qatar	...	5$_{-2}$	...	...	47$_{-1i}$	77$_{-1i}$	PSE
Saudi Arabia	...	12$_{-2}$	...	...	22$_{-1i}$	55$_{-1i}$	QAT
State of Palestine (the)	...	8$_{-2}$	...	12$_{-3}$	54	70	SAU
Sudan	...	36$_{-2}$	...	...	...	...	SDN
Syrian Arab Republic	...	26$_{-2}$	...	...	12	47	SYR
Tunisia	...	9$_{-2}$	...	...	...	...	TUN
Türkiye	...	6$_{-2}$	...	...	48$_{-1i}$	99$_{-1i}$	TUR
United Arab Emirates	...	...	...	...	85$_{i}$	100$_{i}$	ARE
Yemen	...	36$_{-2}$	...	...	...	...	YEM
Central and Southern Asia							
Afghanistan	29	34$_{-2}$	...	-	...	...	AFG
Bangladesh	74$_{-4}$	28$_{-2}$	63$_{-4}$	6$_{-4}$	4$_{-2}$	20$_{-1}$	BGD
Bhutan	...	23$_{-2}$	...	...	42$_{-1}$	56$_{-1}$	BTN
India	...	32$_{-2}$	...	...	51	94$_{-1}$	IND
Iran, Islamic Republic of	...	5$_{-2}$	...	...	59$_{-3}$	59$_{-3}$	IRN
Kazakhstan	...	5$_{-2}$	...	...	73$_{+1}$	79$_{+1}$	KAZ
Kyrgyzstan	...	11$_{-2}$	...	...	42$_{+1}$	87$_{+1}$	KGZ
Maldives	...	14$_{-2}$	...	...	68	83	MDV
Nepal	65$_{-4}$	28$_{-2}$	...	3$_{-4}$	58$_{+1}$	75$_{+1}$	NPL
Pakistan	...	35$_{-2}$	...	...	7$_{-1}$	12$_{-1}$	PAK
Sri Lanka	...	16$_{-2}$	...	56$_{-4}$	35$_{-1}$	52$_{-1}$	LKA
Tajikistan	...	14$_{-2}$	...	...	...	...	TJK
Turkmenistan	95$_{-4}$	7$_{-2}$	...	32$_{-4}$	...	...	TKM
Uzbekistan	83$_{-1}$	7$_{-2}$	...	32$_{-1}$	46$_{-1}$	66$_{-1}$	UZB
Eastern and South-eastern Asia							
Brunei Darussalam	...	11$_{-2}$	...	...	53	73	BRN
Cambodia	...	23$_{-2}$	...	...	40	67	KHM
China	...	5$_{-2}$	...	...	...	...	CHN
DPR Korea	...	18$_{-2}$	...	...	...	...	PRK
Hong Kong, China	...	...	...	...	95$_{i}$	100	HKG
Indonesia	...	31$_{-2}$	...	...	47	91	IDN
Japan	...	5$_{-2}$	...	...	95$_{-1i}$	97$_{-2i}$	JPN
Lao PDR	...	29$_{-2}$	...	...	38$_{+1}$	89$_{+1}$	LAO
Macao, China	...	...	...	...	85$_{i}$	84$_{i}$	MAC
Malaysia	...	22$_{-2}$	...	...	80	86	MYS
Mongolia	...	6$_{-2}$	...	...	84	90	MNG
Myanmar	...	25$_{-2}$	...	...	...	...	MMR
Philippines	77$_{-1}$	29$_{-2}$	...	...	72	72	PHL
Republic of Korea	...	2$_{-2}$	...	...	96$_{-1i}$	97$_{-1i}$	KOR
Singapore	...	3$_{-2}$	...	...	96$_{-1i}$	99$_{-1i}$	SGP
Thailand	80$_{-1}$	12$_{-2}$	...	36$_{-1}$	79$_{+1}$	98$_{+1}$	THA
Timor-Leste	...	46$_{-2}$	...	...	26$_{-3}$	60$_{-3}$	TLS
Viet Nam	78$_{-2}$	20$_{-2}$	...	26$_{-2}$	95	97$_{-1}$	VNM

TABLE 3: Continued

Country or territory	A Children under 5 developmentally on track (%)	B Under-5 stunting (%)	C Stimulating home environment (%)	D Children under 5 with 3+ children's books (%)	E NER pre-primary (%)	F NERA one year before primary entry (%)	Country code
SDG indicator	4.2.1		4.2.3		4.2.4	4.2.2	
Reference year	2023						
Oceania							
Australia	...	3$_{-2}$	...	...	83$_{-1i}$	92$_{-1i}$	AUS
Cook Islands	...	...	...	...	64	81	COK
Fiji	83$_{-2}$	7$_{-2}$	...	24$_{-2}$	34	93	FJI
Kiribati	80$_{-4}$	14$_{-2}$	...	4$_{-4}$	88	99	KIR
Marshall Islands	...	31$_{-2}$	...	...	79$_{-1}$	91$_{-1}$	MHL
Micronesia, F. S.	...	...	...	...	22$_{-1}$	58$_{-1}$	FSM
Nauru	...	15$_{-2}$	...	...	38$_{-3}$	84	NRU
New Zealand	...	...	...	...	79$_{-1i}$	81$_{-1i}$	NZL
Niue	...	...	...	...	77	77	NIU
Palau	...	...	...	...	64	86$_{-1}$	PLW
Papua New Guinea	...	51$_{-2}$	...	...	...	...	PNG
Samoa	73$_{-3}$	7$_{-2}$	...	9$_{-3}$	31	38	WSM
Solomon Is	...	30$_{-2}$	...	...	28	47	SLB
Tokelau	...	...	...	...	48	93	TKL
Tonga	79$_{-4}$	2$_{-2}$	...	24$_{-4}$	46	75	TON
Tuvalu	69$_{-3}$	5$_{-2}$	...	24$_{-3}$	71	96	TUV
Vanuatu	...	31$_{-2}$	...	...	50	72	VUT
Latin America and the Caribbean							
Anguilla	...	...	...	...	83$_{-1}$	88$_{-1}$	AIA
Antigua and Barbuda	...	...	...	...	...	...	ATG
Argentina	86$_{-3}$	9$_{-2}$	...	48$_{-3}$	77$_{-1}$	95$_{-1}$	ARG
Aruba	...	...	...	...	...	...	ABW
Bahamas	...	...	...	...	29	37	BHS
Barbados	...	6$_{-2}$	...	...	63	75	BRB
Belize	...	12$_{-2}$	...	...	33	53	BLZ
Bolivia, P. S.	...	12$_{-2}$	...	...	73$_{i}$	87$_{i}$	BOL
Brazil	...	7$_{-2}$	...	...	75$_{-1i}$	90$_{-1i}$	BRA
British Virgin Islands	...	...	...	...	...	...	VGB
Cayman Islands	...	...	...	...	85	87	CYM
Chile	...	2$_{-2}$	...	...	73$_{-1i}$	92$_{-1i}$	CHL
Colombia	...	11$_{-2}$	...	...	78$_{-1i}$	...	COL
Costa Rica	...	9$_{-2}$	...	...	89$_{-1i}$	91$_{-1i}$	CRI
Cuba	95$_{-4}$	7$_{-2}$	...	42$_{-4}$	100$_{-1}$	98	CUB
Curaçao	...	...	...	...	86$_{i}$	97$_{i}$	CUW
Dominica	...	...	...	...	73	94	DMA
Dominican Republic	87$_{-4}$	6$_{-2}$	...	9$_{-4}$	53	84	DOM
Ecuador	...	23$_{-2}$	...	...	69$_{i}$	94$_{-1i}$	ECU
El Salvador	83$_{-2}$	10$_{-2}$	...	17$_{-2}$	63	80	SLV
Grenada	...	...	...	...	46$_{-1}$	49$_{-1i}$	GRD
Guatemala	...	44$_{-2}$	...	...	52	86	GTM
Guyana	86$_{-3}$	8$_{-2}$	...	47$_{-3}$	68	83	GUY
Haiti	...	20$_{-2}$	...	...	...	...	HTI
Honduras	75$_{-4}$	18$_{-2}$	...	6$_{-4}$	30	65	HND
Jamaica	...	6$_{-2}$	...	...	93	93	JAM
Mexico	81$_{-1}$	13$_{-2}$	71$_{-4}$	31$_{-1}$	62$_{-1i}$	98$_{-1i}$	MEX
Montserrat	...	...	...	...	82$_{-3}$	88$_{-3}$	MSR
Nicaragua	...	15$_{-2}$	...	...	63	81	NIC
Panama	...	14$_{-2}$	...	...	57	73	PAN
Paraguay	...	4$_{-2}$	...	...	46	77	PRY
Peru	...	11$_{-2}$	...	...	92	100	PER
Saint Kitts and Nevis	...	...	...	...	...	...	KNA
Saint Lucia	...	2$_{-2}$	...	...	18	48	LCA
Saint Vincent/Grenadines	...	...	...	...	73	58$_{-1}$	VCT
Sint Maarten	...	...	...	...	...	...	SXM
Suriname	...	8$_{-2}$	...	...	42	50	SUR
Trinidad and Tobago	93$_{-1}$	9$_{-2}$	...	65$_{-1}$	20	32	TTO
Latin America and the Caribbean (continued)							
Turks and Caicos Islands	91$_{-3}$	3$_{-2}$	...	55$_{-3}$	86	99	TCA
Uruguay	...	6$_{-2}$	...	...	90$_{-1i}$	98$_{-1i}$	URY
Venezuela, B. R.	...	10$_{-2}$	...	...	...	...	VEN
Europe and Northern America							
Albania	...	9$_{-2}$	...	...	81$_{i}$	94$_{i}$	ALB
Andorra	...	...	...	...	91	94	AND
Austria	...	...	...	...	86$_{-1i}$	97$_{-1i}$	AUT
Belarus	87$_{-4}$	4$_{-2}$	...	91$_{-4}$	98	98	BLR
Belgium	...	2$_{-2}$	...	...	98$_{-1i}$	99$_{-1i}$	BEL
Bermuda	...	...	...	...	...	...	BMU
Bosnia and Herzegovina	...	8$_{-2}$	...	...	...	32	BIH
Bulgaria	...	6$_{-2}$	...	...	86$_{-1i}$	94$_{-1i}$	BGR
Canada	...	...	...	...	...	95$_{-1i}$	CAN
Croatia	...	...	...	...	77$_{-1i}$	100$_{-1i}$	HRV
Czechia	...	2$_{-2}$	...	...	85$_{-1i}$	94$_{-1i}$	CZE
Denmark	...	...	...	...	96$_{-1i}$	98$_{-1i}$	DNK
Estonia	...	1$_{-2}$	...	...	...	94$_{-1i}$	EST
Finland	...	...	...	...	89$_{-1i}$	96$_{-1i}$	FIN
France	...	...	...	...	100$_{-1i}$	100$_{-1i}$	FRA
Germany	...	2$_{-2}$	...	...	93$_{-1i}$	96$_{-1i}$	DEU
Greece	...	2$_{-2}$	...	...	98$_{-1i}$	100$_{-1i}$	GRC
Hungary	...	...	...	...	82$_{-1i}$	96$_{-1i}$	HUN
Iceland	...	...	...	...	96$_{-1i}$	97$_{-1i}$	ISL
Ireland	...	...	...	...	81$_{-1i}$	93$_{-1i}$	IRL
Italy	...	...	...	...	90$_{-1i}$	95$_{-1i}$	ITA
Latvia	...	2$_{-2}$	...	...	95$_{-1i}$	98$_{-1i}$	LVA
Liechtenstein	...	...	...	...	76$_{-2i}$	98$_{-2i}$	LIE
Lithuania	...	5$_{-2}$	...	...	95$_{-1i}$	100$_{-1i}$	LTU
Luxembourg	...	...	...	...	89$_{-1i}$	99$_{-1i}$	LUX
Malta	...	...	...	...	87$_{-1i}$	89$_{-1i}$	MLT
Monaco	...	...	...	...	...	...	MCO
Montenegro	...	8$_{-2}$	...	...	78$_{i}$	84$_{i}$	MNE
Netherlands (Kingdom of the)	...	2$_{-2}$	...	...	92$_{-1i}$	99$_{-1i}$	NLD
North Macedonia	82$_{-4}$	4$_{-2}$	...	55$_{-4}$	41$_{-1i}$	50$_{-1i}$	MKD
Norway	...	...	...	...	97$_{-1i}$	98$_{-1i}$	NOR
Poland	...	2$_{-2}$	...	...	92$_{-1i}$	100$_{-1i}$	POL
Portugal	...	3$_{-2}$	...	...	96$_{-1i}$	100$_{-1i}$	PRT
Republic of Moldova	...	4$_{-2}$	...	...	93$_{-3i}$	...	MDA
Romania	...	8$_{-2}$	...	...	74$_{-1i}$	81$_{-1i}$	ROU
Russian Federation	...	...	...	...	83$_{-4i}$	83$_{i}$	RUS
San Marino	...	...	...	...	95$_{i}$	98$_{i}$	SMR
Serbia	97$_{-4}$	5$_{-2}$	...	78$_{-4}$	66$_{-1i}$	87$_{-1i}$	SRB
Slovakia	...	...	...	...	79$_{-1i}$	91$_{-1i}$	SVK
Slovenia	...	...	...	...	93$_{-1i}$	95$_{-1i}$	SVN
Spain	...	...	...	...	97$_{-1i}$	97$_{-1i}$	ESP
Sweden	...	...	...	...	96$_{-1i}$	99$_{-1i}$	SWE
Switzerland	...	...	...	...	73$_{-1i}$	98$_{-1i}$	CHE
Ukraine	...	14$_{-2}$	...	...	83$_{-2i}$	76$_{-2i}$	UKR
United Kingdom	...	...	...	...	...	...	GBR
United States	...	4$_{-2}$	...	...	61$_{-1i}$	87$_{-1i}$	USA

TABLE 4: SDG 4, Target 4.3 – Technical, vocational, tertiary and adult education

By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

SDG 4, Target 4.4 – Skills for work

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

	A	B	C	D	E	F	G			H				
							% of adults 15+ with ICT skills			% of adults 25+ having attained at least				
	Participation in adult education and training (%)	% of youth enrolled in TVET	TVET share of secondary enrolment (%)	TVET share of post-secondary non-tertiary (%)	Gross graduation ratio from tertiary (%)	GER tertiary (%)	Copy and paste within document	Use formula in spreadsheet	Write computer program	Primary	Lower secondary	Upper secondary	Post-secondary	
SDG indicator	4.3.1	4.3.3				4.3.2	4.4.1			4.4.3				
Reference year	2023						2023							
Region	Weighted average						Weighted average							
World	3_{i}	4_{i}	11_{i}	...	27_{i}	43_{i}	38_{i}	23_{i}	...	84_{i}	68_{i}	47_{i}	24_{i}	
Sub-Saharan Africa	3_{i}	1_{-3i}	6_{i}	...	4_{i}	9_{-2i}	...	...	...	...	...	...	...	
Northern Africa and Western Asia	3_{i}	8_{i}	12_{i}	...	29_{i}	51_{i}	51	26	9	...	...	...	...	
Northern Africa	1_{i}	8_{-1i}	14_{-1i}	...	30	39	57_{i}	23_{i}	11_{i}	...	...	...	...	
Western Asia	4_{i}	8_{i}	11_{i}	...	27_{i}	61_{i}	47	29	8	...	...	...	...	
Central and Southern Asia	1_{i}	3	5	...	24	31	...	...	...	66	52	35	16	
Central Asia	...	16_{-2i}	18_{-2i}	...	29_{i}	46_{i}	20	24	3	100	99	90	...	
Southern Asia	1_{i}	2	4	...	23	30	...	...	...	65	51	33	16	
Eastern and South-eastern Asia	...	3_{i}	16_{i}	...	39	62	...	...	...	93	72	39	20	
Eastern Asia	...	1_{i}	17	...	47	74	...	...	...	96	76	39	20	
South-eastern Asia	1_{i}	7_{-4i}	13_{-2i}	...	24_{i}	42	25_{i}	15_{i}	3_{i}	...	...	...	...	
Oceania	8_{i}	9_{i}	21_{i}	...	44_{i}	64_{i}	...	...	...	...	...	...	...	
Latin America and the Caribbean	5_{i}	7_{i}	12_{i}	...	24_{-1i}	58_{i}	26	18	4	...	...	...	...	
Caribbean	...	...	...	...	...	...	22_{i}	21_{i}	5_{i}	84_{i}	73_{i}	50_{i}	...	
Central America	...	...	...	...	...	...	29	25	6	...	...	...	17	
South America	...	...	...	...	...	...	25	15	3	...	...	...	...	
Europe and Northern America	6_{i}	11_{i}	14_{i}	...	45_{i}	79_{i}	52_{i}	32_{i}	5_{i}	...	...	...	...	
Europe	6_{i}	18_{-4}	21_{i}	...	49_{i}	79_{i}	52	32	5	...	...	...	...	
Northern America	4_{i}	2_{i}	0.4_{i}	...	38_{i}	79_{i}	...	...	...	...	...	...	...	
Low income	3_{i}	1_{-4i}	8_{i}	...	6_{i}	10_{-2i}	...	...	...	...	...	...	...	
Middle income	2_{i}	4_{i}	10_{i}	...	27_{i}	43	...	...	...	81_{i}	62_{i}	38_{i}	17_{i}	
Lower middle	1_{i}	3_{i}	5_{i}	...	20_{i}	27	...	...	...	69_{i}	53_{i}	36_{i}	16_{i}	
Upper middle	4_{i}	5_{i}	15_{i}	...	36	64	...	...	...	91_{i}	69_{i}	39_{i}	18_{i}	
High income	5_{i}	10_{i}	14_{i}	...	45_{i}	79_{i}	61_{i}	41_{i}	7_{i}	...	...	...	...	

A Participation rate of adults (25 to 54) in formal or non-formal education and training in the last 12 months (%).
Estimates based on other reference periods, in particular 4 weeks, are included in the country when no data are available on the last 12 months, but not in regional aggregates.
B Percentage of youth (15 to 24) enrolled in technical and vocational education and training (TVET) programmes (ISCED levels 2 to 5) (%).
C Share of technical and vocational education and training (TVET) in total secondary enrolment (%).
D Share of technical and vocational education and training (TVET) in post-secondary non-tertiary enrolment (%).
E Gross graduation ratio from first degree programmes in tertiary education (ISCED levels 6 and 7).
F Gross enrolment ratio (GER) in tertiary education.
G Percentage of adults (15 and over) with specific information and communication technology (ICT) skills.
H Percentage of adults (25 and over) who have attained at least a given level of education.
I Literacy rate, among youth (15 to 24) and adults (15 and above).
J Number of youth and adult illiterates, and percentage female.

Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.
Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.
(-) Magnitude nil or negligible.
(...) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).
(i) Estimate and/or partial coverage.

SDG 4, Target 4.6 – Literacy and numeracy

By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

	I		J			
	Literacy rate (%)		Illiterates			
			% female		Number (000,000)	
	Youth	Adults	Youth	Adults	Youth	Adults
	4.6.2					
	2023					
	Weighted average				Sum	
	93	87	56	63	88	754
	79$_{i}$	69$_{i}$	56$_{i}$	61$_{i}$	50$_{i}$	217$_{i}$
	90	82	57	63	10	71
	90$_{i}$	75$_{i}$	50$_{i}$	62$_{i}$	4$_{i}$	44$_{i}$
	89	87	62	65	5	27
	94	77	59	64	25	359
	100$_{i}$	100$_{i}$	48$_{i}$	66$_{i}$	-$_{i}$	0.1$_{i}$
	93	76	59	64	25	359
	99	97	43	70	2	63
	100	97	44	74	1	40
	99	96	43	65	1	22
	...	...	...	...	...	...
	99	95	43	54	1	27
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	100$_{-1i}$	99$_{-1i}$	51$_{-1i}$	59$_{-1i}$	0.4$_{-1i}$	12$_{-1i}$
	...	...	...	...	...	...
	100$_{-1i}$	99$_{-1i}$	55$_{-1i}$	52$_{-1i}$	0.2$_{-1i}$	4$_{-1i}$
	75$_{i}$	63$_{i}$	55$_{i}$	61$_{i}$	36$_{i}$	154$_{i}$
	95	87	57	64	51	574
	92	78	58	63	45	476
	98	96	49	66	6	98
	99$_{-2i}$	...	47$_{-2i}$	...	1$_{-2i}$	...

TABLE 4: Continued

Country or territory	A	B	C	D	E	F	G			H			
							% of adults 15+ with ICT skills			% of adults 25+ having attained at least			
	Participation in adult education and training (%)	% of youth enrolled in TVET	TVET share of secondary enrolment (%)	TVET share of post-secondary non-tertiary (%)	Gross graduation ratio from tertiary (%)	GER tertiary (%)	Copy and paste within document	Use formula in spreadsheet	Write computer program	Primary	Lower secondary	Upper secondary	Post-secondary
SDG indicator	4.3.1	4.3.3				4.3.2	4.4.1			4.4.3			
Reference year	2023						2023						
Sub-Saharan Africa													
Angola	4_{-2i}	...	20_{-2}	...	5	10	...	...	...	74_{-2i}	40_{-2i}	22_{-2i}	5_{-2i}
Benin	2_{-1i}	2_{-1}	5_{-1}	...	...	11_{-1}	...	...	...	38_{-1i}	22_{-1i}	11_{-1i}	5_{-1i}
Botswana	2_{i}	...	...	76	...	22	...	...	...	90_{i}	72_{i}	46_{i}	31_{i}
Burkina Faso	2_{i}	1_{i}	5	...	3_{-1}	10	...	...	...	19_{i}	10_{i}	5_{i}	5_{i}
Burundi	2_{-3i}	3_{-3}	9_{-3}	...	...	6	...	...	...	...	...	...	...
Cabo Verde	...	1_{-2}	2_{-2}	100_{-4}	...	...	18_{-4}	6_{-4}	...	...	...	...	...
Cameroon	...	7	22	...	...	16	...	...	...	...	...	...	...
Central African Republic	...	...	...	...	...	...	...	...	...	31_{-4}	13_{-4}	6_{-4}	...
Chad	...	-	1	...	...	5_{-3}	...	...	...	19_{-4}	9_{-4}	5_{-4}	...
Comoros	3_{-2i}	...	0.5	...	...	...	...	...	...	47_{-1}	32_{-1}	23_{-1}	16_{-2i}
Congo	...	...	...	...	...	10	...	...	...	...	...	...	...
Côte d'Ivoire	2_{-1i}	2	5	...	...	11	12_{-4}	3_{-4}	1_{-4}	44_{-1i}	25_{-1i}	14_{-1i}	7_{-1i}
D. R. Congo	1_{-3i}	...	19	...	...	7_{-3}	...	...	...	66_{-3i}	...	8_{-3i}	...
Djibouti	...	...	7	...	...	...	...	...	...	...	...	...	...
Equat. Guinea	...	...	...	...	...	5_{-4}	...	...	...	...	...	...	...
Eritrea	...	...	1_{-4}	100_{-4}	...	...	...	...	...	...	...	...	...
Eswatini	2_{i}	...	...	...	...	...	...	...	...	92_{i}	68_{i}	19_{i}	19_{i}
Ethiopia	7_{-2i}	...	...	...	...	...	...	...	...	44_{-2i}	18_{-2i}	12_{-2i}	9_{-2i}
Gabon	...	...	7_{-2}	...	...	15_{-2}	...	...	...	...	...	...	...
Gambia	3_{i}	...	...	...	...	...	...	...	...	54_{i}	42_{i}	29_{i}	11_{i}
Ghana	2_{-1i}	1_{-2}	3_{-1}	...	16	22	...	...	...	65_{-1}	54_{-1}	23_{-1}	10_{-1i}
Guinea	3_{-4i}	...	7_{-2}	...	5_{-1}	7_{-2}	...	...	...	72_{-4i}	47_{-4i}	33_{-4i}	31_{-4i}
Guinea-Bissau	...	...	...	...	...	...	...	...	...	51_{-1i}	38_{-1i}	16_{-1i}	6_{-1i}
Kenya	1_{-2i}	...	...	...	$-_{-4}$	11_{-4i}	...	...	...	79_{-1}	65_{-1}	38_{-1}	7_{-2i}
Lesotho	2_{-4i}	...	...	...	...	...	12_{-4}	5_{-4}	3_{-4}	100_{-4i}	43_{-4i}	6_{-4i}	6_{-4i}
Liberia	...	...	...	...	...	...	...	...	...	47_{-4}	36_{-4}	26_{-4}	...
Madagascar	0.4_{-1i}	1_{-2}	2_{-2}	100_{-4}	4	6	...	...	...	41_{-2}	18_{-2}	9_{-2}	...
Malawi	1_{-3i}	$-_{-4}$	...	...	...	...	...	...	...	47_{-3}	19_{-3}	12_{-3}	3_{-3i}
Mali	1_{-1i}	...	10	100	...	5_{-4}	...	...	...	27_{-1i}	17_{-1i}	10_{-1i}	3_{-3}
Mauritania	2_{-4i}	0.2_{-4}	2_{-3}	...	4_{-4i}	6_{-3}	...	...	...	21_{-4i}	12_{-4i}	6_{-4i}	3_{-4i}
Mauritius	1_{-1i}	4_{-3i}	7_{-3}	49_{-3}	...	44_{-1i}	37_{-3}	27_{-3}	3_{-3}	97_{-1i}	66_{-1i}	51_{-1i}	$-_{-2i}$
Mozambique	...	...	1_{-1}	...	...	7_{-4}	...	...	...	32_{-1}	18_{-1}	12_{-1}	...
Namibia	...	...	...	...	16_{-1}	29_{-1}	...	...	...	...	...	...	...
Niger	1_{-1i}	1_{i}	9	...	5_{-4i}	5_{-3}	...	...	...	18_{-1i}	8_{-1i}	3_{-1i}	1_{-1i}
Nigeria	5_{-1i}	...	...	...	...	...	...	...	...	87_{-1i}	70_{-1i}	66_{-1i}	39_{-1i}
Rwanda	1_{i}	4_{i}	14	...	7_{i}	9_{i}	...	...	...	83_{i}	22_{i}	15_{i}	...
Sao Tome and Principe	...	...	2_{-2}	...	...	17_{-2}	...	...	...	...	...	...	...
Senegal	2_{-1i}	2	4	...	...	17	...	...	...	36_{-1i}	19_{-1i}	11_{-1i}	6_{-1i}
Seychelles	2_{-3i}	21_{i}	11	100	16_{i}	14_{i}	...	...	...	98_{-3i}	...	84_{-3i}	...
Sierra Leone	...	...	...	...	...	...	...	...	...	34_{-4}	23_{-4}	12_{-4}	...
Somalia	...	...	2_{-2}	...	...	...	...	...	...	16_{-1}	11_{-1}	10_{-1}	...
South Africa	3_{i}	4_{-1}	5_{-1}	100_{-1}	14_{-1}	27_{-1}	15_{-4}	10_{-4}	5_{-4}	88_{i}	78_{i}	44_{i}	15_{i}
South Sudan	...	...	...	...	...	...	...	...	...	...	...	...	...
Togo	2_{-1i}	4	7	100_{-2}	...	15_{-3}	...	...	...	63_{-1i}	38_{-1i}	16_{-1i}	7_{-1i}
Uganda	1_{-2i}	...	...	...	...	...	...	...	...	86_{-2i}	39_{-2i}	39_{-2i}	13_{-2i}
United Republic of Tanzania	1_{-3i}	...	1_{-2}	94	3_{-2}	4_{+1}	...	...	...	67_{-1}	15_{-1}	7_{-1}	3_{-3i}
Zambia	3_{-1i}	...	...	...	...	...	...	...	...	89_{-1i}	65_{-1i}	38_{-1i}	11_{-1i}
Zimbabwe	1_{-1i}	...	...	100_{-3}	...	10_{-3}	10_{-3}	5_{-3}	1_{-3}	95_{-1i}	91_{-1i}	66_{-1i}	25_{-1i}

	I		J				
	Literacy rate (%)		Illiterates				
			% female		Number (000,000)		Country code
	Youth	Adults	Youth	Adults	Youth	Adults	
	4.6.2						
	2023						
	83$_{-1i}$	72$_{-1i}$	58$_{-1i}$	70$_{-1i}$	1,110$_{-1i}$	5,312$_{-1i}$	AGO
	66$_{-1i}$	47$_{-1i}$	60$_{-1i}$	60$_{-1i}$	856$_{-1i}$	4,009$_{-1i}$	BEN
	...	...	...	...	...	...	BWA
	54$_{-1i}$	34$_{-1i}$	52$_{-1i}$	55$_{-1i}$	2,072$_{-1i}$	8,225$_{-1i}$	BFA
	94$_{-1i}$	76$_{-1i}$	53$_{-1i}$	64$_{-1i}$	152$_{-1i}$	1,678$_{-1i}$	BDI
	99$_{-1i}$	91$_{-1i}$	29$_{-1i}$	70$_{-1i}$	1$_{-1i}$	39$_{-1i}$	CPV
	86$_{-3i}$	78$_{-3i}$	59$_{-3i}$	62$_{-3i}$	703$_{-3i}$	3,262$_{-3i}$	CMR
	38$_{-3i}$	37$_{-3i}$	57$_{-3i}$	60$_{-3i}$	706$_{-3i}$	1,699$_{-3i}$	CAF
	36$_{-1i}$	27$_{-1i}$	54$_{-1i}$	56$_{-1i}$	2,186$_{-1i}$	6,652$_{-1i}$	TCD
	82$_{-1i}$	62$_{-1i}$	47$_{-1i}$	56$_{-1i}$	28$_{-1i}$	196$_{-1i}$	COM
	82$_{-2i}$	81$_{-2i}$	58$_{-2i}$	64$_{-2i}$	187$_{-2i}$	654$_{-2i}$	COG
	67$_{-2}$	50$_{-2i}$	76$_{-4}$	65$_{-4}$	804$_{-4}$	1,484$_{-4}$	CIV
	88$_{-1i}$	81$_{-1i}$	61$_{-1i}$	74$_{-1i}$	2,202$_{-1i}$	10,137$_{-1i}$	COD
	...	...	...	...	...	...	DJI
	...	...	...	...	...	...	GNQ
	...	...	...	...	...	...	ERI
	99$_{-1}$	91$_{-1i}$	35$_{-3i}$	50$_{-3i}$	9$_{-3i}$	81$_{-3i}$	SWZ
	...	...	...	...	...	...	ETH
	91$_{-1i}$	86$_{-1i}$	39$_{-1i}$	51$_{-1i}$	39$_{-1i}$	215$_{-1i}$	GAB
	75$_{-1i}$	59$_{-1i}$	39$_{-1i}$	59$_{-1i}$	137$_{-1i}$	627$_{-1i}$	GMB
	86$_{-1}$	80$_{-3i}$	50$_{-3i}$	61$_{-3i}$	389$_{-3i}$	3,907$_{-3i}$	GHA
	60$_{-2i}$	45$_{-2i}$	63$_{-2i}$	65$_{-2i}$	1,092$_{-2i}$	4,211$_{-2i}$	GIN
	69$_{-1i}$	54$_{-1i}$	60$_{-1i}$	66$_{-1i}$	131$_{-1i}$	573$_{-1i}$	GNB
	96$_{-1}$	83$_{-1i}$	47$_{-1i}$	59$_{-1i}$	1,228$_{-1i}$	5,668$_{-1i}$	KEN
	90$_{-1i}$	82$_{-1i}$	22$_{-1i}$	29$_{-1i}$	46$_{-1i}$	272$_{-1i}$	LSO
	77$_{-4}$	...	...	...	...	...	LBR
	81$_{-1i}$	77$_{-1i}$	50$_{-1i}$	53$_{-1i}$	1,139$_{-1i}$	4,005$_{-1i}$	MDG
	77$_{-1i}$	68$_{-1i}$	44$_{-1i}$	57$_{-1i}$	1,001$_{-1i}$	3,674$_{-1i}$	MWI
	46$_{-3}$	31$_{-3}$	57$_{-3}$	56$_{-3}$	2,142$_{-3}$	7,498$_{-3}$	MLI
	76$_{-2i}$	67$_{-2i}$	54$_{-2i}$	59$_{-2i}$	213$_{-2i}$	875$_{-2i}$	MRT
	99$_{-2i}$	92$_{-2i}$	30$_{-2i}$	62$_{-2i}$	1$_{-2i}$	85$_{-2i}$	MUS
	70$_{-3}$	60$_{-3}$	60$_{-3}$	67$_{-3}$	1,835$_{-3}$	6,871$_{-3}$	MOZ
	96$_{-2i}$	92$_{-2i}$	39$_{-2i}$	52$_{-2i}$	21$_{-2i}$	124$_{-2i}$	NAM
	48$_{-1i}$	38$_{-1i}$	57$_{-1i}$	56$_{-1i}$	2,591$_{-1i}$	8,138$_{-1i}$	NER
	74$_{-2}$	63$_{-2i}$	...	...	...	...	NGA
	90$_{-1}$	79$_{-1}$	38$_{-1}$	57$_{-1}$	279$_{-1}$	1,772$_{-1}$	RWA
	98$_{-1i}$	94$_{-1i}$	45$_{-1i}$	72$_{-1i}$	1$_{-1i}$	8$_{-1i}$	STP
	78$_{-1i}$	58$_{-1i}$	56$_{-1i}$	65$_{-1i}$	740$_{-1i}$	4,227$_{-1i}$	SEN
	99$_{-3i}$	96$_{-3i}$	19$_{-3i}$	41$_{-3i}$	0.1$_{-3i}$	3$_{-3i}$	SYC
	73$_{-1i}$	49$_{-1i}$	53$_{-1i}$	57$_{-1i}$	465$_{-1i}$	2,659$_{-1i}$	SLE
	71$_{-1}$	54$_{-1}$	59$_{-1}$	62$_{-1}$	1,008$_{-1}$	4,197$_{-1}$	SOM
	97$_{-2}$	90$_{-2}$	37$_{-2}$	56$_{-2}$	310$_{-2}$	4,219$_{-2}$	ZAF
	...	...	...	...	...	...	SSD
	88$_{-4}$	67$_{-4}$	66$_{-4}$	69$_{-4}$	187$_{-4}$	1,564$_{-4}$	TGO
	92$_{-1i}$	81$_{-1i}$	43$_{-1i}$	62$_{-1i}$	839$_{-1i}$	4,976$_{-1i}$	UGA
	87$_{-1}$	82$_{-1i}$	47$_{-1i}$	61$_{-1i}$	1,495$_{-1i}$	6,560$_{-1i}$	TZA
	93$_{-3i}$	88$_{-3i}$	53$_{-3i}$	65$_{-3i}$	259$_{-3i}$	1,301$_{-3i}$	ZMB
	91$_{-1i}$	90$_{-1i}$	30$_{-1i}$	47$_{-1i}$	309$_{-1i}$	971$_{-1i}$	ZWE

TABLE 4: Continued

Country or territory	A	B	C	D	E	F	G			H			
							% of adults 15+ with ICT skills			% of adults 25+ having attained at least			
	Participation in adult education and training (%)	% of youth enrolled in TVET	TVET share of secondary enrolment (%)	TVET share of post-secondary non-tertiary (%)	Gross graduation ratio from tertiary (%)	GER tertiary (%)	Copy and paste within document	Use formula in spreadsheet	Write computer program	Primary	Lower secondary	Upper secondary	Post-secondary
SDG indicator	4.3.1	4.3.3				4.3.2	4.4.1			4.4.3			
Reference year	2023						2023						
Northern Africa and Western Asia													
Algeria	...	2	7	...	36	56	...	...	...	64_{-4}	45_{-4}	24_{-4}	...
Armenia	1_{-1i}	12	9	...	39	61	...	...	...	100_{-1i}	99_{-1i}	96_{-1i}	53_{-1i}
Azerbaijan	...	11_{i}	7	100_{+1}	32_{i}	41_{i}	74_{-2}	25_{-2}	...	100	98	92	33
Bahrain	...	4	6	100	50	72	68_{-2}	46_{-2}	17_{-3}	90	83	67	41
Cyprus	3_{-1i}	6_{-1i}	9_{-1}	...	3_{-1i}	98_{-1i}	48_{-4}	28_{-4}	4_{-4}	97_{-1i}	86_{-1i}	78_{-1i}	43_{-1i}
Egypt	0.4_{-1i}	11_{-2}	22_{-2}	100	40	39	62_{-3}	23_{-3}	11_{-3}	67_{-1i}		54_{-1i}	21_{-1i}
Georgia	2_{i}	3	4	100	40	80	32_{-2}	10_{-2}	1_{-3}	99_{i}	98_{i}	93_{i}	54_{i}
Iraq	2_{-2i}	...	...	...	...	...	1_{-4}	1_{-4}	0.2_{-4}	32_{-2i}	32_{-2i}	23_{-2i}	17_{-2i}
Israel	10_{-1i}	15_{-1i}	20_{-1}	...	40_{-1i}	58_{-1i}	...	...	...	96_{-1i}	92_{-1i}	85_{-1i}	50_{-1i}
Jordan	1_{-1i}	1_{i}	3	...	...	33_{i}	...	...	...	88	79	43	32
Kuwait	...	...	...	...	33_{-3}	62_{-2}	68_{-2}	38_{-2}	15_{-2}	...	...	...	...
Lebanon	...	...	14	...	...	60	...	...	...	86_{-4i}	65_{-4i}	42_{-4i}	29_{-4i}
Libya	...	...	...	...	...	...	...	...	...	...	...	...	...
Morocco	...	9	8	100_{-1}	22	48	57_{-2}	24_{-2}	10_{-2}	...	...	...	...
Oman	...	1	0.2	...	31	46	84_{-3}	25_{-3}	8_{-3}	98_{-1}	97_{-1}	64_{-1}	18_{-1i}
Qatar	...	1_{-1i}	1	...	13_{-1i}	35_{-1i}	54_{-3}	23_{-3}	5_{-4}	90_{-1}	74_{-1}	51_{-1}	35_{-1}
Saudi Arabia	1_{-3i}	6_{-2i}	0.3_{-1}	33_{-1}	42_{-1i}	74_{-1i}	100_{-2}	75_{-2}	25_{-2}	92_{i}	80_{i}	65_{i}	38_{i}
State of Palestine (the)	2_{-1i}	4	1	100	34	43	15_{-4}	8_{-4}	3_{-4}	96_{-1}	69_{-1}	47_{-1}	...
Sudan	2_{-1i}	...	...	...	...	...	...	...	...	32_{-1i}	25_{-1i}	20_{-1i}	11_{-1i}
Syrian Arab Republic	...	2	6	75	...	...	...	...	...	...	...	...	...
Tunisia	2_{i}	...	...	...	28	38	23_{-4}	18_{-4}	16_{-4}	83_{i}		44_{i}	16_{-4}
Türkiye	9_{i}	23_{-1i}	21_{-1}	...	35_{-1i}	128_{-1i}	28_{-2}	14_{-2}	3_{-2}	86_{i}	53_{-1i}	41_{i}	21_{-1i}
United Arab Emirates	1_{-1i}	6_{i}	6	100	...	61_{i}	100_{-2}	84_{-2}	22_{-2}	93_{-1}	85_{-1}	74_{-1}	56_{-1}
Yemen	...	...	...	...	...	...	...	...	...	46	34	26	...
Central and Southern Asia													
Afghanistan	0.4_{-3i}	...	...	...	11_{-3}	11_{-3}	...	...	...	21_{-1}	15_{-1}	13_{-1}	5_{-2}
Bangladesh	2_{-1i}	4	7	100	...	24	34_{-2}	14_{-2}	1_{-2}	64_{-1i}	46_{-1i}	29_{-1i}	18_{-2}
Bhutan	2_{i}	...	2_{-1}	100_{-3}	...	15	10_{-2}	6_{-2}	1_{-2}	...	...	...	...
India	0.4_{i}	2	3	100	29_{i}	33	...	...	...	66	52	34	14
Iran, Islamic Republic of	2_{-1i}	8_{-3}	16_{-3}	...	25_{-3}	61_{-1}	17_{-2}	4_{-2}	1_{-2}	87_{-1i}	64_{-1i}	45_{-1i}	45_{-1i}
Kazakhstan	...	18_{+1}	10_{+1}	100_{+1}	63_{-3}	55_{+1}	15_{-2}	40_{-2}	6_{-3}	100_{-4}	99_{-4}	94_{-4}	...
Kyrgyzstan	0.3_{-2i}	7_{-2}	8_{+1}	100_{+1}	31	56_{+1}	...	...	...	...	...	...	...
Maldives	7_{-4i}	...	...	...	...	50_{-1}	...	...	...	93_{-4i}	57_{-4i}	29_{-4i}	26_{-4i}
Nepal	...	1_{+1}	1_{+1}	...	...	18	...	...	...	46_{-2}	34_{-2}	13_{-2}	...
Pakistan	0.4_{-2i}	1_{-1}	3_{-1}	100_{-1}	...	11	4_{-3}	2_{-3}	2_{-3}	50_{-2i}	38_{-2i}	27_{-2i}	9_{-2i}
Sri Lanka	2_{-1i}	...	3_{-1}	100_{-1}	13_{-1}	23_{-1}	...	...	...	87_{-1i}	82_{-1}	64_{-1}	5_{-3i}
Tajikistan	...	...	1_{+1}	...	...	34_{+1}	...	...	...	...	...	...	...
Turkmenistan	...	$-_{-1}$	...	100_{-1}	...	18_{-1}	...	...	...	100_{-4}	98_{-4}	33_{-4i}	...
Uzbekistan	...	6_{+1}	5_{+1}	100_{+1}	20_{i}	57_{+1}	24_{-2}	14_{-2}	1_{-2}	100_{-1}	100_{-1}	97_{-1}	...
Eastern and South-eastern Asia													
Brunei Darussalam	1_{-1i}	6_{-2}	13	...	23_{-3}	38	60_{-4}	42_{-4}	28_{-4}	91_{-1i}	88_{-1i}	69_{-1i}	37_{-1i}
Cambodia	0.2_{-2i}	...	2	100	...	18	...	...	...	43_{-2}	22_{-2}	12_{-2}	6_{-2i}
China	...	...	19	75_{-2}	47	75	...	...	...	96_{-3}	72_{-3}	32_{-3}	16_{-3}
DPR Korea	...	...	...	...	...	...	...	...	...	97_{-1i}	89_{-1i}	80_{-1i}	48_{-1i}
Hong Kong, China	...	3_{i}	1	66	...	100_{i}	59_{-2}	40_{-2}	1_{-2}	100_{i}	81_{-1}	66_{i}	32_{-1}
Indonesia	1_{i}	13	19	...	30	45	...	...	...	84_{i}	57_{i}	39_{i}	12_{-1i}
Japan	...	...	11_{-1}	...	49_{-1i}	65_{-1i}	64_{-2}	51_{-2}	...	100_{-3}	99_{-3}	85_{-3}	42_{-3}
Lao PDR	4_{-1i}	5	2	100	9_{-4}	15	...	...	...	74_{-1i}	40_{-1i}	24_{-1i}	12_{-1i}
Macao, China	...	1_{i}	3	...	72_{i}	129_{i}	42_{-2}	35_{-2}	5_{-2}	...	...	...	...
Malaysia	...	5	6	...	16	41	78_{-2}	44_{-2}	16_{-2}	95_{-1}	81_{-1}	70_{-1}	26_{-1}
Mongolia	1_{i}	8_{-1}	8	100	56	65	17_{-2}	21_{-2}	3_{-2}	98_{i}	93_{i}	83_{i}	60_{i}
Myanmar	0.5_{-3i}	...	...	...	...	...	...	...	...	87_{-3i}	78_{-3i}	62_{-3i}	29_{-3i}
Philippines	...	6_{-2}	10	100_{-2}	...	45	6_{-4}	2_{-4}	1_{-4}	86_{-1}	62_{-1}	34_{-1}	26_{-1i}
Republic of Korea	2_{i}	11_{-1i}	8_{-1}	...	58_{-1i}	103_{-1i}	97_{-2}	54_{-2}	10_{-2}	98_{i}	90_{i}	81_{i}	48_{-1i}
Singapore	2_{i}	23_{-1i}	...	72_{-1}	61_{-1i}	98_{-1i}	51_{-2}	33_{-2}	9_{-2}		85_{-1}	63_{i}	63_{-1}
Thailand	0.3_{i}	11_{+1}	13_{+1}	100_{+1}	30_{i}	48_{+1}	23_{-3}	15_{-3}	1_{-3}	75_{i}	54_{i}	39_{i}	22_{i}
Timor-Leste	7_{-1i}	5_{-4}	9_{-3}	...	...	31	...	...	...	46_{-1i}	38_{-1i}	15_{-1i}	3_{-1i}
Viet Nam	0.5_{i}	15_{-1}	9_{-1}	100_{-1}	18_{-1}	42_{-1}	26_{-2}	16_{-2}	1_{-2}	87_{i}	66_{i}	39_{i}	19_{i}

	I		J				
	Literacy rate (%)		Illiterates				
			% female		Number (000,000)		Country code
	Youth	Adults	Youth	Adults	Youth	Adults	
	4.6.2						
	2023						
	74$_{-4}$	...	...	...	...	...	DZA
	100$_{-3}$	100$_{-3}$	40$_{-3}$	68$_{-3}$	0.4$_{-3}$	5$_{-3}$	ARM
	100	100	47	65	2	17	AZE
	99	98	49	61	1	25	BHR
	100$_{-2i}$	99$_{-2i}$	44$_{-2i}$	67$_{-2i}$	0.1$_{-2i}$	7$_{-2i}$	CYP
	92$_{-1i}$	74$_{-1i}$	52$_{-1i}$	61$_{-1i}$	1,455$_{-1i}$	18,825$_{-1i}$	EGY
	100$_{-1}$	100$_{-1}$	16$_{-1}$	59$_{-1}$	1$_{-1}$	13$_{-1}$	GEO
	...	...	...	...	...	...	IRQ
	...	...	...	...	...	...	ISR
	99	95	38	74	16	386	JOR
	99$_{-3}$	96$_{-3}$	28$_{-3}$	48$_{-3}$	3$_{-3}$	127$_{-3}$	KWT
	...	...	...	...	...	...	LBN
	...	...	...	...	...	...	LBY
	99$_{-1i}$	77$_{-1i}$	53$_{-1i}$	68$_{-1i}$	88$_{-1i}$	6,183$_{-1i}$	MAR
	100$_{-1}$	97$_{-1}$	42$_{-1}$	67$_{-1}$	2$_{-1}$	90$_{-1}$	OMN
	...	...	...	...	...	...	QAT
	99$_{-3}$	98$_{-3}$	53$_{-3}$	65$_{-3}$	28$_{-3}$	642$_{-3}$	SAU
	99$_{-1}$	98$_{-1}$	52$_{-1}$	76$_{-1}$	7$_{-1}$	69$_{-1}$	PSE
	...	...	...	...	...	...	SDN
	98$_{-2}$	94$_{-2}$	48$_{-2}$	75$_{-2}$	77$_{-2}$	772$_{-2}$	SYR
	98$_{-1}$	85$_{-1i}$	55$_{-4}$	69$_{-4}$	53$_{-4}$	1,751$_{-4}$	TUN
	100$_{-4}$	97$_{-4}$	80$_{-4}$	86$_{-4}$	13$_{-4}$	2,060$_{-4}$	TUR
	100$_{-1}$	98$_{-1}$	46$_{-1}$	44$_{-1}$	3$_{-1}$	121$_{-1}$	ARE
	69	...	...	...	...	...	YEM
	63$_{-1}$	37$_{-2}$	66$_{-2}$	62$_{-2}$	3,736$_{-2}$	14,016$_{-2}$	AFG
	95$_{-2}$	76$_{-2}$	39$_{-2}$	57$_{-2}$	1,712$_{-2}$	29,161$_{-2}$	BGD
	98$_{-1i}$	72$_{-1i}$	48$_{-1i}$	60$_{-1i}$	3$_{-1i}$	169$_{-1i}$	BTN
	97	77	61	65	8,221	238,079	IND
	99$_{-1i}$	89$_{-1i}$	44$_{-1i}$	68$_{-1i}$	134$_{-1i}$	7,435$_{-1i}$	IRN
	100$_{-3i}$	100$_{-3i}$	100$_{-3i}$	70$_{-3i}$	1$_{-3i}$	21$_{-3i}$	KAZ
	100$_{-4i}$	100$_{-4i}$	40$_{-4i}$	64$_{-4i}$	3$_{-4i}$	17$_{-4i}$	KGZ
	99$_{-2i}$	98$_{-2i}$	53$_{-2i}$	31$_{-2i}$	0.4$_{-2i}$	8$_{-2i}$	MDV
	94$_{-2i}$	71$_{-2i}$	59$_{-2i}$	69$_{-2i}$	369$_{-2i}$	5,944$_{-2i}$	NPL
	73$_{-4}$	58$_{-4}$	62$_{-4}$	63$_{-4}$	12,279$_{-4}$	57,994$_{-4}$	PAK
	99$_{-1}$	92$_{-1}$	28$_{-1}$	58$_{-1}$	40$_{-1}$	1,257$_{-1}$	LKA
	...	...	...	...	...	...	TJK
	...	...	...	...	...	...	TKM
	100$_{-1}$	100$_{-1}$	50$_{-1}$	50$_{-1}$	-$_{-1}$	-$_{-1}$	UZB
	100$_{-2i}$	98$_{-2i}$	35$_{-2i}$	63$_{-2i}$	0.2$_{-2i}$	8$_{-2i}$	BRN
	96$_{-1i}$	84$_{-1i}$	43$_{-1i}$	64$_{-1i}$	112$_{-1i}$	1,917$_{-1i}$	KHM
	100$_{-3}$	97$_{-3}$	45$_{-3}$	75$_{-3}$	395$_{-3}$	38,069$_{-3}$	CHN
	...	...	...	...	...	...	PRK
	...	...	...	...	...	...	HKG
	100$_{-3}$	96$_{-3}$	48$_{-3}$	68$_{-3}$	97$_{-3}$	8,030$_{-3}$	IDN
	...	...	...	...	...	...	JPN
	95$_{-1i}$	88$_{-1i}$	58$_{-1i}$	66$_{-1i}$	79$_{-1i}$	646$_{-1i}$	LAO
	100$_{-2i}$	97$_{-2i}$	10$_{-2i}$	76$_{-2i}$	0.1$_{-2i}$	17$_{-2i}$	MAC
	99$_{-1}$	96$_{-1}$	69$_{-1}$	62$_{-1}$	67$_{-1}$	1,103$_{-1}$	MYS
	99$_{-3}$	99$_{-3}$	41$_{-3}$	47$_{-3}$	4$_{-3}$	18$_{-3}$	MNG
	95$_{-4}$	89$_{-4}$	47$_{-4}$	65$_{-4}$	419$_{-4}$	4,216$_{-4}$	MMR
	100$_{-1}$	98$_{-3}$	42$_{-3}$	47$_{-3}$	163$_{-3}$	1,170$_{-3}$	PHL
	...	...	...	...	...	...	KOR
	100$_{-2}$	98$_{-2}$	38$_{-2}$	75$_{-2}$	1$_{-2}$	118$_{-2}$	SGP
	98$_{-1}$	91$_{-1i}$	35$_{-2i}$	63$_{-2i}$	113$_{-2i}$	3,550$_{-2i}$	THA
	85$_{-3i}$	70$_{-3i}$	44$_{-3i}$	55$_{-3i}$	42$_{-3i}$	247$_{-3i}$	TLS
	99$_{-1}$	96$_{-1}$	44$_{-1}$	65$_{-1}$	131$_{-1}$	2,938$_{-1}$	VNM

TABLE 4: Continued

Country or territory	A	B	C	D	E	F	G			H			
							% of adults 15+ with ICT skills			% of adults 25+ having attained at least			
	Participation in adult education and training (%)	% of youth enrolled in TVET	TVET share of secondary enrolment (%)	TVET share of post-secondary non-tertiary (%)	Gross graduation ratio from tertiary (%)	GER tertiary (%)	Copy and paste within document	Use formula in spreadsheet	Write computer program	Primary	Lower secondary	Upper secondary	Post-secondary
SDG indicator	4.3.1	4.3.3				4.3.2	4.4.1			4.4.3			
Reference year	2023						2023						
Oceania													
Australia	10_{i}	14_{-1i}	29_{-1}	100_{-1}	74_{-1i}	106_{-1i}	...	...	...	99_{i}	93_{i}	79_{i}	52_{i}
Cook Islands	...	5	...	100	...	...	...	...	...	99_{i}	96_{i}	74_{i}	19_{i}
Fiji	...	1_{-3}	1	...	...	60	...	...	...	91_{-2}	64_{-2}	26_{-2i}	...
Kiribati	1_{-3i}	1	3	...	...	...	...	...	...	97_{-3i}	85_{-3i}	46_{-3i}	6_{-3i}
Marshall Islands	7_{-2i}	1_{-2}	2_{-2}	50_{-1}	4_{-4}	54_{-1}	...	...	...	93_{-2i}	68_{-2i}	48_{-2i}	18_{-2i}
Micronesia, F. S.	...	...	...	...	...	...	...	...	...	...	...	...	...
Nauru	5_{-2i}	-	...	...	...	...	...	...	...	94_{-2i}	70_{-2i}	31_{-2i}	5_{-2i}
New Zealand	...	14_{-1i}	17_{-1}	94_{-1}	41_{-1i}	77_{-1i}	...	...	...	82_{-3i}	82_{-3}	75_{-3}	51_{-3}
Niue	5_{-1i}	5_{-3}	4_{-3}	...	...	...	...	...	...	79_{-1i}	79_{-1i}	71_{-1i}	49_{-1i}
Palau	1_{-3i}	$-_{-2}$	...	100	...	35	...	...	...	96_{-3i}	94_{-3i}	88_{-3i}	36_{-3i}
Papua New Guinea	3_{-1i}	...	...	...	...	...	...	...	...	63_{-1i}	35_{-1i}	20_{-1i}	14_{-1i}
Samoa	2_{-1i}	...	...	...	3_{-2}	13	...	...	...	95_{-1i}	92_{-1i}	44_{-1i}	23_{-1i}
Solomon Is	...	...	...	...	...	...	...	...	...	...	...	...	...
Tokelau	...	-	...	...	$-_{-3}$	...	...	...	...	70_{-1i}	66_{-1i}	36_{-1i}	25_{-1i}
Tonga	4_{-2i}	8_{-3i}	3	20	...	51_{i}	...	...	...	100_{-2i}	94_{-2i}	69_{-2i}	24_{-2i}
Tuvalu	14_{-1i}	4	6	...	...	...	...	...	...	52_{-1i}	48_{-1i}	39_{-1i}	6_{-1i}
Vanuatu	3_{-3i}	...	54	...	...	...	...	...	...	88_{-3i}	44_{-3i}	19_{-3i}	6_{-3i}
Latin America and the Caribbean													
Anguilla	...	$-_{-1}$	$-_{-1}$	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	...	...	...	...	...	...	...	...	...	90_{-2}	83_{-2}	74_{-2}	...
Argentina	8_{i}	...	...	...	28_{-1}	107_{-1}	...	...	...	...	...	...	...
Aruba	...	...	23_{-1}	...	...	...	...	...	...	...	...	...	...
Bahamas	...	-	...	...	...	...	...	...	...	99_{i}	95_{i}	91_{i}	38_{i}
Barbados	...	-	...	51	...	...	...	...	...	99_{-4i}	50_{-4i}	32_{-4i}	29_{-4i}
Belize	2_{-2i}	3	6	...	...	23	...	...	...	87_{-2}	52_{-3}	43_{-3}	21_{-3}
Bolivia, P. S.	9_{i}	28_{i}	63	...	...	...	...	...	...	76_{i}	62_{i}	52_{i}	31_{i}
Brazil	7_{i}	4_{-1i}	5_{-1}	100_{-1}	...	60_{-1i}	24_{-2}	13_{-2}	2_{-2}	85_{i}	69_{i}	60_{i}	...
British Virgin Islands	...	2_{-2}	4_{-1}	...	...	29	...	...	...	...	...	...	...
Cayman Islands	...	-	...	...	...	45_{-1}	...	...	...	...	...	...	...
Chile	7_{i}	13_{-1i}	11_{-1}	...	18_{-1i}	99_{-1i}	...	...	...	92_{i}	87_{i}	68_{i}	30_{i}
Colombia	4_{i}	9_{-1i}	8_{-1}	...	30_{-2i}	59_{-1i}	27_{-2}	20_{-2}	5_{-2}	82_{i}	61_{i}	57_{i}	27_{i}
Costa Rica	9_{i}	9_{-1i}	25_{-1}	...	...	55_{-4i}	...	...	...	86_{i}	54_{i}	40_{i}	20_{i}
Cuba	...	12	25	100	...	49	24_{-2}	25_{-2}	6_{-2}	92_{-4}	80_{-4}	55_{-4}	...
Curaçao	...	28_{i}	38	...	...	16_{-1}	...	...	...	99_{-3}	90_{-3}	51_{-3}	...
Dominica	...	-	-	-	...	...	...	...	...	80_{-2}	61_{-2}	53_{-2}	...
Dominican Republic	6_{i}	5	12	...	...	55_{-1i}	...	...	...	68_{i}	61_{i}	36_{i}	19_{i}
Ecuador	4_{i}	8_{i}	15	...	...	60_{-1i}	24_{-3}	18_{-3}	3_{-3}	84_{-1}	54_{-1}	45_{-1}	14_{-1}
El Salvador	2_{i}	7	15	...	13_{-4}	32	...	...	...	65	49	34	...
Grenada	1_{-3i}	...	...	100_{-3}	...	...	...	...	...	99_{-3i}	53_{-3i}	50_{-3i}	25_{-3i}
Guatemala	3_{i}	8	27	...	...	27	...	...	...	53_{i}	33_{i}	18_{i}	5_{-4}
Guyana	2_{-4i}	0.3	-	100	...	...	...	...	...	84_{-4}	57_{-4}	35_{-4}	11_{-4i}
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	...
Honduras	3_{i}	7	36	...	11_{-4}	22_{-1}	...	...	...	61_{i}	29_{i}	19_{i}	4_{i}
Jamaica	2_{-1i}	-	...	85	...	...	16_{-2}	7_{-2}	1_{-2}	93_{-1}	77_{-1}	56_{-1}	34_{-1i}
Mexico	3_{i}	11_{-1i}	26_{-1}	...	32_{-2i}	46_{-1i}	29_{-2}	25_{-2}	6_{-2}	86_{i}	69_{i}	41_{i}	19_{-3}
Montserrat	...	...	...	...	...	...	...	...	...	73_{-3i}	65_{-3i}	65_{-3i}	65_{-3i}
Nicaragua	...	2	8	100	...	30	...	...	...	85_{-2}	62_{-2}	52_{-2}	...
Panama	6_{i}	...	18_{-2}	...	14_{-3}	58_{-1}	...	...	...	89_{i}	67_{i}	51_{i}	17_{i}
Paraguay	...	5	11	...	...	...	...	...	...	80_{-1}	57_{-1}	46_{-1}	...
Peru	4_{-1i}	2	7	...	...	...	31_{-4}	20_{-4}	3_{-4}	86_{i}	70_{i}	64_{i}	26_{i}
Saint Kitts and Nevis	...	$-_{-2}$	$-_{-2}$	...	...	...	...	...	...	...	...	...	...
Saint Lucia	0.3_{-1i}	1	2	43	...	16_{-1}	...	...	...	59_{-1i}	32_{-1i}	20_{-1i}	19_{-1i}
Saint Vincent/Grenadines	...	...	3	...	...	41_{-1}	...	...	...	...	...	...	...
Sint Maarten	...	...	...	100	0.4_{-1}	4	...	...	...	...	...	...	...
Suriname	...	...	35	...	...	6_{-1}	...	...	...	...	...	...	...
Trinidad and Tobago	1_{-1i}	2_{-4}	0.5_{-4}	32	5	...	...	...	...	94_{-1}	72_{-1}	63_{-1}	21_{-1i}
Turks and Caicos Islands	...	$-_{-1}$	...	...	...	25	...	...	...	96_{-4}	88_{-4}	75_{-4}	...
Uruguay	8_{i}	10_{-1i}	24_{-1}	...	22_{-1i}	76_{-1i}	...	...	...	93_{i}	61_{i}	34_{i}	15_{i}
Venezuela, B. R.	...	1	1	...	...	...	...	...	...	...	...	...	...

	I		J				
	Literacy rate (%)		Illiterates				
			% female		Number (000,000)		Country code
	Youth	Adults	Youth	Adults	Youth	Adults	
	4.6.2						
	2023						
	...	...	...	...	...	...	AUS
	...	...	...	...	...	...	COK
	98$_{-2}$	...	...	...	...	...	FJI
	...	...	...	...	...	...	KIR
	...	...	...	...	...	...	MHL
	...	...	...	...	...	...	FSM
	...	...	...	...	...	...	NRU
	...	...	...	...	...	...	NZL
	...	...	...	...	...	...	NIU
	...	...	...	...	...	...	PLW
	...	...	...	...	...	...	PNG
	99$_{-2i}$	99$_{-2i}$	33$_{-2i}$	41$_{-2i}$	0.3$_{-2i}$	1$_{-2i}$	WSM
	...	...	...	...	...	...	SLB
	...	...	...	...	...	...	TKL
	99$_{-2i}$	99$_{-2i}$	41$_{-2i}$	47$_{-2i}$	0.1$_{-2i}$	0.4$_{-2i}$	TON
	99$_{-4}$	...	...	...	...	...	TUV
	97$_{-2i}$	89$_{-2i}$	45$_{-2i}$	54$_{-2i}$	2$_{-2i}$	21$_{-2i}$	VUT
	...	...	...	...	...	...	AIA
	...	...	...	...	...	...	ATG
	...	...	...	...	...	...	ARG
	100$_{-3i}$	98$_{-3i}$	60$_{-3i}$	53$_{-3i}$	0.1$_{-3i}$	2$_{-3i}$	ABW
	...	...	...	...	...	...	BHS
	...	...	...	...	...	...	BRB
	...	...	...	...	...	...	BLZ
	100$_{-2}$	94$_{-3}$	52$_{-3}$	79$_{-3}$	10$_{-3}$	490$_{-3}$	BOL
	99$_{-1}$	95$_{-1i}$	32$_{-1i}$	49$_{-1i}$	189$_{-1i}$	9,077$_{-1i}$	BRA
	...	...	...	...	...	...	VGB
	...	...	...	...	...	...	CYM
	99$_{-1}$	97$_{-1i}$	56$_{-1i}$	51$_{-1i}$	23$_{-1i}$	455$_{-1i}$	CHL
	99$_{-1}$	96$_{-3}$	35$_{-3}$	48$_{-3}$	86$_{-3}$	1,721$_{-3}$	COL
	100$_{-2i}$	98$_{-2i}$	41$_{-2i}$	49$_{-2i}$	4$_{-2i}$	80$_{-2i}$	CRI
	100$_{-2i}$	100$_{-2i}$	41$_{-2i}$	44$_{-2i}$	2$_{-2i}$	31$_{-2i}$	CUB
	...	...	...	...	...	...	CUW
	...	...	...	...	...	...	DMA
	99$_{-1}$	96$_{-1i}$	59$_{-1i}$	49$_{-1i}$	20$_{-1i}$	366$_{-1i}$	DOM
	96$_{-1}$	94$_{-1}$	43$_{-1}$	58$_{-1}$	27$_{-1}$	798$_{-1}$	ECU
	98	90	37	62	24	479	SLV
	...	...	...	...	...	...	GRD
	95$_{-1}$	83$_{-1}$	53$_{-1i}$	64$_{-1i}$	142$_{-1i}$	1,877$_{-1i}$	GTM
	98$_{-1i}$	90$_{-1i}$	42$_{-1i}$	54$_{-1i}$	3$_{-1i}$	57$_{-1i}$	GUY
	...	...	...	...	...	...	HTI
	96$_{-4}$	89$_{-4}$	34$_{-4}$	49$_{-4}$	82$_{-4}$	774$_{-4}$	HND
	94$_{-1}$	...	...	...	...	...	JAM
	99$_{-1}$	95$_{-3}$	45$_{-3}$	60$_{-3}$	197$_{-3}$	4,444$_{-3}$	MEX
	...	...	...	...	...	...	MSR
	...	...	...	...	...	...	NIC
	99$_{-1}$	96$_{-4}$	50$_{-4}$	55$_{-4}$	8$_{-4}$	130$_{-4}$	PAN
	99$_{-1}$	95$_{-3}$	49$_{-3}$	54$_{-3}$	16$_{-3}$	253$_{-3}$	PRY
	99$_{-1}$	94$_{-3}$	57$_{-3}$	73$_{-3}$	32$_{-3}$	1,341$_{-3}$	PER
	...	...	...	...	...	...	KNA
	...	...	...	...	...	...	LCA
	...	...	...	...	...	...	VCT
	...	...	...	...	...	...	SXM
	99$_{-2i}$	95$_{-2i}$	59$_{-2i}$	66$_{-2i}$	1$_{-2i}$	23$_{-2i}$	SUR
	92$_{-1}$	...	...	...	...	...	TTO
	100$_{-3}$	...	...	...	...	...	TCA
	99$_{-1}$	99$_{-1}$	35$_{-1}$	41$_{-1}$	4$_{-1}$	32$_{-1}$	URY
	99$_{-1i}$	98$_{-1i}$	34$_{-1i}$	48$_{-1i}$	59$_{-1i}$	485$_{-1i}$	VEN

TABLE 4: Continued

Country or territory	A	B	C	D	E	F	G			H				
	Participation in adult education and training (%)	% of youth enrolled in TVET	TVET share of secondary enrolment (%)	TVET share of post-secondary non-tertiary (%)	Gross graduation ratio from tertiary (%)	GER tertiary (%)	% of adults 15+ with ICT skills: Copy and paste within document	Use formula in spreadsheet	Write computer program	% of adults 25+ having attained at least: Primary	Lower secondary	Upper secondary	Post-secondary	
SDG indicator	4.3.1	4.3.3				4.3.2	4.4.1			4.4.3				
Reference year	2023						2023							
Europe and Northern America														
Albania	1$_{-1i}$	6$_{i}$	8	...	44$_{i}$	65$_{i}$	22$_{-2}$	...	6$_{-2}$	98$_{-1i}$	92$_{-1i}$	53$_{-1i}$	18$_{-4i}$	
Andorra	...	7	...	100	13	64	...	...	...	99$_{-1}$	83$_{-1}$	61$_{-1}$	40$_{-1}$	
Austria	6$_{i}$	29$_{-1i}$	35$_{-1}$	100$_{-1}$	37$_{-1i}$	95$_{-1i}$	65$_{-2}$	...	10$_{-2}$	100$_{i}$	99$_{i}$	83$_{i}$	36$_{i}$	
Belarus	18$_{-1i}$	17	13	100	61	67	38$_{-2}$	18$_{-2}$	1$_{-2}$	100$_{i}$	98$_{-4}$	98$_{i}$	74$_{-4}$	
Belgium	9$_{-1i}$	23$_{-1i}$	40$_{-1}$	92$_{-1}$	49$_{-1i}$	84$_{-1i}$	57$_{-4}$	44$_{-2}$	5$_{-2}$	97$_{-1i}$	90$_{-1i}$	75$_{-1i}$	41$_{-1i}$	
Bermuda	...	1	...	...	...	17	...	...	...	...	...	...	...	
Bosnia and Herzegovina	2$_{i}$	25	38	...	33	45	55$_{-2}$	18$_{-2}$	2$_{-2}$	91$_{i}$	72$_{i}$	72$_{i}$	19$_{i}$	
Bulgaria	2$_{-2i}$	20$_{-1i}$	33$_{-1}$	100$_{-1}$	54$_{-3i}$	84$_{-1i}$	39$_{-2}$	...	1$_{-2}$	99$_{-1i}$	96$_{-1i}$	79$_{-1i}$	27$_{-1i}$	
Canada	5$_{i}$	7$_{-1i}$	5$_{-1}$	...	45$_{-1i}$	77$_{-1i}$	...	...	...	96$_{i}$	96$_{i}$	90$_{i}$	68$_{i}$	
Croatia	4$_{-1i}$	24$_{-1i}$	38$_{-1}$	...	47$_{-1i}$	81$_{-1i}$	81$_{-2}$	46$_{-2}$	4$_{-2}$	99$_{-1i}$	95$_{-1i}$	80$_{-1i}$	23$_{-1i}$	
Czechia	2$_{-1i}$	29$_{-1i}$	33$_{-1}$	23$_{-1}$	43$_{-1i}$	71$_{-1i}$	47$_{-2}$	37$_{-2}$	5$_{-2}$	99$_{-1i}$	99$_{-1i}$	91$_{-1i}$	23$_{-1i}$	
Denmark	20$_{-1i}$	12$_{-1i}$	22$_{-1}$	...	60$_{-2i}$	85$_{-1i}$	...	48$_{-2}$	11$_{-2}$	99$_{-1i}$	92$_{-1i}$	77$_{-1i}$	37$_{-1i}$	
Estonia	15$_{-1i}$	12$_{-1i}$	22$_{-1}$	100$_{-1}$	45$_{-1i}$	71$_{-1i}$	55$_{-2}$	42$_{-2}$	6$_{-2}$	100$_{-1i}$	99$_{-1i}$	86$_{-1i}$	49$_{-1i}$	
Finland	22$_{-1i}$	19$_{-1i}$	44$_{-1}$	100$_{-1}$	61$_{-1i}$	105$_{-1i}$	...	53$_{-2}$	9$_{-2}$	100$_{-1i}$	92$_{-1i}$	81$_{-1i}$	39$_{-1i}$	
France	3$_{i}$	19$_{-1i}$	18$_{-1}$	44$_{-1}$	52$_{-1i}$	71$_{-1i}$	64$_{-2}$	...	6$_{-2}$	100$_{i}$	92$_{i}$	78$_{i}$	37$_{i}$	
Germany	7$_{-1i}$	20$_{-1i}$	18$_{-1}$	95$_{-1}$	47$_{-1i}$	77$_{-1i}$	57$_{-4}$	34$_{-2}$	5$_{-2}$	99$_{-1i}$	94$_{-1i}$	81$_{-1i}$	40$_{-1i}$	
Greece	3$_{-1i}$	14$_{-1i}$	18$_{-1}$	100$_{-1}$	57$_{-1i}$	167$_{-1i}$	56$_{-2}$	36$_{-2}$	3$_{-2}$	97$_{-1i}$	77$_{-1i}$	69$_{-1i}$	37$_{-1i}$	
Hungary	6$_{-1i}$	24$_{-1i}$	28$_{-1}$	100$_{-1}$	32$_{-1i}$	58$_{-1i}$	52$_{-4}$	...	4$_{-2}$	100$_{-1i}$	99$_{-1i}$	83$_{-1i}$	32$_{-1i}$	
Iceland	30$_{-1i}$	9$_{-1i}$	20$_{-1}$	98$_{-1}$	54$_{-1i}$	85$_{-1i}$	65$_{-2}$	67$_{-2}$	10$_{-2}$	100$_{-1i}$	100$_{-1i}$	79$_{-1i}$	46$_{-1i}$	
Ireland	5$_{-1i}$	8$_{-1i}$	13$_{-1}$	100$_{-1}$	...	77$_{-1i}$	53$_{-3}$	36$_{-3}$	7$_{-3}$	99$_{-1i}$	90$_{-1i}$	80$_{-1i}$	60$_{-1i}$	
Italy	4$_{-1i}$	21$_{-1i}$	32$_{-1}$	100$_{-1}$	43$_{-1i}$	74$_{-1i}$	...	...	...	98$_{-1i}$	83$_{-1i}$	53$_{-1i}$	18$_{-1i}$	
Latvia	8$_{-1i}$	18$_{-1i}$	20$_{-1}$	100$_{-1}$	43$_{-1i}$	91$_{-1i}$	48$_{-4}$	33$_{-2}$	5$_{-2}$	100$_{i}$	98$_{-1i}$	69$_{i}$	49$_{-1i}$	
Liechtenstein	...	25$_{-2i}$	34$_{-2}$	...	4$_{-3i}$	46$_{-2i}$	...	...	...	...	...	...	...	
Lithuania	5$_{-1i}$	8$_{-1i}$	8$_{-1}$	100$_{-1}$	56$_{-1i}$	77$_{-1i}$	53$_{-2}$	40$_{-2}$	5$_{-2}$	99$_{-1i}$	97$_{-1i}$	92$_{-1i}$	63$_{-1i}$	
Luxembourg	11$_{-1i}$	22$_{-1i}$	32$_{-1}$	100$_{-1}$	9$_{-1i}$	21$_{-1i}$	65$_{-2}$	45$_{-2}$	9$_{-2}$	98$_{-1i}$	91$_{-1i}$	77$_{-1i}$	49$_{-1i}$	
Malta	13$_{-1i}$	10$_{-1i}$	16$_{-1}$	46$_{-1}$	57$_{-1i}$	79$_{-1i}$	53$_{-2}$	45$_{-2}$	9$_{-2}$	99$_{-1i}$	88$_{-1i}$	55$_{-1i}$	35$_{-1i}$	
Monaco	...	...	12	100	...	...	...	...	...	...	...	...	...	
Montenegro	3$_{-1i}$	23$_{i}$	31	...	35$_{-2i}$	55$_{i}$	...	33$_{-2}$	7$_{-2}$	94$_{-1i}$	93$_{-1i}$	59$_{-2i}$	59$_{-2i}$	
Netherlands (Kingdom of the)	18$_{-1i}$	22$_{-1i}$	41$_{-1}$	...	47$_{-1i}$	89$_{-2i}$	72$_{-4}$	54$_{-4}$	9$_{-4}$	99$_{-1i}$	92$_{-1i}$	74$_{-1i}$	39$_{-1i}$	
North Macedonia	2$_{i}$	...	29$_{-1}$	100$_{-1}$	34$_{-1i}$	53$_{-1i}$	...	...	...	95$_{i}$	72$_{i}$	72$_{i}$	33$_{i}$	
Norway	24$_{-1i}$	19$_{-1i}$	29$_{-1}$	100$_{-1}$	60$_{-1i}$	98$_{-1i}$	61$_{-2}$	54$_{-2}$	12$_{-2}$	98$_{-1i}$	97$_{-1i}$	79$_{-1i}$	43$_{-1i}$	
Poland	2$_{i}$	27$_{-1i}$	27$_{-1}$	100$_{-1}$	50$_{-1i}$	75$_{-1i}$	...	28$_{-2}$	5$_{-2}$	100$_{i}$	98$_{-1i}$	67$_{i}$	32$_{-1i}$	
Portugal	16$_{i}$	15$_{-1i}$	23$_{-1}$	100$_{-1}$	52$_{-1i}$	76$_{-1i}$	38$_{-2}$	38$_{-2}$	7$_{-2}$	96$_{i}$	65$_{i}$	47$_{i}$	25$_{i}$	
Republic of Moldova	1$_{i}$	15$_{-3i}$	13$_{+1}$	100$_{+1}$	43$_{-3i}$	61$_{-2}$	...	...	...	100$_{i}$	98$_{i}$	75$_{i}$	20$_{-1i}$	
Romania	6$_{-1i}$	19$_{-1i}$	28$_{-1}$	100$_{-1}$	43$_{-1i}$	58$_{-1i}$	34$_{-2}$	5$_{-2}$	...	99$_{-1}$	93$_{-1}$	73$_{-1}$	20$_{-1}$	
Russian Federation	1$_{i}$	4$_{i}$	5	100$_{-4}$	52$_{-4i}$	54$_{-1}$	41$_{-2}$	23$_{-2}$	1$_{-2}$	100$_{i}$	99$_{i}$	93$_{i}$	76$_{i}$	
San Marino	...	2$_{i}$	5	...	41$_{i}$	51$_{i}$	...	...	...	99$_{-1}$	88$_{-1}$	59$_{-1}$	18$_{-1}$	
Serbia	8$_{i}$	25$_{-1i}$	36$_{-1}$	100$_{-1}$	...	73$_{i}$	61$_{-2}$	24$_{-2}$	2$_{-2}$	99$_{i}$	77$_{i}$	76$_{i}$	26$_{i}$	
Slovakia	1$_{-1i}$	25$_{-1i}$	29$_{-1}$	100$_{-1}$	36$_{-1i}$	52$_{-1i}$	65$_{-2}$	40$_{-2}$	4$_{-2}$	100$_{-1i}$	99$_{-1i}$	90$_{-1i}$	28$_{-1i}$	
Slovenia	16$_{-1i}$	33$_{-1i}$	40$_{-1}$	...	46$_{-1i}$	82$_{-1i}$	49$_{-2}$	33$_{-2}$	6$_{-2}$	100$_{-1i}$	99$_{-1i}$	86$_{-1i}$	35$_{-1i}$	
Spain	18$_{i}$	18$_{-1i}$	21$_{-1}$	100$_{-1}$	42$_{-1i}$	95$_{-1i}$	65$_{-2}$	42$_{-2}$	8$_{-2}$	94$_{i}$	83$_{-1i}$	55$_{i}$	35$_{-1i}$	
Sweden	25$_{-1i}$	14$_{-1i}$	21$_{-1}$	73$_{-1}$	45$_{-1i}$	84$_{-1i}$	58$_{-2}$	42$_{-2}$	9$_{-2}$	100$_{-1i}$	95$_{-1i}$	84$_{-1i}$	51$_{-1i}$	
Switzerland	7$_{i}$	23$_{-1i}$	35$_{-1}$	80$_{-1}$	62$_{-1i}$	74$_{-1i}$	...	50$_{-2}$	8$_{-2}$	100$_{i}$	98$_{i}$	84$_{i}$	40$_{-1i}$	
Ukraine	...	6$_{-2i}$	6	100	38$_{-3i}$	76$_{-2i}$	38$_{-2}$	12$_{-2}$	1$_{-2}$	100$_{-2i}$	...	72$_{-2i}$	...	
United Kingdom	6$_{i}$	16$_{-1i}$	27$_{-1}$	...	55$_{-2i}$	80$_{-1i}$	...	46$_{-4}$	9$_{-4}$	99$_{i}$	99$_{i}$	79$_{i}$	...	
United States	4$_{i}$	...	...	100$_{-1}$	...	79$_{-1i}$	...	...	...	100$_{i}$	98$_{i}$	95$_{i}$	49$_{i}$	

	I		J				
	Literacy rate (%)		Illiterates				
			% female		Number (000,000)		Country code
	Youth	Adults	Youth	Adults	Youth	Adults	
	4.6.2						
	2023						
	100$_{-1j}$	98$_{-1j}$	10$_{-1j}$	57$_{-1j}$	2$_{-1j}$	36$_{-1j}$	ALB
	...	...	...	...	...	...	AND
	...	...	...	...	...	...	AUT
	100$_{-4}$	100$_{-4}$	39$_{-4}$	54$_{-4}$	1$_{-4}$	10$_{-4}$	BLR
	...	...	...	...	...	...	BEL
	...	...	...	...	...	...	BMU
	100$_{-1j}$	98$_{-1j}$	49$_{-1j}$	83$_{-1j}$	1$_{-1j}$	49$_{-1j}$	BIH
	98$_{-2j}$	98$_{-2j}$	54$_{-2j}$	60$_{-2j}$	12$_{-2j}$	94$_{-2j}$	BGR
	...	...	...	...	...	...	CAN
	100$_{-2j}$	99$_{-2j}$	45$_{-2j}$	72$_{-2j}$	1$_{-2j}$	19$_{-2j}$	HRV
	...	...	...	...	...	...	CZE
	...	...	...	...	...	...	DNK
	100$_{-2j}$	100$_{-2j}$	32$_{-2j}$	51$_{-2j}$	-$_{-2j}$	1$_{-2j}$	EST
	...	...	...	...	...	...	FIN
	...	...	...	...	...	...	FRA
	...	...	...	...	...	...	DEU
	...	...	...	...	...	...	GRC
	99$_{-2j}$	99$_{-2j}$	41$_{-2j}$	53$_{-2j}$	13$_{-2j}$	75$_{-2j}$	HUN
	...	...	...	...	...	...	ISL
	...	...	...	...	...	...	IRL
	100$_{-4j}$	99$_{-4j}$	28$_{-4j}$	62$_{-4j}$	7$_{-4j}$	338$_{-4j}$	ITA
	100$_{-2j}$	100$_{-2j}$	36$_{-2j}$	44$_{-2j}$	0.3$_{-2j}$	2$_{-2j}$	LVA
	...	...	...	...	...	...	LIE
	100$_{-2j}$	100$_{-2j}$	44$_{-2j}$	48$_{-2j}$	0.2$_{-2j}$	4$_{-2j}$	LTU
	...	...	...	...	...	...	LUX
	99$_{-2j}$	95$_{-2j}$	31$_{-2j}$	34$_{-2j}$	0.3$_{-2j}$	23$_{-2j}$	MLT
	...	...	...	...	...	...	MCO
	99$_{-2j}$	99$_{-2j}$	56$_{-2j}$	74$_{-2j}$	1$_{-2j}$	5$_{-2j}$	MNE
	...	...	...	...	...	...	NLD
	...	...	...	...	...	...	MKD
	...	...	...	...	...	...	NOR
	100$_{-2j}$	100$_{-2j}$	32$_{-2j}$	52$_{-2j}$	6$_{-2j}$	65$_{-2j}$	POL
	100$_{-2j}$	97$_{-2j}$	43$_{-2j}$	68$_{-2j}$	3$_{-2j}$	287$_{-2j}$	PRT
	100$_{-2j}$	100$_{-2j}$	49$_{-2j}$	66$_{-2j}$	1$_{-2j}$	10$_{-2j}$	MDA
	100$_{-2}$	99$_{-2}$	51$_{-2}$	44$_{-2}$	1$_{-2}$	137$_{-2}$	ROU
	100$_{-2}$	100$_{-2}$	43$_{-2j}$	49$_{-2j}$	12$_{-2j}$	88$_{-2j}$	RUS
	100$_{-1}$	100$_{-1}$	47$_{-1}$	42$_{-1}$	-$_{-1}$	-$_{-1}$	SMR
	100$_{-4}$	99$_{-4}$	50$_{-4}$	89$_{-4}$	-$_{-4}$	33$_{-4}$	SRB
	...	...	...	...	...	...	SVK
	...	...	...	...	...	...	SVN
	100$_{-3}$	99$_{-3}$	31$_{-3}$	66$_{-3}$	18$_{-3}$	569$_{-3}$	ESP
	...	...	...	...	...	...	SWE
	...	...	...	...	...	...	CHE
	100$_{-2j}$	100$_{-2j}$	-$_{-2j}$	55$_{-2j}$	4$_{-2j}$	-$_{-2j}$	UKR
	...	...	...	...	...	...	GBR
	...	...	...	...	...	...	USA

TABLE 5: SDG 4, Target 4.5 – Equity

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												
	A			B				C		D			
	GPIA in completion			GPIA in minimum proficiency				GPIA in literacy rate		GPIA in gross enrolment ratio			
				End of primary		End of lower secondary							
	Primary	Lower secondary	Upper secondary	Reading	Mathematics	Reading	Mathematics	Youth	Adults	Primary	Secondary	Tertiary	
SDG indicator	4.5.1												
Reference year	2023												
Region	**Weighted average**												
World	1.03	1.02	1.04	1.10$_{i}$	0.98$_{i}$	…	…	0.98	0.93	0.98$_{i}$	0.99$_{i}$	1.13$_{i}$	
Sub-Saharan Africa	1.08	0.97	0.88	1.05$_{i}$	0.92$_{i}$	...	...	0.94$_{i}$	0.83$_{i}$	0.97$_{i}$	0.92$_{-1i}$	0.78$_{-2i}$	
Northern Africa and Western Asia	1.01	1.05	1.07	1.13$_{i}$	...	1.27$_{i}$	1.06$_{i}$	0.96	0.87	0.96$_{i}$	0.97$_{i}$	1.08$_{i}$	
Northern Africa	1.02	1.08	1.10	1.15$_{i}$	...	...	1.10$_{i}$	1.00$_{i}$	0.85$_{i}$	0.98	1.00$_{-1i}$	1.13	
Western Asia	0.99	1.01	1.04	1.11$_{i}$	0.96$_{i}$	1.27$_{i}$	1.03$_{i}$	0.93	0.9	0.94$_{i}$	0.95$_{i}$	1.05$_{i}$	
Central and Southern Asia	1.02	1.01	0.96	...	...	...	...	0.97	0.83	0.97	0.99	1.03	
Central Asia	1.00	1.00	0.98	1.12	...	1.27	0.85	1.00$_{i}$	1.00$_{i}$	1.00$_{i}$	0.98$_{i}$	1.06$_{i}$	
Southern Asia	1.03	1.01	0.96	...	...	...	...	0.97	0.83	0.97	0.99	1.02	
Eastern and South-eastern Asia	1.02	1.07	1.16	...	...	1.26$_{i}$	1.11$_{i}$	1.00	0.97	1.01$_{i}$	1.02$_{i}$	1.13	
Eastern Asia	1.01	1.07	1.18	...	...	...	...	1.00	0.97	1.02	1.02	1.12	
South-eastern Asia	1.02	1.08	1.15	1.20$_{i}$	1.06$_{i}$	1.29	1.12	1.00	0.97	0.98$_{-2i}$	1.03$_{-2i}$	1.21	
Oceania	1.05	1.06	1.06	...	1.02$_{i}$	1.10$_{i}$	0.99$_{i}$	...	...	0.98$_{i}$	0.96$_{i}$	1.34$_{i}$	
Latin America and the Caribbean	1.03	1.06	1.11	1.15	0.93	1.12	0.81	1.00	0.99	0.99$_{i}$	1.06$_{i}$	1.29$_{i}$	
Caribbean	1.12	1.09	1.16	1.35$_{i}$	1.01$_{i}$	1.35$_{i}$	0.92$_{i}$	...	...	...	...	...	
Central America	1.01	1.04	1.09	1.15	0.97	1.08	0.78	...	...	...	...	...	
South America	1.04	1.07	1.12	1.15	0.90	1.12	0.83	...	...	...	...	...	
Europe and Northern America	1.00	1.01	1.04	1.02	1.04	1.11	0.98	1.00$_{-1i}$	1.00$_{-1i}$	1.00$_{i}$	1.01$_{i}$	1.25$_{i}$	
Europe	1.00	1.01	1.05	1.02	1.04	1.12	0.98	...	...	1.00$_{i}$	1.00$_{i}$	1.21$_{i}$	
Northern America	1.00	1.01	1.03	1.02	1.05	1.09	0.96	1.00$_{-1i}$	1.00$_{-1i}$	1.00$_{i}$	1.02$_{i}$	1.31$_{i}$	
Low income	1.09	0.96	0.89	...	...	...	...	0.92$_{i}$	0.79$_{i}$	0.93$_{i}$	0.84$_{-1i}$	0.67$_{-2i}$	
Middle income	1.02	1.03	1.05	...	...	...	...	0.98	0.92	0.99$_{i}$	1.00$_{i}$	1.12	
Lower middle	1.03	1.02	0.97	...	...	...	...	0.97	0.85	0.98$_{i}$	0.99$_{i}$	1.04	
Upper middle	1.02	1.06	1.15	...	...	1.19$_{i}$	0.95$_{i}$	1.00	0.97	1.00$_{i}$	1.02$_{i}$	1.17	
High income	1.00	1.01	1.04	1.03	1.03	1.11	0.98	1.00$_{-2i}$	...	1.00$_{i}$	1.01$_{i}$	1.22$_{i}$	

A Adjusted gender parity index (GPIA) in school completion rate by level - model data
[*Source:* UIS and GEM Report analysis of administrative data and household surveys available at https://education-estimates.org/].
B Adjusted gender parity index (GPIA) in percentage of students with minimum level of proficiency at the end of given level.
C Adjusted gender parity index (GPIA) in youth and adult literacy rate.
D Adjusted gender parity index (GPIA) in gross enrolment ratio by level.
E Adjusted parity index for location (rural-urban) and wealth (poorest to richest quintile) in school completion by level.
F Adjusted parity index for wealth (poorest to richest quintile) in achievement of minimum proficiency.

Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.
Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.
(-) Magnitude nil or negligible.
(...) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).
(i) Estimate and/or partial coverage.

	Location/Wealth															
	E												F			
	Disparity in primary completion				Disparity in lower secondary completion				Disparity in upper secondary completion				Wealth disparity in minimum proficiency			
	Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		End of primary		End of lower secondary	
	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Reading	Mathematics	Reading	Mathematics
	4.5.1															
	2023															
	Median															
	0.99$_i$	0.91$_i$	…	…	0.95$_i$	0.68$_i$	…	…	0.76$_i$	0.34$_i$	…	…	…	…	0.53$_i$	0.47$_i$
	0.65$_i$	0.47$_i$	37$_i$	40$_i$	0.42$_i$	0.19$_i$	12$_i$	10$_i$	0.26$_i$	0.07$_i$	5$_i$	2$_i$	…	…	…	…
	…	…	…	…	…	…	…	…	…	…	…	…	0.78$_i$	0.81$_i$	0.43$_i$	0.42$_i$
	0.93$_i$	0.85$_i$	80$_i$	88$_i$	0.79$_i$	0.57$_i$	40$_i$	64$_i$	0.61$_i$	0.28$_i$	13$_i$	26$_i$	0.61$_i$	…	…	0.36$_i$
	…	…	…	…	…	…	…	…	…	…	…	…	0.83$_i$	0.83$_i$	0.44$_i$	0.42
	0.99$_i$	0.87$_i$	86$_i$	85$_i$	0.97$_i$	0.71$_i$	69$_i$	67$_i$	0.75$_i$	0.22$_i$	17$_i$	11$_i$	…	…	…	…
	1.00$_i$	1.00$_i$	99$_i$	100$_i$	0.99$_i$	0.99$_i$	99$_i$	98$_i$	0.99$_i$	0.55$_i$	51$_i$	46$_i$	…	…	0.46$_i$	0.55$_i$
	0.98$_i$	0.82$_i$	74$_i$	81$_i$	0.94$_i$	0.61$_i$	53$_i$	57$_i$	0.72$_i$	0.22$_i$	17$_i$	11$_i$	…	…	…	…
	…	…	…	…	…	…	…	…	…	…	…	…	…	…	0.46	0.48
	…	…	…	…	…	…	…	…	…	…	…	…	…	…	0.77	0.77
	0.98$_i$	0.92$_i$	89$_i$	95$_i$	0.94$_i$	0.66$_i$	58$_i$	72$_i$	0.74$_i$	0.37$_i$	33$_i$	35$_i$	…	…	0.36	0.32
	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
	0.99$_i$	0.97$_i$	95$_i$	97$_i$	0.95$_i$	0.84$_i$	78$_i$	85$_i$	0.79$_i$	0.60$_i$	52$_i$	58$_i$	0.32$_i$	0.22$_i$	…	…
	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
	0.95	0.95	95	94	0.82	0.78	74	81	0.67	0.52	43	44	0.26	0.15	0.33$_i$	0.13$_i$
	0.99	0.97	97	97	0.95	0.83	79	86	0.78	0.61	55	59	0.32$_i$	0.24$_i$	0.46$_i$	0.26$_i$
	1.00$_i$	…	…	…	1.00$_i$	…	…	…	0.99$_i$	…	…	…	0.91$_i$	0.71$_i$	0.57	0.54
	1.00$_i$	…	…	…	1.00$_i$	…	…	…	0.99$_i$	…	…	…	0.90$_i$	0.70$_i$	0.57	0.53
	…	1.00$_i$	99$_i$	99$_i$	…	0.99$_i$	98$_i$	98$_i$	…	0.92$_i$	88$_i$	91$_i$	0.95	0.74	0.72	0.59
	0.58$_i$	0.33$_i$	25$_i$	22$_i$	0.32$_i$	0.18$_i$	10$_i$	7$_i$	0.25$_i$	0.06$_i$	4$_i$	2$_i$	…	…	…	…
	0.98$_i$	0.91$_i$	86$_i$	92$_i$	0.94$_i$	0.72$_i$	69$_i$	72$_i$	0.72$_i$	0.40$_i$	26$_i$	35$_i$	…	…	…	…
	0.96$_i$	0.80$_i$	73$_i$	81$_i$	0.82$_i$	0.53$_i$	38$_i$	47$_i$	0.58$_i$	0.24$_i$	19$_i$	18$_i$	…	…	…	…
	0.99$_i$	0.97$_i$	97$_i$	97$_i$	0.96$_i$	0.84$_i$	79$_i$	86$_i$	0.77$_i$	0.59$_i$	51$_i$	58$_i$	0.43$_i$	0.50$_i$	0.43$_i$	0.36$_i$
	1.00$_i$	…	…	…	1.00$_i$	…	…	…	0.99$_i$	…	…	…	0.89$_i$	0.67$_i$	0.59$_i$	0.55

TABLE 5: Continued

Country or territory	Gender											
	A			B				C		D		
	GPIA in completion			GPIA in minimum proficiency				GPIA in literacy rate		GPIA in gross enrolment ratio		
				End of primary		End of lower secondary						
	Primary	Lower secondary	Upper secondary	Reading	Mathematics	Reading	Mathematics	Youth	Adults	Primary	Secondary	Tertiary
SDG indicator	4.5.1											
Reference year	2023											
Sub-Saharan Africa												
Angola	1.04	0.85	0.79	...	...	...	...	0.94_{-1i}	0.75_{-1i}	0.97_{-1}	0.87_{-2}	0.98
Benin	0.91	0.68	0.48	1.07_{-4}	1.03_{-4}	...	...	0.80_{-1i}	0.63_{-1i}	0.93_{-1}	0.86_{-1}	0.59_{-1}
Botswana	1.02	1.00	1.17	...	...	...	...	...	...	0.99_{-1}	1.10_{-2}	1.39
Burkina Faso	1.13	0.87	0.53	1.02_{-4}	0.90_{-4}	...	...	0.93_{-1i}	0.73_{-1i}	1.03	1.16	0.68
Burundi	1.18	0.71	1.05	0.93_{-4}	0.61_{-4}	...	...	0.99_{-1i}	0.85_{-1i}	1.01_{-3}	1.18_{-3}	0.78
Cabo Verde	...	...	...	...	...	...	...	1.01_{-1i}	0.93_{-1i}	0.95_{-2}	1.09_{-2}	...
Cameroon	1.07	1.04	0.99	1.13_{-4}	1.15_{-4}	...	...	0.95_{-3i}	0.88_{-3i}	0.92	0.9	0.83
Central African Republic	0.89	0.70	0.67	...	...	...	...	0.61_{-3i}	0.53_{-3i}	...	...	...
Chad	1.00	0.53	0.44	0.95_{-4}	1.17_{-4}	...	...	0.74_{-1i}	0.53_{-1i}	0.84	0.66	0.39_{-3}
Comoros	1.09	1.27	1.37	...	...	...	...	1.03_{-1i}	0.85_{-1i}	0.94	1.01	...
Congo	0.96	0.64	0.81	1.18_{-4}	1.15_{-4}	...	...	0.93_{-2i}	0.88_{-2i}	0.98	...	0.67
Côte d'Ivoire	1.01	0.78	0.60	1.09_{-4}	0.62_{-4}	...	...	0.77_{-2}	0.67_{-2i}	0.96	0.94	0.88
D. R. Congo	1.14	1.09	0.93	0.86_{-4}	0.80_{-4}	...	...	0.94_{-1i}	0.80_{-1i}	0.95	0.63_{-2}	0.59_{-3}
Djibouti	1.01	0.90	1.18	...	...	...	...	...	...	...	...	...
Equat. Guinea	1.28	0.64	0.53	...	...	...	...	...	...	0.97_{-4}	...	...
Eritrea	...	...	...	...	...	...	...	...	...	0.85_{-1}	0.84_{-1}	...
Eswatini	1.14	0.94	1.06	...	...	...	...	1.00_{-1}	0.99_{-1i}	0.93	...	...
Ethiopia	1.27	1.26	1.25	...	...	...	...	...	...	0.93	...	...
Gabon	1.07	1.18	1.33	1.07_{-4}	0.76_{-4}	...	...	1.04_{-1i}	0.99_{-1i}	0.96_{-2}	1.07_{-2}	1.38_{-2}
Gambia	1.11	1.11	1.10	...	...	...	...	1.13_{-1i}	0.80_{-1i}	1.13	1.16_{-2}	...
Ghana	1.11	1.08	0.95	...	...	...	...	0.92_{-1}	0.90_{-3i}	0.97_{-1}	1.00_{-1}	0.96
Guinea	0.86	0.79	0.61	1.03_{-4}	0.79_{-4}	...	...	0.69_{-2i}	0.51_{-2i}	0.88_{-2}	0.76_{-2}	0.46_{-2}
Guinea-Bissau	1.20	1.11	0.67	...	...	...	...	0.83_{-1i}	0.61_{-1i}	...	...	...
Kenya	1.12	1.14	1.07	1.14	1.05	...	...	0.99_{-1}	0.94_{-1i}	0.96_{-4}	...	...
Lesotho	1.33	1.43	1.28	1.28	1.27	...	...	1.12_{-1i}	1.18_{-1i}	0.96	...	...
Liberia	1.29	1.12	0.92	...	...	...	...	0.83_{-4}	...	1.02_{-1}	0.96_{-3}	...
Madagascar	1.19	1.08	1.05	1.24_{-4}	1.12_{-4}	...	...	1.00_{-1i}	0.96_{-1i}	1.04_{+1}	1.06_{-2}	1.02
Malawi	1.30	1.14	1.09	...	...	...	...	1.08_{-1i}	0.91_{-1i}	1.02	0.81_{-4}	...
Mali	0.96	0.93	0.60	...	...	...	...	1.00_{-3}	1.00_{-3}	0.91	0.91	0.51_{-4}
Mauritania	1.11	0.95	0.82	...	...	...	...	0.96_{-2i}	0.87_{-2i}	1	1.02_{-3}	0.57_{-3}
Mauritius	1.00	1.07	1.19	...	...	...	...	1.01_{-2i}	0.96_{-2i}	1.01_{i}	1.04_{-3i}	1.26_{-1i}
Mozambique	1.06	0.71	0.61	...	...	...	...	1.00_{-3}	1.00_{-3}	0.96	0.95_{-1}	0.85_{-4}
Namibia	1.17	1.28	1.22	...	...	...	...	1.02_{-2i}	1.00_{-2i}	0.96_{-1}	...	1.40_{-1}
Niger	0.85	0.38	0.50	1.18_{-4}	0.89_{-4}	...	...	0.72_{-1i}	0.64_{-1i}	0.94_{i}	0.92_{i}	0.48_{-3}
Nigeria	0.99	0.88	0.79	...	...	...	...	0.89_{-2}	0.72_{-2i}	0.99_{-2}	0.99_{-2}	...
Rwanda	1.14	1.14	1.11	...	...	...	...	1.00_{-1}	1.00_{-1}	0.97_{i}	1.15_{i}	0.77_{i}
Sao Tome and Principe	1.13	1.06	1.16	...	...	...	...	1.00_{-1i}	0.94_{-1i}	0.92_{-2}	1.09_{-2}	1.19_{-2}
Senegal	1.14	1.14	1.04	1.12_{-4}	0.98_{-4}	...	...	0.93_{-1i}	0.68_{-1i}	1.16	1.2	1.04
Seychelles	...	...	...	...	...	...	...	1.01_{-3i}	1.01_{-3i}	1.00_{i}	1.04_{i}	1.46_{i}
Sierra Leone	1.07	1.01	0.69	...	...	...	...	0.95_{-1i}	0.74_{-1i}	1.06	1.03_{-2}	...
Somalia	0.71	0.43	0.20	...	...	...	...	1.00_{-1}	1.00_{-1}	0.83	0.7	...
South Africa	1.01	1.06	1.18	...	...	...	...	1.00_{-2}	1.00_{-2}	0.98_{-1}	1.10_{-1}	1.41_{-1}
South Sudan	0.76	0.49	0.50	...	...	...	...	...	...	...	...	...
Togo	1.00	0.85	0.62	1.08_{-4}	1.00_{-4}	...	...	1.00_{-4}	1.00_{-4}	0.98	0.87	0.57_{-3}
Uganda	1.29	0.92	1.09	...	...	...	...	1.03_{-1i}	0.90_{-1i}	...	...	...
United Republic of Tanzania	1.14	1.12	0.83	...	...	...	...	0.96_{-1}	0.92_{-1i}	1.05	1.07_{-2}	0.82_{+1}
Zambia	1.13	1.08	0.89	1.33	0.98	...	...	0.99_{-3i}	0.93_{-3i}	1.03_{-3}	...	...
Zimbabwe	1.08	1.11	0.64	...	...	...	...	1.08_{-1i}	1.03_{-1i}	0.99_{-1}	...	0.96_{-3}

Location/Wealth																	Country code
E													F				
Disparity in primary completion				Disparity in lower secondary completion				Disparity in upper secondary completion				Wealth disparity in minimum proficiency					
Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		End of primary		End of lower secondary			
Location	Wealth	Male	Female	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Reading	Mathematics	Reading	Mathematics		
4.5.1																	
2023																	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		AGO
0.65$_{-2}$	0.28$_{-2}$	25$_{-2}$	18$_{-2}$	0.42$_{-2}$	0.09$_{-2}$	7$_{-2}$	2$_{-2}$	0.29$_{-2}$	0.08$_{-2}$	6$_{-2}$	0.3$_{-2}$	...	...	...	...		BEN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		BWA
0.67$_{-2}$	0.47$_{-2}$	37$_{-2}$	40$_{-2}$	0.41$_{-2}$	0.19$_{-2}$	12$_{-2}$	11$_{-2}$	0.24$_{-2}$	0.06$_{-2}$	2$_{-2}$	2$_{-2}$	...	...	...	...		BFA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		BDI
...	...	...	...	...	...	...	...	0.76$_{-3}$	...	...	...	...	...	...	...		CPV
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		CMR
0.21$_{-4}$	0.16$_{-4}$	11$_{-4}$	7$_{-4}$	0.05$_{-4}$	0.03$_{-4}$	2$_{-4}$	1$_{-4}$	-$_{-4}$	-$_{-4}$	...	0.2$_{-4}$	...	...	...	...		CAF
0.35$_{-4}$	0.16$_{-4}$	11$_{-4}$	8$_{-4}$	0.20$_{-4}$	0.07$_{-4}$	3$_{-4}$	2$_{-4}$	0.09$_{-4}$	0.06$_{-4}$	2$_{-4}$	0.1$_{-4}$	...	...	...	...		TCD
0.90$_{-1}$	0.78$_{-1}$	71$_{-1}$	70$_{-1}$	0.80$_{-1}$	0.58$_{-1}$	39$_{-1}$	47$_{-1}$	0.58$_{-1}$	0.46$_{-1}$	21$_{-1}$	23$_{-1}$	...	...	...	...		COM
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		COG
0.60$_{-2}$	0.52$_{-2}$	40$_{-2}$	42$_{-2}$	0.29$_{-2}$	0.14$_{-2}$	11$_{-2}$	6$_{-2}$	0.18$_{-2}$	0.05$_{-2}$	3$_{-2}$	1$_{-2}$	...	...	...	...		CIV
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		COD
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		DJI
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		GNQ
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		ERI
0.84$_{-1}$	0.80$_{-1}$	67$_{-1}$	80$_{-1}$	0.77$_{-1}$	0.57$_{-1}$	36$_{-1}$	47$_{-1}$	0.63$_{-1}$	0.36$_{-1}$	20$_{-1}$	17$_{-1}$	...	...	...	...		SWZ
0.57$_{-4}$	...	...	...	0.30$_{-4}$	...	...	...	0.12$_{-4}$	...	...	...	...	...	...	...		ETH
0.50$_{-2}$	0.47$_{-2}$	41$_{-2}$	46$_{-2}$	0.41$_{-2}$	0.23$_{-2}$	18$_{-2}$	16$_{-2}$	0.16$_{-2}$	0.08$_{-2}$	5$_{-2}$	3$_{-2}$	...	...	...	...		GAB
0.68$_{-3}$	0.55$_{-3}$	40$_{-3}$	46$_{-3}$	0.51$_{-3}$	0.33$_{-3}$	24$_{-3}$	21$_{-3}$	0.47$_{-3}$	0.25$_{-3}$	8$_{-3}$	14$_{-3}$	...	...	...	...		GMB
0.77$_{-1}$	0.50$_{-1}$	45$_{-1}$	47$_{-1}$	0.70$_{-1}$	0.41$_{-1}$	37$_{-1}$	37$_{-1}$	0.51$_{-1}$	0.22$_{-1}$	19$_{-1}$	19$_{-1}$	...	...	...	...		GHA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		GIN
0.48$_{-4}$	0.32$_{-4}$	25$_{-4}$	19$_{-4}$	0.32$_{-4}$	0.18$_{-4}$	10$_{-4}$	12$_{-4}$	0.32$_{-4}$	0.17$_{-4}$	8$_{-4}$	3$_{-4}$	...	...	...	...		GNB
0.98$_{-1}$	0.83$_{-1}$	73$_{-1}$	84$_{-1}$	0.90$_{-1}$	0.69$_{-1}$	64$_{-1}$	64$_{-1}$	0.63$_{-1}$	0.27$_{-1}$	25$_{-1}$	19$_{-1}$	...	...	...	...		KEN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		LSO
0.38$_{-4}$	0.15$_{-4}$	6$_{-4}$	11$_{-4}$	0.25$_{-4}$	0.09$_{-4}$	5$_{-4}$	5$_{-4}$	0.20$_{-4}$	0.04$_{-4}$	4$_{-4}$	1$_{-4}$	...	...	...	...		LBR
0.58$_{-2}$	0.15$_{-2}$	13$_{-2}$	13$_{-2}$	0.31$_{-2}$	0.03$_{-2}$	4$_{-2}$	1$_{-2}$	0.20$_{-2}$	0.01$_{-2}$	-$_{-2}$	1$_{-2}$	...	...	...	...		MDG
0.59$_{-3}$	0.33$_{-3}$	21$_{-3}$	30$_{-3}$	0.30$_{-3}$	0.06$_{-3}$	5$_{-3}$	2$_{-3}$	0.26$_{-3}$	0.04$_{-3}$	2$_{-3}$	2$_{-3}$	...	...	...	...		MWI
0.50$_{-3}$	0.76$_{-3}$	43$_{-3}$	35$_{-3}$	0.23$_{-3}$	0.53$_{-3}$	22$_{-3}$	10$_{-3}$	0.20$_{-3}$	0.33$_{-3}$	6$_{-3}$	4$_{-3}$	...	...	...	...		MLI
0.40$_{-3}$	0.15$_{-3}$	...	...	0.19$_{-3}$	0.06$_{-3}$	...	...	0.16$_{-3}$	0.07$_{-3}$	...	...	...	...	...	...		MRT
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		MUS
0.48$_{-1}$	0.22$_{-1}$	19$_{-1}$	19$_{-1}$	0.24$_{-1}$	0.05$_{-1}$	6$_{-1}$	2$_{-1}$	0.22$_{-1}$	0.04$_{-1}$	3$_{-1}$	1$_{-1}$	...	...	...	...		MOZ
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		NAM
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		NER
0.68$_{-2}$	0.35$_{-2}$	34$_{-2}$	34$_{-2}$	0.63$_{-2}$	0.29$_{-2}$	29$_{-2}$	24$_{-2}$	0.49$_{-2}$	0.17$_{-2}$	19$_{-2}$	13$_{-2}$	...	...	...	...		NGA
0.74$_{-3}$	0.43$_{-3}$	31$_{-3}$	41$_{-3}$	0.55$_{-3}$	0.12$_{-3}$	6$_{-3}$	6$_{-3}$	0.34$_{-3}$	0.04$_{-3}$	2$_{-3}$	2$_{-3}$	...	...	...	...		RWA
1.01$_{-4}$	0.76$_{-4}$	62$_{-4}$	87$_{-4}$	0.96$_{-4}$	0.37$_{-4}$	41$_{-4}$	27$_{-4}$	0.89$_{-4}$	0.33$_{-4}$	14$_{-4}$	21$_{-4}$	...	...	...	...		STP
0.54$_{-4}$	0.35$_{-4}$	26$_{-4}$	27$_{-4}$	0.29$_{-4}$	0.12$_{-4}$	11$_{-4}$	3$_{-4}$	0.23$_{-4}$	0.07$_{-4}$	3$_{-4}$	...	...	...	...	...		SEN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		SYC
0.66$_{-4}$	0.53$_{-4}$	45$_{-4}$	47$_{-4}$	0.45$_{-4}$	0.21$_{-4}$	17$_{-4}$	15$_{-4}$	0.37$_{-4}$	0.10$_{-4}$	6$_{-4}$	1$_{-4}$	...	...	...	...		SLE
0.59	...	...	...	0.51	...	...	...	...	...	...	...	...	...	...	...		SOM
0.98$_{-2}$	...	...	...	0.96$_{-2}$	...	...	...	0.74$_{-2}$	...	...	...	...	...	...	...		ZAF
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		SSD
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		TGO
0.66$_{-4}$	...	7$_{-4}$	22$_{-4}$	0.76$_{-4}$	0.20$_{-4}$	13$_{-4}$	7$_{-4}$	0.41$_{-4}$	0.05$_{-4}$	4$_{-4}$	1$_{-4}$	...	...	...	...		UGA
0.79$_{-1}$	0.48$_{-1}$	39$_{-1}$	51$_{-1}$	0.42$_{-1}$	0.12$_{-1}$	7$_{-1}$	6$_{-1}$	0.23$_{-1}$	0.02$_{-1}$	1$_{-1}$	0.4$_{-1}$	...	...	...	...		TZA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		ZMB
0.88$_{-4}$	0.79$_{-4}$	75$_{-4}$	81$_{-4}$	0.51$_{-4}$	0.22$_{-4}$	20$_{-4}$	18$_{-4}$	0.21$_{-4}$	0.02$_{-4}$	1$_{-4}$	0.4$_{-4}$	...	...	...	...		ZWE

TABLE 5: Continued

Country or territory	Gender											
	A			B				C		D		
	GPIA in completion			GPIA in minimum proficiency				GPIA in literacy rate		GPIA in gross enrolment ratio		
				End of primary		End of lower secondary						
	Primary	Lower secondary	Upper secondary	Reading	Mathematics	Reading	Mathematics	Youth	Adults	Primary	Secondary	Tertiary
SDG indicator	4.5.1											
Reference year	2023											
Northern Africa and Western Asia												
Algeria	1.03	1.26	1.47	...	...	...	...	1.23_{-4}	...	0.98	1.04	1.35
Armenia	1.00	1.01	1.06	...	0.96_{-4}	...	...	1.00_{-3}	1.00_{-3}	0.99	1	1.27
Azerbaijan	0.99	0.97	0.96	1.11_{-2}	0.98_{-4}	1.38_{-1}	1.07_{-1}	1	1	0.99_{i}	0.96_{i}	1.19_{i}
Bahrain	...	...	...	1.22_{-2}	0.96_{-4}	...	1.14_{-4}	1	1	1	0.97	1.34
Cyprus	1.00	1.03	1.06	1.02_{-2}	1.08_{-4}	...	...	1.00_{-2i}	1.00_{-2i}	1.01_{-1i}	0.99_{-1i}	1.32_{-1i}
Egypt	1.03	1.06	1.06	1.12_{-2}	...	...	1.13_{-4}	0.99_{-1i}	0.86_{-1i}	1.01	0.96_{-2}	1
Georgia	1.00	1.01	1.02	1.08_{-2}	1.06_{-4}	1.37_{-1}	1.05_{-1}	1.00_{-1}	1.00_{-1}	1	0.96	1.16
Iraq	0.98	1.08	0.90	...	...	...	...	...	...	...	...	...
Israel	1.00	1.01	1.06	1.02_{-2}	...	1.13_{-1}	1.00_{-1}	...	...	1.01_{-1i}	1.01_{-1i}	1.30_{-1i}
Jordan	1.02	1.03	1.24	1.22_{-2}	...	1.56_{-1}	1.26_{-1}	1	1	1.00_{i}	1.03_{i}	1.34_{i}
Kuwait	...	...	...	...	1.07_{-4}	...	0.96_{-4}	1.00_{-3}	1.00_{-3}	...	...	1.36_{-2}
Lebanon	...	...	...	...	...	...	0.96_{-4}	...	...	0.98	1.12	1.24_{-4}
Libya	...	...	...	...	...	...	...	...	...	...	...	...
Morocco	0.93	0.94	1.03	1.27_{-2}	0.94_{-4}	1.28_{-1}	0.98_{-1}	1.00_{-1i}	0.81_{-1i}	0.98	0.98	1.15
Oman	...	...	...	1.19_{-2}	0.92_{-4}	...	1.39_{-4}	1.00_{-1}	1.00_{-1}	1.02	0.98	1.35
Qatar	1.00	1.02	1.05	1.08_{-2}	1.03_{-4}	1.28_{-1}	1.11_{-1}	...	...	1.02_{-1i}	1.02_{-1i}	1.79_{-1i}
Saudi Arabia	...	...	...	1.19_{-2}	0.85_{-4}	1.36_{-1}	0.91_{-1}	1.00_{-3}	1.00_{-3}	0.98_{-1i}	0.99_{-1i}	1.11_{-1i}
State of Palestine (the)	1.00	1.03	1.14	...	...	1.58_{-1}	1.26_{-1}	1.00_{-1}	1.00_{-1}	0.99	1.08	1.4
Sudan	1.06	1.06	0.95	...	...	...	...	...	...	...	...	...
Syrian Arab Republic	1.01	1.19	1.23	...	...	...	...	1.00_{-2}	1.00_{-2}	1	1.12	...
Tunisia	1.03	1.05	1.24	...	...	...	...	1.00_{-1}	0.85_{-1i}	0.98	...	1.43
Türkiye	1.01	1.01	1.08	1.05_{-2}	1.00_{-4}	1.15_{-1}	0.98_{-1}	1.00_{-4}	1.00_{-4}	0.99_{-1i}	0.97_{-1i}	1.04_{-1i}
United Arab Emirates	...	...	...	1.12_{-2}	1.06_{-4}	1.27_{-1}	1.09_{-1}	1.00_{-1}	1.00_{-1}	1.01_{i}	1.00_{i}	1.23_{i}
Yemen	0.91	0.84	0.84	...	...	...	...	1.19	...	...	...	...
Central and Southern Asia												
Afghanistan	0.79	0.68	0.54	...	...	...	...	0.54_{-1}	...	0.68_{-4}	...	0.38_{-3}
Bangladesh	1.14	1.21	1.04	...	...	...	...	1.00_{-2}	1.00_{-2}	1.08	1.13	0.86
Bhutan	1.10	1.08	1.10	...	...	...	...	1.00_{-1i}	0.81_{-1i}	1.07_{-1}	1.14_{-1}	0.99
India	1.02	1.01	0.95	...	...	...	...	1	1	0.99	1	0.98
Iran, Islamic Republic of	1.01	1.02	1.17	1.12_{-2}	1.10_{-4}	...	1.11_{-4}	1.00_{-1i}	0.91_{-1i}	1.05_{-3}	0.98_{-3}	1.00_{-1}
Kazakhstan	1.00	1.00	1.00	1.06_{-2}	0.99_{-4}	1.30_{-1}	1.02_{-1}	1.00_{-3i}	1.00_{-3i}	1.00_{+1}	1.00_{+1}	1.17_{+1}
Kyrgyzstan	1.00	1.00	1.00	...	...	...	...	1.00_{-4i}	1.00_{-4i}	0.99_{+1}	0.99_{+1}	1.21_{+1}
Maldives	1.00	1.06	1.34	...	...	...	...	1.00_{-2i}	1.01_{-2i}	1.02	1.08	1.53_{-1}
Nepal	1.03	1.05	0.96	...	...	...	...	0.98_{-2i}	0.78_{-2i}	0.97_{+1}	0.99_{+1}	1.2
Pakistan	1.03	0.92	1.18	...	1.00_{-4}	...	...	1.00_{-4}	1.00_{-4}	0.86_{-1}	0.87_{-1}	0.96
Sri Lanka	...	...	...	...	...	...	...	1.00_{-1}	1.00_{-1}	1.01_{-1}	1.05_{-1}	1.40_{-1}
Tajikistan	1.00	0.99	0.83	...	...	...	...	...	...	0.99_{+1}	0.97_{+1}	1.09_{+1}
Turkmenistan	1.00	1.00	1.03	...	...	...	...	...	...	1.01_{-1}	1.01_{-1}	0.99_{-1}
Uzbekistan	1.00	1.01	1.00	1.15_{-2}	...	1.26_{-1}	0.76_{-1}	1.00_{-1}	1.00_{-1}	0.99_{+1}	0.99_{+1}	1.10_{+1}

Location/Wealth																	Country code
E														F			
Disparity in primary completion				Disparity in lower secondary completion				Disparity in upper secondary completion				Wealth disparity in minimum proficiency					
Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		End of primary		End of lower secondary			
Location	Wealth	Male	Female	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Reading	Mathematics	Reading	Mathematics		
4.5.1																	
2023																	
0.95$_{-4}$	0.87$_{-4}$	83$_{-4}$	89$_{-4}$	0.83$_{-4}$	0.60$_{-4}$	48$_{-4}$	61$_{-4}$	0.67$_{-4}$	0.35$_{-4}$	17$_{-4}$	35$_{-4}$	...	...	...	...	DZA
...	...	...	...	...	...	...	...	...	...	...	...	...	0.93$_{-4}$	...	...	ARM
...	...	...	...	...	...	...	...	...	...	...	...	...	1.07$_{-4}$	0.44$_{-1}$	0.48$_{-1}$	AZE
...	...	...	...	...	...	...	...	...	...	...	...	0.82$_{-2}$	0.83$_{-4}$	...	0.83$_{-4}$	BHR
...	...	...	...	0.97$_{-2}$	...	...	...	1.06$_{-2}$	...	...	...	0.85$_{-2}$	0.67$_{-4}$	...	...	CYP
...	...	...	...	...	...	...	...	...	...	...	...	0.69$_{-2}$	...	...	0.51$_{-4}$	EGY
...	...	...	...	...	...	...	...	...	...	...	...	0.91$_{-2}$	0.85$_{-4}$	0.37$_{-1}$	0.42$_{-1}$	GEO
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	IRQ
...	...	...	...	...	...	...	...	...	...	...	...	0.74$_{-2}$	...	0.45$_{-1}$	0.35$_{-1}$	ISR
...	...	...	...	...	...	...	...	...	...	...	...	0.46$_{-2}$	...	0.27$_{-1}$	0.29$_{-1}$	JOR
...	...	...	...	...	...	...	...	...	...	...	...	...	0.61$_{-4}$	...	1.12$_{-4}$	KWT
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.43$_{-4}$	LBN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LBY
...	...	...	...	...	...	...	...	...	...	...	...	0.52$_{-2}$	0.35$_{-4}$	0.30$_{-1}$	0.20$_{-1}$	MAR
...	...	...	...	...	...	...	...	...	...	...	...	0.74$_{-2}$	1.22$_{-4}$	...	0.49$_{-4}$	OMN
...	...	...	...	...	...	...	...	...	...	...	...	0.89$_{-2}$	0.52$_{-4}$	0.42$_{-1}$	0.26$_{-1}$	QAT
...	...	...	...	...	...	...	...	...	...	...	...	0.74$_{-2}$	0.36$_{-4}$	0.47$_{-1}$	0.40$_{-1}$	SAU
1.00$_{-4}$	0.99$_{-4}$	99$_{-4}$	99$_{-4}$	0.99$_{-4}$	0.91$_{-4}$	81$_{-4}$	95$_{-4}$	0.97$_{-4}$	0.63$_{-4}$	36$_{-4}$	58$_{-4}$	...	...	0.35$_{-1}$	0.26$_{-1}$	PSE
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SDN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SYR
0.91$_{-1}$	0.82$_{-1}$	77$_{-1}$	87$_{-1}$	0.74$_{-1}$	0.53$_{-1}$	32$_{-1}$	68$_{-1}$	0.55$_{-1}$	0.21$_{-1}$	9$_{-1}$	18$_{-1}$	...	...	...	...	TUN
...	...	...	...	...	...	...	...	...	...	...	...	0.84$_{-2}$	0.78$_{-4}$	0.71$_{-1}$	0.61$_{-1}$	TUR
...	...	...	...	...	...	...	...	...	...	...	...	0.88$_{-2}$	0.95$_{-4}$	0.45$_{-1}$	0.40$_{-1}$	ARE
0.73	0.45	44	37	0.66	0.36	31	22	0.59	0.3	22	12	...	...	...	...	YEM
0.53$_{-1}$	0.25$_{-1}$	25$_{-1}$	14$_{-1}$	0.47$_{-1}$	0.18$_{-1}$	14$_{-1}$	7$_{-1}$	0.44$_{-1}$	0.11$_{-1}$	11$_{-1}$	2$_{-1}$	...	...	...	...	AFG
0.99$_{-4}$	0.77$_{-4}$	62$_{-4}$	79$_{-4}$	0.95$_{-4}$	0.52$_{-4}$	38$_{-4}$	49$_{-4}$	0.78$_{-4}$	0.24$_{-4}$	16$_{-4}$	8$_{-4}$	...	...	...	...	BGD
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	BTN
0.98$_{-4}$	0.88$_{-4}$	86$_{-4}$	87$_{-4}$	0.94$_{-4}$	0.72$_{-4}$	71$_{-4}$	69$_{-4}$	0.72$_{-4}$	0.25$_{-4}$	24$_{-4}$	17$_{-4}$	...	...	...	...	IND
...	...	...	...	...	...	...	...	...	...	...	...	0.53$_{-2}$	0.43$_{-4}$	...	0.40$_{-4}$	IRN
...	...	...	...	1.04$_{-4}$	...	...	...	0.99$_{-4}$	...	...	...	0.90$_{-2}$	0.84$_{-4}$	0.48$_{-1}$	0.62$_{-1}$	KAZ
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	KGZ
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	MDV
0.98$_{-2}$	0.87$_{-2}$	85$_{-2}$	83$_{-2}$	0.88$_{-2}$	0.70$_{-2}$	68$_{-2}$	65$_{-2}$	0.52$_{-2}$	0.21$_{-2}$	17$_{-2}$	14$_{-2}$	...	...	...	...	NPL
...	...	...	...	...	...	...	...	...	...	...	...	...	0.63$_{-4}$	...	...	PAK
1.01$_{-1}$	...	...	...	0.99$_{-1}$	...	...	...	0.83$_{-1}$	...	...	...	...	...	...	...	LKA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	TJK
1.00$_{-4}$	1.00$_{-4}$	98$_{-4}$	99$_{-4}$	0.99$_{-4}$	0.98$_{-4}$	98$_{-4}$	97$_{-4}$	0.30$_{-4}$	0.17$_{-4}$	10$_{-4}$	4$_{-4}$	...	...	...	...	TKM
1.00$_{-1}$	1.00$_{-1}$	99$_{-1}$	100$_{-1}$	0.99$_{-1}$	1.00$_{-1}$	100$_{-1}$	99$_{-1}$	1.00$_{-1}$	0.93$_{-1}$	92$_{-1}$	88$_{-1}$	...	...	0.43$_{-1}$	0.47$_{-1}$	UZB

TABLE 5: Continued

Country or territory	Gender											
	A			B				C		D		
	GPIA in completion			GPIA in minimum proficiency				GPIA in literacy rate		GPIA in gross enrolment ratio		
				End of primary		End of lower secondary						
	Primary	Lower secondary	Upper secondary	Reading	Mathematics	Reading	Mathematics	Youth	Adults	Primary	Secondary	Tertiary
SDG indicator	4.5.1											
Reference year	2023											
Eastern and South-eastern Asia												
Brunei Darussalam	...	...	...	...	...	1.23$_{-1}$	1.11$_{-1}$	1.00$_{-2i}$	0.99$_{-2i}$	1.01	1.01	1.31
Cambodia	1.12	1.14	1.11	1.41$_{-4}$	1.16$_{-4}$	1.33$_{-1}$	0.91$_{-1}$	1.01$_{-1i}$	0.90$_{-1i}$	0.98	1.12	1.14
China	1.01	1.07	1.19	...	...	...	...	1.00$_{-3}$	1.00$_{-3}$	1.02	...	1.14
DPR Korea	...	...	...	...	...	...	...	...	...	...	...	...
Hong Kong, China	...	...	...	1.01$_{-2}$	0.99$_{-4}$	1.08$_{-1}$	1.03$_{-1}$	...	...	0.98$_{-1i}$	0.97$_{-1i}$	1.09$_{i}$
Indonesia	1.01	1.04	1.04	...	...	1.29$_{-1}$	1.11$_{-1}$	1.00$_{-3}$	1.00$_{-3}$	0.97	1.03	1.2
Japan	1.00	...	...	...	...	1.07$_{-1}$	1.03$_{-1}$	...	...	1.00$_{-1i}$	1.00$_{-1i}$	0.97$_{-1i}$
Lao PDR	1.07	0.99	1.10	1.33$_{-4}$	1.08$_{-4}$	...	...	0.98$_{-1i}$	0.91$_{-1i}$	0.98$_{+1}$	0.96	0.75
Macao, China	...	...	...	1.01$_{-2}$	...	1.06$_{-1}$	1.00$_{-1}$	1.00$_{-2i}$	0.97$_{-2i}$	1.02$_{i}$	0.98$_{i}$	1.08$_{i}$
Malaysia	1.00	1.01	1.27	1.24$_{-4}$	1.10$_{-4}$	1.32$_{-1}$	1.16$_{-1}$	1.00$_{-1}$	1.00$_{-1}$	1.02	1.05	1.26
Mongolia	1.00	1.00	1.07	...	...	1.28$_{-1}$	1.07$_{-1}$	1.00$_{-3}$	1.00$_{-3}$	1.01	1.03	1.39
Myanmar	1.04	1.11	1.30	1.21$_{-4}$	1.02$_{-4}$	...	...	1.00$_{-4}$	1.00$_{-4}$	...	...	...
Philippines	1.04	1.16	1.20	1.23$_{-4}$	1.08$_{-4}$	1.39$_{-1}$	1.24$_{-1}$	1.00$_{-1}$	1.00$_{-3}$	0.99	1.06	1.3
Republic of Korea	1.00	1.00	1.00	...	0.99$_{-4}$	1.10$_{-1}$	1.04$_{-1}$	...	...	1.00$_{-1i}$	1.00$_{-1i}$	0.86$_{-1i}$
Singapore	...	...	...	1.03$_{-2}$	0.99$_{-4}$	1.06$_{-1}$	1.01$_{-1}$	1.00$_{-2}$	1.00$_{-2}$	1.00$_{-1i}$	0.99$_{-1i}$	1.10$_{-1i}$
Thailand	1.01	1.10	1.20	...	...	1.30$_{-1}$	1.07$_{-1}$	1.00$_{-1}$	1.01$_{-1i}$	1.00$_{+1}$	0.98$_{+1}$	1.27$_{+1}$
Timor-Leste	1.13	1.20	1.15	...	...	...	...	1.03$_{-3i}$	0.91$_{-3i}$	1.05	1.13$_{-3}$	1.08
Viet Nam	1.03	1.05	1.12	1.05$_{-4}$	1.00$_{-4}$	1.11$_{-1}$	0.97$_{-1}$	1.00$_{-1}$	1.00$_{-1}$	1.02	1.00$_{-1}$	1.06$_{-1}$
Oceania												
Australia	1.00	1.00	1.06	...	1.01$_{-4}$	1.10$_{-1}$	0.99$_{-1}$	...	...	1.00$_{-1i}$	0.96$_{-1i}$	1.33$_{-1i}$
Cook Islands	...	...	...	...	...	...	...	...	...	1.01	1.04	...
Fiji	1.01	1.03	1.03	...	...	...	...	1.03$_{-2}$	...	0.96	1.04	1.3
Kiribati	1.07	1.22	1.37	...	...	...	...	...	...	0.99	1.13	...
Marshall Islands	...	...	...	...	...	...	...	...	...	1.03$_{-1}$	1.07$_{-1}$	1.23$_{-1}$
Micronesia, F. S.	...	...	...	...	...	...	...	...	...	1.00$_{-1}$	...	...
Nauru	...	...	...	...	...	...	...	...	...	1.01	1.06	...
New Zealand	...	...	...	1.04$_{-2}$	1.04$_{-4}$	1.10$_{-1}$	1.01$_{-1}$	...	...	1.00$_{-1i}$	1.05$_{-1i}$	1.40$_{-1i}$
Niue	...	...	...	...	...	...	...	...	...	1.08	1	...
Palau	...	...	...	...	...	...	...	...	...	0.98	1.03	1.33
Papua New Guinea	1.14	1.25	0.92	...	...	...	...	...	...	...	...	...
Samoa	1.02	1.03	1.30	...	...	...	...	1.01$_{-2i}$	1.00$_{-2i}$	1	...	1.62
Solomon Is	...	...	...	...	...	...	...	...	...	1	...	...
Tokelau	...	...	...	...	...	...	...	...	...	1.13	1.1	...
Tonga	1.01	1.10	1.11	...	...	...	...	1.00$_{-2i}$	1.00$_{-2i}$	1.01	1.06	1.40$_{i}$
Tuvalu	1.00	1.24	1.31	...	...	...	...	0.99$_{-4}$	...	1	1.2	...
Vanuatu	1.06	1.07	0.84	...	...	...	...	1.01$_{-2i}$	0.98$_{-2i}$	0.98	1	...

Location/Wealth																	Country code
E													F				
Disparity in primary completion				Disparity in lower secondary completion				Disparity in upper secondary completion				Wealth disparity in minimum proficiency					
Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		End of primary		End of lower secondary			
Location	Wealth	Male	Female	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Reading	Mathematics	Reading	Mathematics		
4.5.1																	
2023																	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.46$_{-1}$	0.48$_{-1}$	BRN
0.96$_{-2}$	0.69$_{-2}$	57$_{-2}$	73$_{-2}$	0.78$_{-2}$	0.37$_{-2}$	29$_{-2}$	29$_{-2}$	0.58$_{-2}$	0.12$_{-2}$	6$_{-2}$	6$_{-2}$	...	...	0.19$_{-1}$	0.13$_{-1}$	KHM
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	CHN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	PRK
...	...	...	...	...	...	...	...	...	...	...	...	1.00$_{-2}$	0.95$_{-4}$	0.87$_{-1}$	0.87$_{-1}$	HKG
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.31$_{-1}$	0.25$_{-1}$	IDN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.77$_{-1}$	0.77$_{-1}$	JPN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LAO
...	...	...	...	...	...	...	...	...	...	...	...	0.96$_{-2}$	...	0.92$_{-1}$	0.89$_{-1}$	MAC
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.39$_{-1}$	0.32$_{-1}$	MYS
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.28$_{-1}$	0.38$_{-1}$	MNG
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	MMR
0.98$_{-1}$	0.89$_{-1}$	83$_{-1}$	95$_{-1}$	0.94$_{-1}$	0.63$_{-1}$	53$_{-1}$	72$_{-1}$	0.93$_{-1}$	0.40$_{-1}$	32$_{-1}$	42$_{-1}$	...	...	0.27$_{-1}$	0.20$_{-1}$	PHL
...	...	...	...	...	...	...	...	...	...	...	...	...	0.94$_{-4}$	0.70$_{-1}$	0.66$_{-1}$	KOR
...	...	...	...	...	...	...	...	...	...	...	...	0.86$_{-2}$	0.90$_{-4}$	0.75$_{-1}$	0.77$_{-1}$	SGP
0.99$_{-1}$	0.97$_{-1}$	96$_{-1}$	99$_{-1}$	0.98$_{-1}$	0.81$_{-1}$	74$_{-1}$	86$_{-1}$	0.86$_{-1}$	0.45$_{-1}$	39$_{-1}$	49$_{-1}$	...	...	0.34$_{-1}$	0.32$_{-1}$	THA
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	TLS
1.00$_{-2}$	0.95$_{-2}$	94$_{-2}$	95$_{-2}$	0.93$_{-2}$	0.69$_{-2}$	63$_{-2}$	71$_{-2}$	0.61$_{-2}$	0.33$_{-2}$	33$_{-2}$	28$_{-2}$	...	...	0.75$_{-1}$	0.70$_{-1}$	VNM
...	...	...	...	...	...	...	...	...	...	...	...	...	0.54$_{-4}$	0.64$_{-1}$	0.53$_{-1}$	AUS
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	COK
1.01$_{-2}$	0.99$_{-2}$	97$_{-2}$	100$_{-2}$	0.94$_{-2}$	0.82$_{-2}$	74$_{-2}$	87$_{-2}$	0.69$_{-2}$	0.38$_{-2}$	27$_{-2}$	34$_{-2}$	...	...	...	...	FJI
0.97$_{-4}$	0.92$_{-4}$	...	...	0.85$_{-4}$	0.69$_{-4}$	...	...	0.28$_{-4}$	...	...	...	...	...	...	...	KIR
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	MHL
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	FSM
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	NRU
...	...	...	...	...	...	...	...	...	...	...	...	0.82$_{-2}$	0.38$_{-4}$	0.69$_{-1}$	0.50$_{-1}$	NZL
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	NIU
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	PLW
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	PNG
1.00$_{-4}$	0.99$_{-4}$	95$_{-4}$	100$_{-4}$	0.99$_{-4}$	0.97$_{-4}$	93$_{-4}$	97$_{-4}$	0.75$_{-4}$	0.50$_{-4}$	26$_{-4}$	50$_{-4}$	...	...	...	...	WSM
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SLB
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	TKL
1.02$_{-4}$	0.98$_{-4}$	97$_{-4}$	97$_{-4}$	0.95$_{-4}$	0.88$_{-4}$	88$_{-4}$	86$_{-4}$	0.99$_{-4}$	0.71$_{-4}$	58$_{-4}$	79$_{-4}$	...	...	...	...	TON
1.00$_{-4}$	...	...	...	0.99$_{-4}$	0.82$_{-4}$	...	...	0.73$_{-4}$	0.45$_{-4}$	...	...	...	...	...	...	TUV
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	VUT

TABLE 5: Continued

Country or territory	Gender											
	A			B				C		D		
	GPIA in completion			GPIA in minimum proficiency				GPIA in literacy rate		GPIA in gross enrolment ratio		
				End of primary		End of lower secondary						
	Primary	Lower secondary	Upper secondary	Reading	Mathematics	Reading	Mathematics	Youth	Adults	Primary	Secondary	Tertiary
SDG indicator	4.5.1											
Reference year	2023											
Latin America and the Caribbean												
Anguilla	...	...	...	...	...	...	...	...	...	0.92$_{-1}$	1.02$_{-1}$	...
Antigua and Barbuda	...	...	...	...	...	...	...	...	...	0.98$_{-4}$	...	...
Argentina	1.02	1.12	1.19	1.16$_{-4}$	0.85$_{-4}$	1.13$_{-1}$	0.81$_{-1}$	...	...	1.02$_{-1}$	1.06$_{-1}$	1.46$_{-1}$
Aruba	...	...	...	...	...	...	...	1.00$_{-3i}$	1.00$_{-3i}$	1.03$_{-1i}$	1.05$_{-1i}$	...
Bahamas	...	...	...	...	...	...	...	...	...	0.99	1.14	...
Barbados	1.01	1.00	1.07	...	...	...	...	...	...	0.96	1.03	...
Belize	1.11	1.30	1.38	...	...	...	...	...	...	0.99	1.02	1.45
Bolivia, P. S.	1.00	1.02	1.01	...	...	...	...	1.00$_{-2}$	1.00$_{-3}$	1.00$_{i}$	1.00$_{i}$	...
Brazil	1.05	1.07	1.12	1.14$_{-4}$	0.87$_{-4}$	1.14$_{-1}$	0.83$_{-1}$	1.01$_{-1}$	1.00$_{-1i}$	0.99$_{-1i}$	1.05$_{-1i}$	1.32$_{-1i}$
British Virgin Islands	...	...	...	...	...	...	...	...	...	0.98$_{-1}$	1.00$_{-1}$	1.39
Cayman Islands	...	...	...	...	...	...	...	...	...	0.74	1.21	...
Chile	1.00	1.03	1.05	...	...	1.06$_{-1}$	0.82$_{-1}$	1.00$_{-1}$	1.00$_{-1i}$	0.97$_{-1i}$	0.98$_{-1i}$	1.17$_{-1i}$
Colombia	1.03	1.06	1.08	1.11$_{-4}$	0.87$_{-4}$	1.10$_{-1}$	0.85$_{-1}$	1.01$_{-1}$	1.00$_{-3}$	0.97$_{-1i}$	1.04$_{-1i}$	1.15$_{-1i}$
Costa Rica	1.03	1.12	1.17	1.09$_{-4}$	0.84$_{-4}$	1.02$_{-1}$	0.72$_{-1}$	1.00$_{-2i}$	1.00$_{-2i}$	1.02$_{-1i}$	1.10$_{-1i}$	1.19$_{-4i}$
Cuba	1.00	1.03	1.12	1.23$_{-4}$	1.02$_{-4}$	...	...	1.00$_{-2i}$	1.00$_{-2i}$	0.98	1.02	1.47
Curaçao	...	...	...	...	...	...	...	...	...	0.96$_{i}$	1.08$_{i}$	...
Dominica	...	...	...	...	...	...	...	...	...	0.98	0.94	...
Dominican Republic	1.06	1.07	1.27	1.41$_{-4}$	1.01$_{-4}$	1.36$_{-1}$	0.87$_{-1}$	1.01$_{-1}$	1.00$_{-1i}$	0.97	1.1	1.48$_{-1i}$
Ecuador	1.00	0.99	1.10	1.14$_{-4}$	0.97$_{-4}$	...	...	1.01$_{-1}$	1.00$_{-1}$	1.03$_{i}$	1.03$_{i}$	1.20$_{-1i}$
El Salvador	1.03	1.09	1.19	1.19$_{-4}$	0.85$_{-4}$	1.17$_{-1}$	0.77$_{-1}$	1	1	1	1.08	1.26
Grenada	...	...	...	...	...	...	...	...	...	0.93$_{-2}$	...	...
Guatemala	0.99	0.97	1.02	1.05$_{-4}$	0.74$_{-4}$	1.08$_{-1}$	0.70$_{-1}$	0.98$_{-1}$	0.89$_{-1}$	0.98	1.04	1.21
Guyana	1.00	1.09	1.19	...	...	...	...	1.01$_{-1i}$	0.99$_{-1i}$	0.99	1	...
Haiti	1.37	1.26	1.11	...	...	...	...	...	...	...	...	...
Honduras	1.04	1.15	1.18	1.23$_{-4}$	0.87$_{-4}$	...	...	1.03$_{-4}$	1.00$_{-4}$	1.01	1.16	1.28$_{-4}$
Jamaica	1.00	1.01	1.02	...	...	1.28$_{-1}$	1.20$_{-1}$	1.11$_{-1}$	...	1	1	...
Mexico	1.01	1.03	1.07	1.16$_{-4}$	1.05$_{-4}$	1.07$_{-1}$	0.80$_{-1}$	1.00$_{-1}$	1.00$_{-3}$	1.00$_{-1i}$	1.12$_{-1i}$	1.15$_{-1i}$
Montserrat	...	...	...	...	...	...	...	...	...	1.18	0.95	...
Nicaragua	1.15	1.26	1.26	1.16$_{-4}$	0.61$_{-4}$	...	...	...	...	0.97	1.01	1.29
Panama	1.02	1.09	1.18	1.21$_{-4}$	0.96$_{-4}$	1.17$_{-1}$	0.82$_{-1}$	1.00$_{-1}$	1.00$_{-4}$	1	1.04$_{-2}$	1.38$_{-1}$
Paraguay	1.04	1.11	1.11	1.26$_{-4}$	0.91$_{-4}$	1.19$_{-1}$	0.73$_{-1}$	1.00$_{-1}$	1.00$_{-3}$	0.99	1.05	...
Peru	1.00	1.04	1.00	1.16$_{-4}$	1.02$_{-4}$	1.07$_{-1}$	0.79$_{-1}$	1.00$_{-1}$	1.00$_{-3}$	1.01	1.03	...
Saint Kitts and Nevis	...	...	...	...	...	...	...	...	...	0.96$_{-2}$	0.94$_{-2}$	...
Saint Lucia	1.00	1.02	1.13	...	...	...	...	...	...	1	1.03	1.55$_{-1}$
Saint Vincent/Grenadines	...	...	...	...	...	...	...	...	...	1.01	1.01	1.67$_{-1}$
Sint Maarten	...	...	...	...	...	...	...	...	...	1.75	...	1.78
Suriname	1.11	1.25	1.37	...	...	...	...	1.00$_{-2i}$	0.97$_{-2i}$	0.25	1.14$_{-2}$	1.52$_{-1}$
Trinidad and Tobago	1.01	1.05	1.12	...	...	...	...	1.07$_{-1}$	...	0.99	1.05	...
Turks and Caicos Islands	...	...	...	...	...	...	...	1.00$_{-3}$	...	0.96	0.85	1.52
Uruguay	1.01	1.12	1.22	1.13$_{-4}$	0.98$_{-4}$	1.10$_{-1}$	0.88$_{-1}$	1.00$_{-1}$	1.00$_{-1}$	0.98$_{-1i}$	1.12$_{-1i}$	1.43$_{-1i}$
Venezuela, B. R.	1.09	1.15	1.35	...	...	...	...	1.01$_{-1i}$	1.00$_{-1i}$	0.99	1.08	...

Location/Wealth																	
E													F				
Disparity in primary completion				Disparity in lower secondary completion				Disparity in upper secondary completion				Wealth disparity in minimum proficiency					
Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		End of primary		End of lower secondary			
Location	Wealth	Male	Female	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Reading	Mathematics	Reading	Mathematics	Country code	
4.5.1																	
2023																	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	AIA	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	ATG	
...	...	...	...	...	...	...	...	...	...	...	...	0.31_{-4}	0.19_{-4}	0.44_{-1}	0.26_{-1}	ARG	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	ABW	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	BHS	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	BRB	
...	...	...	...	...	...	...	...	0.61_{-2}	...	...	...	...	...	...	...	BLZ	
0.99_{-2}	0.99_{-2}	98_{-2}	98_{-2}	0.97_{-2}	0.95_{-2}	93_{-2}	95_{-2}	0.75_{-2}	0.74_{-2}	72_{-2}	61_{-2}	...	...	...	...	BOL	
0.98_{-1}	0.97_{-1}	94_{-1}	97_{-1}	0.90_{-1}	0.83_{-1}	77_{-1}	86_{-1}	0.76_{-1}	0.59_{-1}	51_{-1}	58_{-1}	0.35_{-4}	0.17_{-4}	0.47_{-1}	0.22_{-1}	BRA	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	VGB	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	CYM	
1.00_{-1}	1.00_{-1}	99_{-1}	99_{-1}	1.00_{-1}	0.99_{-1}	99_{-1}	99_{-1}	0.97_{-1}	0.90_{-1}	85_{-1}	91_{-1}	...	...	0.63_{-1}	0.40_{-1}	CHL	
0.95_{-1}	0.91_{-1}	87_{-1}	93_{-1}	0.77_{-1}	0.71_{-1}	64_{-1}	72_{-1}	0.67_{-1}	0.61_{-1}	55_{-1}	59_{-1}	0.32_{-4}	0.17_{-4}	0.42_{-1}	0.25_{-1}	COL	
0.99_{-1}	0.98_{-1}	97_{-1}	98_{-1}	0.99_{-1}	0.82_{-1}	78_{-1}	82_{-1}	0.88_{-1}	0.63_{-1}	52_{-1}	67_{-1}	0.44_{-4}	0.15_{-4}	...	...	CRI	
1.00_{-4}	1.00_{-4}	100_{-4}	100_{-4}	0.96_{-4}	1.14_{-4}	100_{-4}	100_{-4}	0.79_{-4}	1.49_{-4}	86_{-4}	84_{-4}	0.52_{-4}	0.58_{-4}	...	...	CUB	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	CUW	
...	...	...	...	...	...	...	...	1.15_{-2}	...	...	...	...	...	...	...	DMA	
0.99_{-1}	0.90_{-1}	85_{-1}	92_{-1}	0.98_{-1}	0.87_{-1}	76_{-1}	88_{-1}	0.83_{-1}	0.59_{-1}	39_{-1}	52_{-1}	0.14_{-4}	0.03_{-4}	0.24_{-1}	...	DOM	
0.99_{-1}	0.99_{-1}	99_{-1}	98_{-1}	0.95_{-1}	0.94_{-1}	90_{-1}	93_{-1}	0.90_{-1}	0.73_{-1}	64_{-1}	70_{-1}	0.23_{-4}	0.34_{-4}	...	...	ECU	
0.95_{-1}	0.91_{-1}	83_{-1}	87_{-1}	0.77_{-1}	0.73_{-1}	69_{-1}	62_{-1}	0.61_{-1}	0.47_{-1}	43_{-1}	38_{-1}	0.23_{-4}	0.05_{-4}	0.27_{-1}	0.10_{-1}	SLV	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	GRD	
0.88_{-1}	...	...	...	0.60_{-1}	...	...	...	0.46_{-1}	...	...	...	0.09_{-4}	0.03_{-4}	0.33_{-1}	0.15_{-1}	GTM	
0.99_{-4}	0.95_{-4}	93_{-4}	97_{-4}	0.88_{-4}	0.67_{-4}	58_{-4}	73_{-4}	0.81_{-4}	0.42_{-4}	29_{-4}	43_{-4}	...	...	...	...	GUY	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	HTI	
0.91_{-4}	0.83_{-4}	81_{-4}	80_{-4}	0.57_{-4}	0.34_{-4}	28_{-4}	31_{-4}	0.41_{-4}	0.23_{-4}	15_{-4}	20_{-4}	0.32_{-4}	0.87_{-4}	...	...	HND	
1.00_{-1}	0.98_{-1}	97_{-1}	99_{-1}	0.98_{-1}	0.94_{-1}	90_{-1}	95_{-1}	0.96_{-1}	0.79_{-1}	69_{-1}	82_{-1}	...	...	0.56_{-1}	0.36_{-1}	JAM	
0.99_{-1}	0.97_{-1}	95_{-1}	97_{-1}	0.91_{-1}	0.86_{-1}	82_{-1}	84_{-1}	0.74_{-1}	0.53_{-1}	43_{-1}	44_{-1}	0.43_{-4}	0.50_{-4}	0.50_{-1}	0.38_{-1}	MEX	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	MSR	
...	...	...	...	...	...	...	...	...	...	...	...	0.26_{-4}	0.47_{-4}	...	...	NIC	
0.96_{-1}	0.95_{-1}	95_{-1}	94_{-1}	0.87_{-1}	0.78_{-1}	74_{-1}	81_{-1}	0.73_{-1}	0.52_{-1}	44_{-1}	54_{-1}	0.07_{-4}	0.02_{-4}	0.34_{-1}	0.10_{-1}	PAN	
1.01_{-1}	0.95_{-1}	93_{-1}	94_{-1}	0.91_{-1}	0.81_{-1}	79_{-1}	79_{-1}	0.68_{-1}	0.57_{-1}	50_{-1}	52_{-1}	0.19_{-4}	0.24_{-4}	0.32_{-1}	0.15_{-1}	PRY	
0.99_{-1}	0.97_{-1}	97_{-1}	97_{-1}	0.96_{-1}	0.92_{-1}	89_{-1}	89_{-1}	0.89_{-1}	0.83_{-1}	76_{-1}	80_{-1}	0.34_{-4}	0.35_{-4}	0.46_{-1}	0.31_{-1}	PER	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	KNA	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LCA	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	VCT	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SXM	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SUR	
0.99_{-1}	0.97_{-1}	96_{-1}	99_{-1}	0.97_{-1}	0.87_{-1}	81_{-1}	95_{-1}	0.96_{-1}	0.79_{-1}	57_{-1}	80_{-1}	...	...	...	...	TTO	
1.01_{-4}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	TCA	
1.00_{-1}	0.99_{-1}	99_{-1}	98_{-1}	0.99_{-1}	0.70_{-1}	65_{-1}	70_{-1}	0.93_{-1}	0.24_{-1}	19_{-1}	24_{-1}	0.37_{-4}	0.32_{-4}	0.55_{-1}	0.37_{-1}	URY	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	VEN	

TABLE 5: Continued

Country or territory	Gender											
	A			B				C		D		
	GPIA in completion			GPIA in minimum proficiency				GPIA in literacy rate		GPIA in gross enrolment ratio		
				End of primary		End of lower secondary						
	Primary	Lower secondary	Upper secondary	Reading	Mathematics	Reading	Mathematics	Youth	Adults	Primary	Secondary	Tertiary
SDG indicator	4.5.1											
Reference year	2023											
Europe and Northern America												
Albania	1.01	1.01	1.05	1.04_{-2}	1.04_{-4}	1.47_{-1}	1.21_{-1}	1.01_{-1i}	1.00_{-1i}	0.93_{i}	0.93_{i}	1.32_{i}
Andorra	...	...	...	...	...	...	...	...	...	1	1	1.16
Austria	1.00	1.00	1.06	1.01_{-2}	1.01_{-4}	1.08_{-1}	0.94_{-1}	...	...	0.99_{-1i}	0.98_{-1i}	1.22_{-1i}
Belarus	1.00	1.00	1.02	...	...	...	...	1.00_{-4}	1.00_{-4}	0.99_{+1}	0.98	1.12
Belgium	1.01	1.02	1.09	1.03_{-2}	1.05_{-4}	1.12_{-1}	1.00_{-1}	...	...	1.00_{-1i}	1.11_{-1i}	1.27_{-1i}
Bermuda	...	...	...	...	...	...	...	...	...	1	1.11	1.33
Bosnia and Herzegovina	1.00	1.01	1.16	...	1.14_{-4}	...	...	1.00_{-1i}	0.98_{-1i}	0.99	1.02	1.38
Bulgaria	1.00	0.99	1.01	1.02_{-2}	1.01_{-4}	1.24_{-1}	1.06_{-1}	1.00_{-2i}	0.99_{-2i}	1.00_{-1i}	0.98_{-1i}	1.23_{-1i}
Canada	1.00	1.01	1.07	1.01_{-2}	1.11_{-4}	1.09_{-1}	0.99_{-1}	...	...	1.00_{-1i}	0.99_{-1i}	1.28_{-1i}
Croatia	1.00	1.00	1.01	1.01_{-2}	1.07_{-4}	1.14_{-1}	1.00_{-1}	1.00_{-2i}	1.00_{-2i}	1.00_{-1i}	1.05_{-1i}	1.31_{-1i}
Czechia	1.00	1.00	1.02	1.01_{-2}	1.05_{-4}	1.12_{-1}	1.01_{-1}	...	...	1.00_{-1i}	1.01_{-1i}	1.29_{-1i}
Denmark	1.00	1.00	1.14	...	...	1.09_{-1}	0.98_{-1}	...	...	0.99_{-1i}	0.99_{-1i}	1.28_{-1i}
Estonia	1.00	1.03	1.09	...	...	1.08_{-1}	1.01_{-1}	1.00_{-2i}	1.00_{-2i}	1.00_{-1i}	1.04_{-1i}	1.35_{-1i}
Finland	1.00	1.00	1.03	1.02_{-2}	1.01_{-4}	1.16_{-1}	1.07_{-1}	...	...	1.00_{-1i}	1.11_{-1i}	1.22_{-1i}
France	1.00	1.01	1.06	1.03_{-2}	1.09_{-4}	1.10_{-1}	1.00_{-1}	...	...	1.00_{-1i}	1.01_{-1i}	1.24_{-1i}
Germany	1.00	1.01	1.06	1.02_{-2}	1.06_{-4}	1.08_{-1}	0.97_{-1}	...	...	1.00_{-1i}	0.94_{-1i}	1.08_{-1i}
Greece	1.00	1.01	1.03	...	...	1.18_{-1}	0.96_{-1}	...	...	1.00_{-1i}	0.98_{-1i}	1.06_{-1i}
Hungary	1.00	1.02	1.03	1.03_{-2}	1.05_{-4}	1.09_{-1}	0.96_{-1}	1.00_{-2i}	1.00_{-2i}	1.00_{-1i}	0.99_{-1i}	1.21_{-1i}
Iceland	1.00	1.00	1.23	...	...	1.21_{-1}	1.02_{-1}	...	...	1.00_{-1i}	0.96_{-1i}	1.51_{-1i}
Ireland	1.00	1.00	1.02	...	...	1.07_{-1}	0.99_{-1}	...	...	1.02_{-1i}	1.09_{-1i}	1.18_{-1i}
Italy	1.00	1.00	1.06	1.01_{-2}	1.06_{-4}	1.10_{-1}	0.94_{-1}	1.00_{-4i}	1.00_{-4i}	0.99_{-1i}	0.99_{-1i}	1.29_{-1i}
Latvia	1.00	1.02	1.10	1.04_{-2}	1.01_{-4}	1.13_{-1}	1.00_{-1}	1.00_{-2i}	1.00_{-2i}	1.00_{-1i}	1.01_{-1i}	1.31_{-1i}
Liechtenstein	...	...	...	...	...	...	...	...	...	0.98_{-2i}	0.85_{-2i}	0.65_{-2i}
Lithuania	1.00	1.00	1.06	1.02_{-2}	1.01_{-4}	1.15_{-1}	1.01_{-1}	1.00_{-2i}	1.00_{-2i}	1.00_{-1i}	0.97_{-1i}	1.33_{-1i}
Luxembourg	1.00	1.03	1.09	...	...	...	...	...	...	1.00_{-1i}	1.02_{-1i}	1.18_{-1i}
Malta	1.00	1.00	1.13	1.02_{-2}	1.03_{-4}	1.20_{-1}	1.06_{-1}	1.00_{-2i}	1.03_{-2i}	1.00_{-1i}	1.00_{-1i}	1.32_{-1i}
Monaco	...	...	...	...	...	...	...	...	...	...	...	...
Montenegro	1.00	1.01	1.06	1.08_{-2}	1.06_{-4}	1.30_{-1}	1.04_{-1}	1.00_{-2i}	0.99_{-2i}	1.01_{i}	1.03_{i}	1.34_{i}
Netherlands (Kingdom of the)	1.00	1.04	1.11	1.02_{-2}	1.03_{-4}	1.14_{-1}	0.99_{-1}	...	...	0.99_{-1i}	1.03_{-1i}	1.15_{-2i}
North Macedonia	1.00	1.02	1.03	1.11_{-2}	0.95_{-4}	1.31_{-1}	1.09_{-1}	...	...	1.01_{-1i}	1.00_{-1i}	1.31_{-1i}
Norway	1.00	1.00	1.09	...	0.98_{-4}	1.18_{-1}	1.05_{-1}	...	...	1.00_{-1i}	0.98_{-1i}	1.34_{-1i}
Poland	1.00	1.01	1.05	1.02_{-2}	1.02_{-4}	1.13_{-1}	1.02_{-1}	1.00_{-2i}	1.00_{-2i}	0.99_{-1i}	0.98_{-1i}	1.35_{-1i}
Portugal	1.00	1.03	1.11	1.03_{-2}	1.08_{-4}	1.10_{-1}	0.98_{-1}	1.00_{-2i}	0.98_{-2i}	1.00_{-1i}	1.02_{-1i}	1.17_{-1i}
Republic of Moldova	1.01	1.03	1.08	...	...	1.25_{-1}	0.95_{-1}	1.00_{-2i}	1.00_{-2i}	0.99_{-1}	1.00_{-1}	1.28_{-2}
Romania	1.00	1.00	0.99	...	...	1.18_{-1}	1.00_{-1}	1.00_{-2}	1.00_{-2}	0.99_{-1i}	1.01_{-1i}	1.24_{-1i}
Russian Federation	1.00	1.00	1.03	1.01_{-2}	1.01_{-4}	...	...	1.00_{-2}	1.00_{-2}	1.01_{i}	0.98_{i}	1.11_{-1}
San Marino	...	...	...	...	...	...	...	1.00_{-1}	1.00_{-1}	1.32_{+1}	0.97_{i}	0.90_{i}
Serbia	1.00	1.00	1.12	1.02_{-2}	0.97_{-4}	1.18_{-1}	0.96_{-1}	1.00_{-4}	1.00_{-4}	1.00_{-1i}	1.02_{-1i}	1.32_{i}
Slovakia	1.00	1.00	1.00	1.01_{-2}	1.05_{-4}	1.17_{-1}	1.03_{-1}	...	...	1.00_{-1i}	1.01_{-1i}	1.33_{-1i}
Slovenia	1.00	1.00	1.05	1.04_{-2}	...	1.21_{-1}	1.05_{-1}	...	...	0.99_{-1i}	1.02_{-1i}	1.34_{-1i}
Spain	1.00	1.03	1.16	1.01_{-2}	1.08_{-4}	1.11_{-1}	0.98_{-1}	1.00_{-3}	1.00_{-3}	1.00_{-1i}	1.04_{-1i}	1.22_{-1i}
Sweden	1.00	1.00	1.04	1.02_{-2}	1.05_{-4}	1.15_{-1}	1.03_{-1}	...	...	1.06_{-1i}	1.12_{-1i}	1.42_{-1i}
Switzerland	1.00	1.01	1.03	...	...	1.11_{-1}	0.99_{-1}	...	...	1.00_{-1i}	0.97_{-1i}	1.12_{-1i}
Ukraine	1.00	1.00	1.02	...	...	1.17_{-1}	0.96_{-1}	1.00_{-2i}	1.00_{-2i}	1.01_{-2i}	1.01_{-2i}	1.11_{-2i}
United Kingdom	1.00	1.00	1.03	1.02_{-2}	1.00_{-4}	1.08_{-1}	0.97_{-1}	...	...	1.00_{-1i}	1.03_{-1i}	1.27_{-1i}
United States	1.00	1.01	1.03	1.02_{-2}	1.04_{-4}	1.09_{-1}	0.96_{-1}	...	...	1.00_{-1i}	1.02_{-1i}	1.32_{-1i}

Location/Wealth																	
E													F				
Disparity in primary completion				Disparity in lower secondary completion				Disparity in upper secondary completion				Wealth disparity in minimum proficiency					
Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		Adjusted parity index		% of poorest completing		End of primary		End of lower secondary			
Location	Wealth	Male	Female	Location	Wealth	Male	Female	Location	Wealth	Male	Female	Reading	Mathematics	Reading	Mathematics	Country code	
4.5.1																	
2023																	
...	...	...	...	...	...	...	...	...	...	...	...	0.95_{-2}	0.71_{-4}	0.43_{-1}	0.41_{-1}	ALB	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	AND	
1.01_{-2}	...	...	...	1.03_{-2}	...	...	...	1.10_{-2}	...	...	...	0.91_{-2}	0.77_{-4}	0.54_{-1}	0.51_{-1}	AUT	
1.00_{-4}	1.00_{-4}	100_{-4}	100_{-4}	0.97_{-4}	0.99_{-4}	99_{-4}	100_{-4}	0.85_{-4}	0.83_{-4}	74_{-4}	82_{-4}	...	...	...	...	BLR	
...	...	...	...	0.97_{-2}	...	...	...	1.08_{-2}	...	...	...	0.92_{-2}	0.71_{-4}	0.57_{-1}	0.53_{-1}	BEL	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	BMU	
...	...	...	...	...	...	...	...	...	...	...	...	...	0.88_{-4}	...	...	BIH	
0.99_{-2}	...	...	...	0.98_{-2}	...	...	...	0.80_{-2}	...	...	...	0.83_{-2}	0.50_{-4}	0.30_{-1}	0.31_{-1}	BGR	
...	...	...	...	...	...	...	...	...	...	...	...	0.98_{-2}	0.73_{-4}	0.70_{-1}	0.62_{-1}	CAN	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	0.99_{-2}	...	...	...	0.88_{-2}	0.98_{-4}	0.71_{-1}	0.56_{-1}	HRV	
...	...	...	...	...	...	...	...	...	...	...	...	0.83_{-2}	0.66_{-4}	0.58_{-1}	0.46_{-1}	CZE	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	0.85_{-2}	...	...	...	...	...	0.59_{-1}	0.56_{-1}	DNK	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	0.93_{-2}	...	...	...	...	...	0.80_{-1}	0.72_{-1}	EST	
1.00_{-2}	...	...	...	1.01_{-2}	...	...	...	1.03_{-2}	...	...	...	0.84_{-2}	0.74_{-4}	0.66_{-1}	0.60_{-1}	FIN	
1.00_{-2}	...	...	...	0.99_{-2}	...	...	...	1.00_{-2}	...	...	...	0.89_{-2}	0.54_{-4}	0.57_{-1}	0.51_{-1}	FRA	
...	...	...	...	1.03_{-2}	...	...	...	1.02_{-2}	...	...	...	0.87_{-2}	0.52_{-4}	0.65_{-1}	0.57_{-1}	DEU	
1.01_{-2}	...	...	...	1.02_{-2}	...	...	...	1.02_{-2}	...	...	...	...	...	0.56_{-1}	0.47_{-1}	GRC	
0.99_{-2}	...	...	...	0.98_{-2}	...	...	...	0.86_{-2}	...	...	...	0.78_{-2}	0.48_{-4}	0.49_{-1}	0.41_{-1}	HUN	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.53_{-1}	0.55_{-1}	ISL	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.79_{-1}	0.63_{-1}	IRL	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	1.02_{-2}	...	...	...	0.94_{-2}	0.82_{-4}	0.69_{-1}	0.57_{-1}	ITA	
1.00_{-2}	...	...	...	1.01_{-2}	...	...	...	0.93_{-2}	...	...	...	1.00_{-2}	0.67_{-4}	0.68_{-1}	0.65_{-1}	LVA	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LIE	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	0.91_{-2}	...	...	...	0.90_{-2}	0.65_{-4}	0.64_{-1}	0.53_{-1}	LTU	
1.01_{-2}	...	...	...	1.01_{-2}	...	...	...	1.10_{-2}	...	...	...	...	...	...	...	LUX	
...	...	...	...	...	...	...	...	...	...	...	...	0.73_{-2}	0.61_{-4}	0.60_{-1}	0.62_{-1}	MLT	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	MCO	
...	...	...	...	...	...	...	...	...	...	...	...	0.92_{-2}	0.81_{-4}	0.46_{-1}	0.38_{-1}	MNE	
...	...	...	...	...	...	...	...	...	...	...	...	0.90_{-2}	0.85_{-4}	0.50_{-1}	0.56_{-1}	NLD	
1.02_{-4}	0.97_{-4}	...	...	1.03_{-4}	0.84_{-4}	...	...	1.02_{-4}	0.56_{-4}	...	...	0.70_{-2}	0.60_{-4}	0.29_{-1}	0.32_{-1}	MKD	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	0.92_{-2}	...	...	...	...	0.72_{-4}	0.54_{-1}	0.48_{-1}	NOR	
1.00_{-3}	...	...	...	1.01_{-2}	...	...	...	0.99_{-2}	...	...	...	0.96_{-2}	0.65_{-4}	0.67_{-1}	0.62_{-1}	POL	
0.99_{-2}	...	...	...	0.99_{-2}	...	...	...	0.97_{-2}	...	...	...	0.93_{-2}	0.82_{-4}	0.71_{-1}	0.60_{-1}	PRT	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.43_{-1}	0.37_{-1}	MDA	
0.99_{-3}	...	...	...	0.96_{-2}	...	...	...	0.82_{-2}	...	...	...	...	...	0.42_{-1}	0.32_{-1}	ROU	
0.99_{-2}	...	100_{-2}	100_{-2}	1.00_{-2}	...	100_{-2}	100_{-2}	1.00_{-2}	...	85_{-2}	90_{-2}	0.96_{-2}	0.89_{-4}	...	...	RUS	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SMR	
1.00_{-4}	0.97_{-4}	100_{-4}	93_{-4}	0.99_{-4}	0.93_{-4}	95_{-4}	92_{-4}	0.93_{-4}	0.64_{-4}	63_{-4}	59_{-4}	0.90_{-2}	0.70_{-4}	0.55_{-1}	0.45_{-1}	SRB	
...	...	...	...	...	...	...	...	...	...	...	...	...	0.43_{-4}	0.46_{-1}	0.39_{-1}	SVK	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	1.03_{-2}	...	...	...	0.95_{-2}	...	0.57_{-1}	0.54_{-1}	SVN	
0.99_{-2}	...	...	...	0.99_{-2}	...	...	...	1.02_{-2}	...	...	...	0.89_{-2}	0.63_{-4}	0.68_{-1}	0.60_{-1}	ESP	
1.00_{-2}	...	...	...	1.00_{-2}	...	...	...	0.89_{-2}	...	...	...	0.93_{-2}	0.66_{-4}	0.56_{-1}	0.53_{-1}	SWE	
1.00_{-2}	...	...	...	0.99_{-2}	...	...	...	1.04_{-2}	...	...	...	...	...	0.55_{-1}	0.60_{-1}	CHE	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.47_{-1}	0.45_{-1}	UKR	
1.00_{-4}	...	...	...	1.00_{-4}	...	...	...	1.02_{-4}	...	...	...	0.95_{-2}	0.82_{-4}	0.78_{-1}	0.68_{-1}	GBR	
...	1.00_{-4}	99_{-3}	99_{-3}	...	0.99_{-4}	98_{-3}	98_{-3}	...	0.92_{-4}	88_{-3}	91_{-3}	0.92_{-2}	0.74_{-4}	0.75_{-1}	0.55_{-1}	USA	

TABLE 6: SDG 4, Target 4.7 – Education for sustainable development and global citizenship

By 2030, ensure that all learners acquire the 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

	A				B	
	Extent to which global citizenship education and education for sustainable development are mainstreamed					
	Education policies/ frameworks	Curriculum	In-service teacher training	Student assessment	% of schools providing life skills-based HIV/AIDS education	
SDG indicator	4.7.1				4.7.2	
Reference year	2020				2023	
Region	Median				Weighted average	
World	...	...	...	...	83$_{i}$	
Sub-Saharan Africa	...	...	...	...	47$_{-1i}$	
Northern Africa and Western Asia	0.88$_{i}$	0.76$_{i}$	0.88$_{i}$	0.83$_{i}$	63$_{i}$	
Northern Africa	...	...	...	...	35$_{i}$	
Western Asia	0.88$_{i}$	0.77$_{i}$	0.90$_{i}$	0.92	88$_{i}$	
Central and Southern Asia	...	0.74$_{i}$	...	...	98	
Central Asia	0.75$_{i}$	0.78$_{i}$	0.90$_{i}$	0.92$_{i}$	60$_{-2i}$	
Southern Asia	...	0.66$_{i}$	...	...	100	
Eastern and South-eastern Asia	0.94$_{i}$	...	0.92$_{i}$	0.83$_{i}$	93$_{-1i}$	
Eastern Asia	...	...	...	...	96	
South-eastern Asia	0.94$_{i}$	...	0.92$_{i}$	0.92$_{i}$	93$_{-2i}$	
Oceania	...	...	...	...	...	
Latin America and the Caribbean	...	...	...	...	...	
Caribbean	...	...	...	...	...	
Central America	...	...	...	...	...	
South America	...	...	0.81$_{i}$	0.96$_{i}$	...	
Europe and Northern America	0.91$_{i}$	0.83$_{i}$	0.85$_{i}$	0.83$_{i}$	...	
Europe	0.95	0.84$_{i}$	0.88$_{i}$	0.88$_{i}$	...	
Northern America	0.88$_{i}$	0.78$_{i}$	0.70$_{i}$	0.83$_{i}$	...	
Low income	...	...	...	...	50$_{-1i}$	
Middle income	...	...	...	...	85$_{i}$	
Lower middle	...	...	...	...	89	
Upper middle	0.88$_{i}$	...	...	1.00$_{i}$	...	
High income	0.91$_{i}$	0.85$_{i}$	0.85$_{i}$	0.83$_{i}$	...	

A Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment.
B Percentage of lower secondary schools providing life skills-based HIV/AIDS education.
C Percentage of primary schools with water, sanitation and hygiene (WASH): basic drinking water, basic (single-sex) sanitation or toilets, and basic handwashing facilities.
D Percentage of primary schools with electricity, and computers or internet used for pedagogical purposes.
E Percentage of primary schools with access to adapted infrastructure and materials for students with disabilities.
F Percentage of lower secondary students experiencing bullying in the last 12 months.
G Number of attacks on students, teachers or institutions [*Source:* Global Coalition to Protect Education from Attack].
H Internationally mobile students, inbound and outbound numbers enrolled (thousand) and inbound and outbound mobility rates (as a percentage of total tertiary enrolment in the country).
I Volume of official development assistance flows (all sectors) for scholarships (all levels) and imputed student costs, total gross disbursements (million constant 2021 USD). Region totals include flows unallocated to specific countries. World total includes flows unallocated to specific countries or regions.

Note: ICT = information and communication technology.
Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.
Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.
(-) Magnitude nil or negligible.
(...) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).
(i) Estimate and/or partial coverage.

SDG 4, Means of implementation of target 4.a – Education facilities and learning environments

By 2030, build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments

SDG 4, Means of implementation of target 4.b – Scholarships

By 2020, substantially expand globally the number of scholarships available to developing countries

	C			D			E	F	G	H				I	
	% of schools with WASH facilities			% of schools with ICT for pedagogical purposes						Internationally mobile tertiary students				Official development assistance, USD (000,000)	
	Basic drinking water	Basic sanitation or toilets	Basic handwashing	Electricity	Internet	Computers	% of schools with adapted infrastructure and materials for students with disabilities	% of students experiencing bullying	Number of attacks on education	Mobility rate (%)		Number (000)			
										Inbound	Outbound	Inbound	Outbound	Scholarships	Imputed student costs
	4.a.1							4.a.2	4.a.3					4.b.1	
	2023									2023					
	Weighted average							—		Weighted average		Sum			
	77$_{i}$	77$_{i}$	78$_{i}$	79$_{i}$	49$_{i}$	49$_{i}$	50$_{-1i}$	...	...	3$_{-1}$	3$_{-1}$	6,859$_{-1}$	6,859$_{-1}$	1,050$_{i}$	2,939$_{i}$
	53$_{-1i}$	...	39$_{i}$	34$_{i}$	...	...	...	...	...	2$_{-2i}$	5$_{-2i}$	167$_{-1i}$	528$_{-1}$	209	428
	94$_{i}$	93$_{i}$	97$_{i}$	93$_{i}$	70$_{i}$	80$_{i}$	...	...	...	4$_{-1}$	4$_{-1}$	832$_{-1}$	791$_{-1}$	231$_{i}$	943$_{i}$
	92$_{i}$	91$_{i}$	95$_{i}$	89$_{i}$	58$_{i}$	75$_{i}$	...	...	...	1$_{-1}$	3$_{-1}$	110$_{-1}$	230$_{-1}$	97	469
	96$_{i}$	95$_{i}$	99$_{i}$	97$_{i}$	81$_{i}$	85$_{i}$	...	...	...	5$_{-1i}$	4$_{-1i}$	722$_{-1}$	561$_{-1}$	135$_{i}$	474$_{i}$
	86	83	85	85	38	34	67	...	...	0.4$_{-1}$	3$_{-1}$	209$_{-1}$	1,370$_{-1}$	223	595
	86$_{-2i}$	92$_{-4i}$	95$_{-2i}$	100$_{-2i}$	76$_{-2i}$	96$_{-2i}$	25$_{-2i}$	...	...	6$_{-1i}$	15$_{-1i}$	129$_{-1i}$	339$_{-1}$	41	37
	86	83	84	85	38	33	68	...	...	0.2$_{-1}$	2$_{-1}$	80$_{-1}$	1,030$_{-1}$	182	557
	77$_{-1i}$	74$_{-1i}$	83$_{-1i}$	91$_{-1i}$	78$_{-1i}$	68$_{-1i}$	...	...	...	1$_{-1}$	2$_{-1}$	832$_{-1}$	1,585$_{-1}$	163$_{i}$	488$_{i}$
	96	96	97	97	95	93	...	...	...	1$_{-1}$	2$_{-1}$	618$_{-1}$	1,228$_{-1}$	42$_{i}$	345$_{i}$
	66$_{-4i}$	60$_{-4i}$	74$_{-4i}$	87$_{-2i}$	67$_{-4i}$	52$_{-4i}$	...	...	...	1$_{-4i}$	2$_{-1}$	181$_{-4i}$	357$_{-1}$	121$_{i}$	143$_{i}$
	97$_{-1i}$	96$_{-1i}$	94$_{-1i}$	94$_{-1i}$	70$_{-1i}$	74$_{-1i}$	...	...	...	21$_{-1}$	2$_{-1}$	415$_{-1}$	30$_{-1}$	26$_{i}$	2$_{i}$
	...	74$_{i}$	72$_{-1i}$	88$_{i}$	44$_{i}$	53$_{i}$	34$_{-1i}$	...	...	1$_{-1}$	1$_{-1}$	358$_{-1}$	448$_{-1}$	78$_{i}$	210$_{i}$
	...	...	...	...	...	...	...	...	...	...	...	...	...	10$_{i}$	17$_{i}$
	...	...	...	...	...	...	...	...	...	...	...	...	...	15	51
	...	...	...	...	...	...	...	...	...	...	...	...	...	52$_{i}$	142$_{i}$
	99$_{-1i}$	100$_{-3i}$	100$_{-1i}$	100$_{-1i}$	96$_{-3i}$	99$_{-3i}$	...	...	...	8$_{-1}$	2$_{-1}$	4,046$_{-1}$	1,214$_{-1}$	...	...
	99$_{-1i}$	100$_{-1i}$	100$_{-1i}$	100$_{-1i}$	93$_{i}$	98$_{i}$	...	...	...	9$_{-1}$	3$_{-1}$	2,836$_{-1}$	1,046$_{-1}$	...	...
	100$_{-3i}$	100$_{-3i}$	100$_{-4}$	100$_{-4}$	100$_{-3i}$	100$_{-3i}$	...	...	...	6$_{-1}$	1$_{-1}$	1,210$_{-1}$	168$_{-1}$	...	...
	52$_{i}$	58$_{i}$	41$_{-1i}$	27$_{i}$	...	20$_{-3i}$	...	...	...	1$_{i}$	5$_{-2i}$	58$_{i}$	344$_{-1}$	140	317
	78$_{i}$	77$_{i}$	80$_{i}$	83$_{i}$	46$_{i}$	46$_{i}$	51$_{i}$	...	...	1$_{-1}$	2$_{-1}$	1,926$_{-1}$	4,233$_{-1}$	906	2,613
	80$_{i}$	78$_{i}$	79$_{i}$	77$_{i}$	36$_{i}$	36$_{i}$	55$_{i}$	...	...	1$_{-1}$	3$_{-1}$	394$_{-1}$	1,923$_{-1}$	477	1,252$_{i}$
	73$_{-1i}$	75$_{-4i}$	81$_{-1i}$	93$_{i}$	63$_{i}$	62$_{i}$	...	...	...	1$_{-1}$	2$_{-1}$	1,173$_{-1}$	2,226$_{-1}$	429	1,361
	95$_{-1i}$	96$_{-2i}$	96$_{-1i}$	98$_{-1i}$	91$_{-3i}$	94$_{-3i}$	...	...	...	8$_{-1}$	2$_{-1}$	5,199$_{-1}$	1,438$_{-1}$	...	...

TABLE 6: Continued

Country or territory	A				B
	Extent to which global citizenship education and education for sustainable development are mainstreamed				
	Education policies/ frameworks	Curriculum	In-service teacher training	Student assessment	% of schools providing life skills-based HIV/AIDS education
SDG indicator	4.7.1				4.7.2
Reference year	2020				2023
Sub-Saharan Africa					
Angola	...	...	...	...	...
Benin	...	...	...	...	...
Botswana	...	...	...	...	29$_{-1}$
Burkina Faso	0.88	0.88	0.9	0.83	19
Burundi	0.62	0.62	0.62	0.62	...
Cabo Verde	...	...	...	...	100$_{-4}$
Cameroon	...	...	...	...	82
Central African Republic	...	...	...	...	...
Chad	...	...	...	...	...
Comoros	...	...	...	...	...
Congo	...	...	...	...	...
Côte d'Ivoire	...	...	...	...	58
D. R. Congo	0.88	0.8	0.9	0.83	34$_{-2}$
Djibouti	...	...	...	...	-
Equat. Guinea	...	...	...	...	...
Eritrea	...	...	...	...	100$_{-1}$
Eswatini	...	...	...	...	16
Ethiopia	...	...	...	...	...
Gabon	...	...	...	...	...
Gambia	...	...	...	...	...
Ghana	...	...	...	...	...
Guinea	...	...	...	...	...
Guinea-Bissau	...	...	...	...	...
Kenya	...	...	...	...	...
Lesotho	...	...	...	...	...
Liberia	...	...	...	...	56$_{-2}$
Madagascar	...	...	...	...	...
Malawi	1	0.91	0.9	1	100
Mali	...	...	...	...	2
Mauritania	...	...	...	...	...
Mauritius	...	0.8	0.9	0.83	-
Mozambique	...	...	...	...	...
Namibia	...	...	...	...	...
Niger	...	...	...	...	94
Nigeria	...	...	...	...	...
Rwanda	...	...	...	...	100
Sao Tome and Principe	...	...	...	...	...
Senegal	...	...	...	...	...
Seychelles	...	...	...	...	81
Sierra Leone	...	...	...	...	33
Somalia	...	...	...	...	...
South Africa	...	...	...	...	...
South Sudan	...	...	...	...	...
Togo	...	...	...	...	1$_{-2}$
Uganda	...	...	...	...	...
United Republic of Tanzania	...	...	...	...	68$_{-2}$
Zambia	...	...	...	...	...
Zimbabwe	...	...	...	...	57$_{-3}$

	C			D			E	F	G	H				I		
	% of schools with WASH facilities			% of schools with ICT for pedagogical purposes						Internationally mobile tertiary students				Official development assistance, USD (000,000)		
										Mobility rate (%)		Number (000)				
	Basic drinking water	Basic sanitation or toilets	Basic handwashing	Electricity	Internet	Computers	% of schools with adapted infrastructure and materials for students with disabilities	% of students experiencing bullying	Number of attacks on education	Inbound	Outbound	Inbound	Outbound	Scholarships	Imputed student costs	Country code
	4.a.1							4.a.2	4.a.3					4.b.1		
	2023									2023						
	...	...	...	...	...	...	...	...	1	...	...	...	11$_{-1i}$	5	2	AGO
	53$_{-1}$	...	51$_{-3}$	34$_{-1}$	...	...	...	...	3	3$_{-1}$	8$_{-1i}$	4$_{-1}$	10$_{-1i}$	5	19	BEN
	100$_{-1}$	100$_{-1}$	...	98$_{-1}$	62$_{-1}$	51$_{-1}$	56$_{-1}$	...	1$_{-3}$	4	5$_{-1i}$	2	2$_{-1i}$	0.5	0.3	BWA
	74	34	44	31	0.4	1	47	...	179	2	4$_{-1i}$	4	8$_{-1i}$	4	9	BFA
	39$_{-4}$	35$_{-4}$	20$_{-4}$	9$_{-4}$	-$_{-4}$	-$_{-4}$	-$_{-4}$	...	1$_{-1}$	9	...	6	4$_{-1i}$	2	5	BDI
	100$_{-2}$	93$_{-2}$	100$_{-2}$	90$_{-2}$	32$_{-2}$	52$_{-2}$	...	...	...	...	...	...	6$_{-1i}$	2	2	CPV
	45$_{-1}$	39$_{-1}$	82$_{-1}$	36$_{-1}$	...	17$_{-1}$	...	...	61	2	8$_{-1i}$	7	33$_{-1i}$	11	72	CMR
	...	...	...	...	...	...	...	...	25	...	...	...	3$_{-1i}$	2	2	CAF
	26$_{-2}$	13	22	4	1	2	-$_{-2}$	...	3	-$_{-3}$	29$_{-3}$	-$_{-3}$	20$_{-1i}$	4	12	TCD
	75$_{-2}$	73$_{-2}$	96$_{-2}$	48$_{-2}$	21$_{-2}$	...	...	...	...	...	...	...	7$_{-1i}$	7	8	COM
	54$_{-4}$	...	...	34$_{-4}$	...	...	...	...	1$_{-2}$	...	...	...	14$_{-1i}$	6	18	COG
	68	...	48	67	...	7$_{-3}$	30	...	1	1	7$_{-1i}$	4	19$_{-1i}$	9	28	CIV
	37	73	...	10	...	...	...	...	319	0.4$_{-3}$	3$_{-3}$	2$_{-3}$	19$_{-1i}$	7	7	COD
	88	88	88	81	43	43	1	...	...	...	...	...	4$_{-1i}$	1	2	DJI
	...	...	...	...	...	...	...	...	...	...	...	...	2$_{-1i}$	0.5	0.2	GNQ
	...	...	...	29$_{-1}$	...	...	...	...	1$_{-3}$	...	...	...	1$_{-1i}$	1	2	ERI
	...	...	66	99	12	27	17	...	5$_{-1}$	...	...	...	2$_{-1i}$	0.5	0.1	SWZ
	20	30	14	27	...	...	...	...	30	...	...	...	11$_{-1i}$	18	6	ETH
	97$_{-2}$	...	44$_{-4}$	73$_{-2}$	...	...	4$_{-4}$	...	1	...	...	...	15$_{-1i}$	3	17	GAB
	86$_{-2}$	...	...	40$_{-2}$	...	22$_{-2}$	...	...	...	...	...	...	3$_{-1i}$	4	1	GMB
	...	...	...	39$_{-2}$	...	...	...	...	2$_{-1}$	1	4$_{-1i}$	5	22$_{-1i}$	12	17	GHA
	31$_{-3}$	75$_{-3}$	81$_{-3}$	18$_{-2}$	...	2$_{-2}$	...	...	2	...	...	1	9$_{-1i}$	7	15	GIN
	...	...	...	...	...	...	...	...	1	...	...	...	9$_{-1i}$	2	8	GNB
	...	...	...	...	...	...	...	...	13	1$_{-4i}$	3$_{-4i}$	7$_{-4}$	19$_{-1i}$	10	9	KEN
	...	...	...	...	...	...	...	...	2$_{-1}$	...	...	...	3$_{-1i}$	0.3	0.1	LSO
	63$_{-1}$	...	55$_{-3}$	24$_{-1}$	...	8$_{-3}$	...	...	1$_{-2}$	...	...	...	2$_{-1i}$	1	0.2	LBR
	34$_{+1}$	38$_{+1}$	...	12$_{+1}$	0.1$_{-4}$	4$_{+1}$	2$_{+1}$	...	6	0.3	3$_{-1i}$	1	5$_{-1i}$	3	9	MDG
	95	...	...	34	2	2	...	...	3	...	...	...	3$_{-1i}$	1	0.4	MWI
	...	...	65	18	1	6	6	...	16	...	...	...	11$_{-1i}$	6	10	MLI
	51$_{-4}$	28$_{-4}$	...	44$_{-4}$	...	...	...	...	1$_{-2}$	1$_{-3}$	25$_{-3}$	0.4$_{-3}$	7$_{-1i}$	2	3	MRT
	100	100	100	100	100	98	55	...	...	7$_{-1}$	14$_{-1i}$	3$_{-1}$	6$_{-1i}$	2	8	MUS
	...	...	...	...	...	...	...	...	3	...	...	...	5$_{-1i}$	2	4	MOZ
	...	...	...	...	...	...	...	...	...	3$_{-1}$	5$_{-1i}$	2$_{-1}$	4$_{-1i}$	1	1	NAM
	23	27	49	8	0.4	3	5	...	21	5$_{-4}$	9$_{-4i}$	4$_{-4}$	8$_{-1i}$	2	4	NER
	...	...	...	...	...	...	...	...	178	...	...	...	112$_{-1i}$	15	39	NGA
	54	100	100	78	57	58	69	...	1$_{-3}$	7	7$_{-1i}$	8	7$_{-1i}$	5	4	RWA
	...	...	...	...	...	...	...	...	...	...	...	...	1$_{-1i}$	1	1	STP
	80	31	77	53	27	23	36	...	5	9	7$_{-1i}$	26	19$_{-1i}$	8	54	SEN
	100	100	100	100	100	100	6	...	...	-	55$_{-1i}$	-	1$_{-1i}$	...	...	SYC
	50	73	52	15	1	2	20	...	3$_{-2}$	...	...	...	2$_{-1i}$	2	1	SLE
	...	...	...	...	...	...	...	...	42	...	...	...	16$_{-1i}$	6	1	SOM
	...	...	...	...	...	10$_{-2}$	...	96$_{-4}$	8	3$_{-1}$	1$_{-1i}$	31$_{-1}$	13$_{-1i}$	7	5	ZAF
	...	...	...	...	...	...	...	...	11	...	...	...	2$_{-1i}$	1	0.1	SSD
	56	27	84	36	1	2	19	...	1$_{-2}$	...	6$_{-3}$	41$_{-2}$	8$_{-1i}$	3	15	TGO
	...	...	...	...	...	...	...	...	4	...	...	...	7$_{-1i}$	6	3	UGA
	...	...	...	61	...	93$_{-2}$	...	...	...	0.4$_{-1}$	3$_{-1i}$	1$_{-1}$	8$_{-1i}$	7	2	TZA
	...	...	...	39$_{-3}$	...	...	...	...	2$_{-3}$	...	...	...	5$_{-1i}$	3	1	ZMB
	61$_{-3}$	93$_{-3}$	68$_{-3}$	66$_{-1}$	23$_{-3}$	36$_{-1}$	19$_{-3}$	...	6$_{-1}$	...	...	...	22$_{-1i}$	2	3	ZWE

TABLE 6: Continued

Country or territory	A Extent to which global citizenship education and education for sustainable development are mainstreamed: Education policies/ frameworks	Curriculum	In-service teacher training	Student assessment	B % of schools providing life skills-based HIV/AIDS education
SDG indicator	4.7.1				4.7.2
Reference year	2020				2023
Northern Africa and Western Asia					
Algeria	0.62	0.73	0.65	0.75	...
Armenia	0.88	0.7	0.85	0.83	100
Azerbaijan	...	...	...	...	100
Bahrain	1	0.94	1	1	100
Cyprus	1	0.92	0.95	0.67	...
Egypt	...	...	...	...	...
Georgia	1	...	...	1	...
Iraq	...	...	...	...	...
Israel	...	...	...	...	...
Jordan	0.88	0.75	0.95	1	...
Kuwait	0.62	0.88	0.8	0.83	100_{-2}
Lebanon	...	...	...	...	...
Libya	...	...	...	...	...
Morocco	...	...	...	...	...
Oman	0.81	0.73	0.85	0.83	100
Qatar	...	...	...	0.67	100
Saudi Arabia	0.75	...	...	1	100_{-1}
State of Palestine (the)	0.88	0.71	0.8	0.83	80
Sudan	...	...	...	...	...
Syrian Arab Republic	...	0.77	0.9	1	100_{-1}
Tunisia	...	...	...	...	...
Türkiye	1	0.88	0.9	1	...
United Arab Emirates	...	...	...	...	...
Yemen	...	...	...	...	...
Central and Southern Asia					
Afghanistan	...	0.61	...	...	...
Bangladesh	0.81	0.66	0.82	0.83	77
Bhutan	...	...	...	...	...
India	1	0.92	0.95	1	100
Iran, Islamic Republic of	...	...	...	...	...
Kazakhstan	...	...	...	...	...
Kyrgyzstan	0.62	0.74	0.9	0.83	...
Maldives	...	...	...	...	...
Nepal	...	...	...	...	10_{-1}
Pakistan	...	...	...	...	...
Sri Lanka	...	...	...	...	100_{-1}
Tajikistan	...	...	...	...	...
Turkmenistan	0.88	0.83	0.9	1	100_{-3}
Uzbekistan	...	...	...	...	99_{+1}

	C			D			E	F	G	H				I		
	% of schools with WASH facilities			% of schools with ICT for pedagogical purposes						Internationally mobile tertiary students				Official development assistance, USD (000,000)		
										Mobility rate (%)		Number (000)				
	Basic drinking water	Basic sanitation or toilets	Basic handwashing	Electricity	Internet	Computers	% of schools with adapted infrastructure and materials for students with disabilities	% of students experiencing bullying	Number of attacks on education	Inbound	Outbound	Inbound	Outbound	Scholarships	Imputed student costs	Country code
	4.a.1							4.a.2	4.a.3					4.b.1		
	2023									2023						
	100	100	96	100	58	62	...	...	1 -2	0.2	2 -1j	4	36 -1j	23	115	DZA
	98	91	98	100	100	100	...	...	2	7	6 -1j	7	5 -1j	4	12	ARM
	100	100	100	100	75	99	1	...	1	3	19 -1j	7	50 -1j	10	22	AZE
	100	100	100	100	100	100	100	83 -4	...	10	9 -1j	5	5 -1j	...	...	BHR
	...	...	...	...	...	33 -2	...	80 -4	...	20 -1	48 -1j	11 -1	26 -1j	...	...	CYP
	...	...	...	...	71 -4	84 -2	...	72 -4	5	2	2 -1j	87	69 -1j	14	77	EGY
	100	100	100	100	100	100	...	41 -1	...	15	5 -1j	25	9 -1j	6	17	GEO
	...	...	...	...	...	...	...	...	9	...	...	...	45 -1j	11	12	IRQ
	100 -3	100 -3	100 -3	100 -3	92 -3	59 -1	...	...	5	3 -1	5 -1j	13 -1	19 -1j	...	...	ISR
	100 -1	...	...	100	32 -1	32 -1	...	57 -1	1 -1	10	9 -1j	39	33 -1j	20	20	JOR
	100 -2	100 -2	100 -2	100 -2	100 -2	100 -2	100 -2	76 -4	...	...	20 -2j	...	23 -1j	...	...	KWT
	...	89	96	100	94	70	11	84 -4	14	13	10 -1j	34	28 -1j	11	45	LBN
	...	...	...	...	...	...	...	...	9	...	...	...	8 -1j	3	6	LBY
	82	85	80	98	71	70	24	72 -1	2	2	5 -1j	25	74 -1j	29	174	MAR
	100	100	100	100	100	100	100	83 -4	...	3	14 -2j	3	17 -1j	...	...	OMN
	100	100	100	100	100	100	100	61 -1	...	41	15 -1j	19	7 -1j	...	...	QAT
	100 -1	100 -1	100 -1	100 -1	100 -1	100 -1	100 -1	40 -1	2 -2	4 -1	3 -1j	65 -1	44 -1j	...	...	SAU
	99	100	99	100	98	90	65	60 -1	720	-	14 -1j	-	31 -1j	18	21	PSE
	...	...	...	...	...	...	...	...	92	...	...	...	15 -1j	9	7	SDN
	81	81	100	85	8	55	11	...	120	...	...	...	105 -1j	21	178	SYR
	90	98	98	100	81	93	...	...	2 -1	3	9 -1j	9	27 -1j	18	90	TUN
	100 -1	100 -1	100 -1	100 -1	100 -1	100 -1	...	57 -1	13	3 -1	1 -1j	244 -1	60 -1j	22	128	TUR
	100	100	100	100	100	100	100	55 -1	...	70	5 -3	237	19 -1j	...	...	ARE
	...	...	...	...	...	...	...	...	171	...	...	...	36 -1j	10	18	YEM
	...	...	9 -4	16 -4	...	9 -4	5 -4	...	117	- -3	8 -3	- -3	34 -1j	16	11	AFG
	98	91	98	95	79	93	47	...	4	0.1 -1	2 -1j	2 -1	64 -1j	17	49	BGD
	99 -1	...	92 -1	97 -1	66 -1	86 -1	...	...	...	34 -2	39 -1j	4 -2	5 -1j	2	0.2	BTN
	98	98	93	89	39	30	83	...	40	0.1	2 -1j	46	622 -1j	68	283	IND
	...	...	...	...	...	26 -1	...	75 -4	8	1 -3	3 -1j	24 -3	86 -1j	29	126	IRN
	...	89 +1	...	100 -3	100 +1	100 +1	...	48 -1	1 -3	6 -3	11 -3	41 -3	78 -1j	16	18	KAZ
	...	...	...	...	...	...	...	...	24 -1	26	6 -1j	73	17 -1j	10	5	KGZ
	100	100	100	100 -4	99 -4	96	...	...	...	...	22 -4j	...	3 -1j	1	0.2	MDV
	39 +1	23 +1	50 +1	60 +1	45 +1	27 +1	19 +1	...	9	...	21 -1j	...	95 -1j	8	20	NPL
	53 -1	54 -1	...	47 -1	...	46 -4	...	...	20	...	4 -1j	...	91 -1j	31	64	PAK
	90 -1	100 -1	99 -1	100 -1	41 -1	77 -1	...	...	16	0.4 -1	8 -1j	2 -1	31 -1j	10	5	LKA
	...	...	...	...	...	...	...	...	...	...	...	...	33 -1j	4	3	TJK
	100 -1	100 -3	100 -1	100 -1	34 -1	99 -1	1 -3	...	1 -3	0.1 -1	69 -1j	0.1 -1	61 -1j	2	2	TKM
	80	100 +1	91	100 +1	97 +1	98 +1	61 +1	43 -1	...	0.4	22 -2j	5	150 -1j	10	10	UZB

TABLE 6: Continued

Country or territory	A: Extent to which global citizenship education and education for sustainable development are mainstreamed				B
	Education policies/ frameworks	Curriculum	In-service teacher training	Student assessment	% of schools providing life skills-based HIV/AIDS education
SDG indicator	4.7.1				4.7.2
Reference year	2020				2023
Eastern and South-eastern Asia					
Brunei Darussalam	...	...	...	...	...
Cambodia	1	0.82	0.9	1	...
China	...	...	...	...	96
DPR Korea	...	...	...	...	...
Hong Kong, China	...	...	...	...	100$_{i}$
Indonesia	...	...	...	...	...
Japan	...	...	...	...	...
Lao PDR	...	...	...	...	...
Macao, China	...	...	...	...	100
Malaysia	0.88	0.88	0.9	0.83	100
Mongolia	0.88	0.75	0.85	0.83	...
Myanmar	1	0.9	1	0.83	...
Philippines	...	...	...	...	100$_{-2}$
Republic of Korea	1	0.88	1	0.83	...
Singapore	...	...	...	...	91$_{-1}$
Thailand	0.84	...	0.95	1	100$_{+1}$
Timor-Leste	...	...	...	...	20
Viet Nam	...	...	...	...	77
Oceania					
Australia	...	...	...	...	...
Cook Islands	...	...	...	...	100
Fiji	...	...	...	...	...
Kiribati	...	...	...	...	100
Marshall Islands	...	...	...	...	$^{-}$$_{-1}$
Micronesia, F. S.	...	...	...	...	50$_{-1}$
Nauru	...	...	...	...	-
New Zealand	0.35	...	0.6	...	...
Niue	...	...	...	...	100
Palau	...	...	...	...	100
Papua New Guinea	...	...	...	...	...
Samoa	...	...	...	...	100
Solomon Is	...	...	...	...	...
Tokelau	...	...	...	...	-
Tonga	...	...	...	...	...
Tuvalu	...	...	...	...	17
Vanuatu	...	...	...	...	...

	C			D			E	F	G	H				I		
	% of schools with WASH facilities			% of schools with ICT for pedagogical purposes			% of schools with adapted infrastructure and materials for students with disabilities	% of students experiencing bullying	Number of attacks on education	Internationally mobile tertiary students				Official development assistance, USD (000,000)		
										Mobility rate (%)		Number (000)				
	Basic drinking water	Basic sanitation or toilets	Basic handwashing	Electricity	Internet	Computers				Inbound	Outbound	Inbound	Outbound	Scholarships	Imputed student costs	Country code
	4.a.1							4.a.2	4.a.3					4.b.1		
	2023									2023						
	...	100$_{-3}$	100$_{-3}$	100$_{-3}$	...	...	...	71$_{-1}$	...	5	23$_{-3}$	1	2$_{-1i}$	...	...	BRN
	92	72	86	89	6	6	27	60$_{-1}$	...	0.3$_{-2}$	4$_{-1i}$	1$_{-2}$	7$_{-1i}$	11	3	KHM
	99	99	99	99	99	96	...	...	1	0.3	2$_{-1}$	201	1,052$_{-1}$	28	337	CHN
	...	...	...	...	...	...	...	...	1$_{-2}$	...	...	...	1$_{-1i}$	1	2	PRK
	100	100	100	100	100	100	100$_{i}$	41$_{-1}$	...	22	13$_{-1i}$	64	37$_{-1i}$	...	...	HKG
	90	43	67	98	87	8	...	52$_{-1}$	9	...	1$_{-1i}$	...	63$_{-1i}$	36	48	IDN
	...	...	...	...	...	86$_{-4}$	...	30$_{-1}$	...	5$_{-1}$	1$_{-1i}$	199$_{-1}$	31$_{-1i}$	...	...	JPN
	56$_{-4}$	47$_{-4}$	...	65$_{+1}$	5$_{+1}$	11$_{+1}$	...	...	...	1$_{-3}$	10$_{-3}$	1$_{-3}$	8$_{-1i}$	10	0.4	LAO
	100	100	100	100	100	100	78	55$_{-1}$	...	69	5$_{-1i}$	34	2$_{-1i}$	...	...	MAC
	100	100	100	100	100	90	50	53$_{-1}$	1$_{-4}$	10	4$_{-1i}$	109	48$_{-1i}$	8	15	MYS
	...	...	100$_{-1}$	100	100	100$_{-1}$	...	54$_{-1}$	...	2	11$_{-1i}$	4	16$_{-1i}$	14	6	MNG
	82$_{-4}$	84$_{-4}$	...	64$_{-4}$	...	...	...	...	205	...	...	...	13$_{-1i}$	8	2	MMR
	57$_{-2}$	60$_{-2}$	85$_{-2}$	98$_{-2}$	35$_{-2}$	74$_{-2}$	8$_{-2}$	77$_{-1}$	25	...	1$_{-2i}$	...	30$_{-1i}$	14	5	PHL
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	...	21$_{-1}$	...	4$_{-1}$	3$_{-1i}$	123$_{-1}$	88$_{-1i}$	...	...	KOR
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	95$_{-1}$	59$_{-1}$	...	...	...	66$_{-1}$	20$_{-1i}$	...	...	SGP
	100$_{+1}$	...	100$_{+1}$	100$_{+1}$	100$_{+1}$	100$_{+1}$	...	40$_{-1}$	3	1	1$_{-1i}$	30	30$_{-1i}$	9	9	THA
	96	100	97	100	58	29	10	...	...	...	...	...	2$_{-1i}$	2	1	TLS
	93	95	84	96	94	92	36	47$_{-1}$	...	0.3$_{-1}$	5$_{-1i}$	8$_{-1}$	134$_{-1i}$	22	61	VNM
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	63$_{-1}$	...	23$_{-1}$	1$_{-1i}$	382$_{-1}$	14$_{-1i}$	...	...	AUS
	100	100	100	100	100	100	67	...	...	...	...	...	0.2$_{-1i}$	...	...	COK
	100	...	81$_{-1}$	92	39	...	...	...	...	...	3$_{-4i}$	...	1$_{-1i}$	3	0.1	FJI
	96	89	82	86	4	7	...	...	...	...	...	...	1$_{-1i}$	2	...	KIR
	71$_{-1}$	73$_{-1}$	72$_{-1}$	87$_{-1}$	-$_{-1}$	26$_{-1}$	40$_{-1}$	...	...	3$_{-1}$	23$_{-1i}$	-$_{-1}$	0.4$_{-1i}$	0.1	...	MHL
	87$_{-1}$	77$_{-1}$	86$_{-1}$	79$_{-1}$	42$_{-1}$	32$_{-1}$	31$_{-1}$	...	...	...	...	...	0.1$_{-1i}$	0.1	-	FSM
	100	100	100	100	-	-	25	...	...	...	...	...	0.1$_{-1i}$	1	...	NRU
	...	...	...	...	...	96$_{-2}$	...	66$_{-1}$	...	10$_{-1}$	2$_{-1i}$	25$_{-1}$	5$_{-1i}$	...	...	NZL
	100	100	100	100	100	100	100	...	...	...	...	...	0.1$_{-1i}$	0.2	...	NIU
	100	100	100	100	95	100	100	...	...	...	...	...	0.1$_{-1i}$	-	-	PLW
	...	...	...	...	...	...	...	...	1	...	...	...	1$_{-1i}$	5	-	PNG
	100	100	71	100	51	95	59	...	...	5	31$_{-1i}$	0.1	1$_{-1i}$	7	...	WSM
	56	27	8	36	8	13$_{-4}$	4	...	...	...	...	...	3$_{-1i}$	3	...	SLB
	100	100	100	100	100	100	100	...	...	-$_{-3}$	...	-$_{-3}$	0.1$_{-1i}$	-	...	TKL
	100	98	95	99	5	83	5	...	...	0.4$_{-3}$	33$_{-3}$	-$_{-3}$	1$_{-1i}$	2	-	TON
	100	100	100	90	90	10	80$_{-1}$	...	...	...	...	...	0.4$_{-1i}$	1	...	TUV
	...	...	...	...	...	...	...	...	...	...	...	...	2$_{-1i}$	2	1	VUT

TABLE 6: Continued

Country or territory	A: Extent to which global citizenship education and education for sustainable development are mainstreamed				B
	Education policies/ frameworks	Curriculum	In-service teacher training	Student assessment	% of schools providing life skills-based HIV/AIDS education
SDG indicator	4.7.1				4.7.2
Reference year	2020				2023
Latin America and the Caribbean					
Anguilla	...	...	...	...	100_{-1}
Antigua and Barbuda	...	...	...	...	...
Argentina	...	...	...	...	...
Aruba	...	...	...	...	...
Bahamas	...	...	...	...	...
Barbados	...	...	...	...	...
Belize	...	...	...	...	...
Bolivia, P. S.	...	...	0.77	0.75	...
Brazil	1	0.94	1	0.92	...
British Virgin Islands	...	...	...	...	100_{-1}
Cayman Islands	...	...	...	...	100
Chile	...	...	...	...	...
Colombia	1	0.88	0.85	1	...
Costa Rica	...	...	...	...	80_{-3}
Cuba	1	1	0.95	1	100
Curaçao	...	...	...	...	...
Dominica	...	...	...	...	100_{-1}
Dominican Republic	0.97	0.87	0.82	1	-
Ecuador	...	...	...	...	...
El Salvador	...	...	...	...	...
Grenada	...	...	...	...	...
Guatemala	...	...	...	...	...
Guyana	...	...	...	...	...
Haiti	...	...	...	...	...
Honduras	...	...	...	...	...
Jamaica	...	...	...	...	...
Mexico	0.75	...	0.8	1	...
Montserrat	...	...	...	...	100_{-4}
Nicaragua	0.88	0.79	0.9	1	61_{-1}
Panama	...	...	...	...	...
Paraguay	...	...	...	...	...
Peru	1	0.81	0.2	1	...
Saint Kitts and Nevis	0.57	0.61	0.8	0.83	...
Saint Lucia	...	...	...	...	100
Saint Vincent/Grenadines	...	...	...	...	...
Sint Maarten	...	...	...	...	...
Suriname	...	...	...	...	...
Trinidad and Tobago	...	...	...	...	...
Turks and Caicos Islands	...	...	...	...	100
Uruguay	...	...	...	...	100_{-1}
Venezuela, B. R.	...	...	...	...	...

	C			D			E	F	G	H				I		
	% of schools with WASH facilities			% of schools with ICT for pedagogical purposes			% of schools with adapted infrastructure and materials for students with disabilities	% of students experiencing bullying	Number of attacks on education	Internationally mobile tertiary students				Official development assistance, USD (000,000)		
										Mobility rate (%)		Number (000)				
	Basic drinking water	Basic sanitation or toilets	Basic handwashing	Electricity	Internet	Computers				Inbound	Outbound	Inbound	Outbound	Scholarships	Imputed student costs	Country code
	4.a.1							4.a.2	4.a.3					4.b.1		
	2023									2023						
	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	...	...	...	...	...	0.1 $_{-1\mathrm{i}}$	...	...	AIA
	...	...	...	...	...	...	...	...	...	...	...	...	1 $_{-1\mathrm{i}}$	...	...	ATG
	91 $_{-4}$	...	74 $_{-1}$	97 $_{-1}$	62 $_{-1}$	63 $_{-1}$	62 $_{-1}$	68 $_{-1}$	2	4 $_{-1}$	0.3 $_{-1\mathrm{i}}$	137 $_{-1}$	12 $_{-1\mathrm{i}}$	4	8	ARG
	...	...	...	...	...	...	...	...	...	...	...	...	0.3 $_{-1\mathrm{i}}$	...	...	ABW
	...	...	...	...	...	...	...	...	...	...	...	...	4 $_{-1\mathrm{i}}$	...	...	BHS
	100	100	100	100	...	...	...	...	...	...	...	...	1 $_{-1\mathrm{i}}$	...	...	BRB
	...	...	...	...	...	...	...	...	...	0.4	10 $_{-1\mathrm{i}}$	-	1 $_{-1\mathrm{i}}$	0.3	-	BLZ
	...	...	...	...	...	...	...	...	...	...	...	...	24 $_{-1\mathrm{i}}$	1	4	BOL
	94 $_{-4}$	...	...	97 $_{-4}$	60 $_{-4}$	29 $_{-2}$	...	62 $_{-1}$	4 $_{-1}$	0.2 $_{-1}$	1 $_{-1\mathrm{i}}$	24 $_{-1}$	87 $_{-1\mathrm{i}}$	27	51	BRA
	66 $_{-1}$	66 $_{-1}$	66 $_{-1}$	66 $_{-1}$	66 $_{-1}$	66 $_{-1}$	50 $_{-3}$	...	...	23 $_{-3}$	43 $_{-1\mathrm{i}}$	0.2 $_{-3}$	0.3 $_{-1\mathrm{i}}$	...	...	VGB
	100	100	100	100	100	100	100	...	...	...	...	...	1 $_{-1\mathrm{i}}$	...	...	CYM
	...	...	...	...	...	52 $_{-4}$	...	60 $_{-1}$	3	1 $_{-1}$	2 $_{-1\mathrm{i}}$	18 $_{-1}$	21 $_{-1\mathrm{i}}$	...	...	CHL
	53 $_{-4}$	...	...	88 $_{-1}$	47 $_{-1}$	78 $_{-1}$	...	59 $_{-1}$	92	0.2 $_{-1}$	3 $_{-1\mathrm{i}}$	5 $_{-1}$	62 $_{-1\mathrm{i}}$	7	43	COL
	93 $_{-3}$	76 $_{-3}$	96 $_{-3}$	99 $_{-3}$	86 $_{-3}$	97 $_{-3}$	72 $_{-3}$	58 $_{-1}$	...	1 $_{-4}$	2 $_{-4\mathrm{i}}$	3 $_{-3}$	5 $_{-1\mathrm{i}}$	1	3	CRI
	100 $_{-1}$	...	100	100	36	100	...	...	...	2	1 $_{-2\mathrm{i}}$	7	4 $_{-1\mathrm{i}}$	2	2	CUB
	...	...	...	...	...	...	...	...	...	...	...	...	0.2 $_{-1\mathrm{i}}$	...	...	CUW
	100	100	100	100	100	100	100 $_{-1}$	...	...	...	...	...	1 $_{-1\mathrm{i}}$	0.2	0.4	DMA
	-	-	80	90	53	23	-	59 $_{-1}$	3 $_{-1}$	11 $_{-1}$	1 $_{-1\mathrm{i}}$	55 $_{-1}$	5 $_{-1\mathrm{i}}$	1	1	DOM
	41	...	87	84	43	76	...	...	2 $_{-1}$	1 $_{-1}$	3 $_{-1\mathrm{i}}$	7 $_{-1}$	32 $_{-1\mathrm{i}}$	4	11	ECU
	81 $_{-4}$	...	...	99 $_{-4}$	94 $_{-4}$	100 $_{-4}$	...	62 $_{-1}$	...	0.5	3 $_{-1\mathrm{i}}$	1	5 $_{-1\mathrm{i}}$	1	3	SLV
	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	51 $_{-1}$	...	...	...	...	...	...	0.4 $_{-1\mathrm{i}}$	0.1	0.1	GRD
	76 $_{-4}$	...	...	85 $_{-4}$	30 $_{-4}$	37 $_{-4}$	...	44 $_{-1}$	3 $_{-1}$	0.4	1 $_{-4\mathrm{i}}$	2	4 $_{-1\mathrm{i}}$	2	2	GTM
	...	...	...	75	...	...	...	...	...	...	...	...	1 $_{-1\mathrm{i}}$	1	0.4	GUY
	...	...	...	...	...	...	...	...	35	...	...	...	12 $_{-1\mathrm{i}}$	5	13	HTI
	88 $_{-4}$	...	...	91 $_{-4}$	25 $_{-4}$	31 $_{-4}$	...	...	1 $_{-4}$	1 $_{-4}$	2 $_{-4\mathrm{i}}$	2 $_{-4}$	7 $_{-1\mathrm{i}}$	1	2	HND
	90 $_{-4}$	95 $_{-4}$	100	100	99	83	...	65 $_{-1}$	...	...	...	6 $_{-4}$	5 $_{-1\mathrm{i}}$	1	1	JAM
	75 $_{-2}$	...	74 $_{-2}$	89 $_{-2}$	30 $_{-2}$	47 $_{-2}$	23 $_{-2}$	47 $_{-1}$	9 $_{-1}$	1 $_{-1}$	1 $_{-1\mathrm{i}}$	51 $_{-2}$	37 $_{-1\mathrm{i}}$	10	39	MEX
	100 $_{-4}$	100 $_{-4}$	100 $_{-4}$	100 $_{-4}$	100 $_{-4}$	100 $_{-4}$	...	...	...	...	...	...	- $_{-1\mathrm{i}}$	0.1	...	MSR
	29 $_{-1}$	- $_{-1}$	- $_{-1}$	32 $_{-1}$	3 $_{-1}$	17 $_{-1}$	- $_{-1}$	...	...	2	...	3	4 $_{-1\mathrm{i}}$	0.4	1	NIC
	24	...	47	73	41	42	...	49 $_{-1}$	6 $_{-1}$	3 $_{-1}$	3 $_{-1\mathrm{i}}$	6 $_{-1}$	5 $_{-1\mathrm{i}}$	1	1	PAN
	94 $_{-4}$	...	...	99 $_{-4}$	24 $_{-4}$	32 $_{-4}$	...	61 $_{-1}$	1 $_{-2}$	...	...	...	17 $_{-1\mathrm{i}}$	1	1	PRY
	66 $_{-4}$	...	50	83	53	71	89	54 $_{-1}$	3	...	...	...	42 $_{-1\mathrm{i}}$	4	15	PER
	100 $_{-2}$	100 $_{-2}$	100 $_{-2}$	100 $_{-2}$	100 $_{-2}$	100 $_{-2}$	...	...	...	...	...	...	1 $_{-1\mathrm{i}}$	...	...	KNA
	100	100	100	100	100	100	100	...	...	4 $_{-1}$	33 $_{-1\mathrm{i}}$	0.1 $_{-1}$	1 $_{-1\mathrm{i}}$	0.3	0.4	LCA
	...	...	...	...	...	...	...	...	...	...	...	...	1 $_{-1\mathrm{i}}$	0.2	0.1	VCT
	...	...	...	...	...	...	...	...	...	...	76 $_{-1\mathrm{i}}$	...	0.1 $_{-1\mathrm{i}}$	...	...	SXM
	...	...	...	...	...	...	...	...	...	- $_{-2}$	32 $_{-1\mathrm{i}}$	- $_{-2}$	1 $_{-1\mathrm{i}}$	0.5	0.1	SUR
	...	...	...	...	...	...	...	...	1 $_{-4}$	...	...	1	3 $_{-1\mathrm{i}}$	...	...	TTO
	100	100	100	100	100	100	82	...	...	41 $_{-1}$	39 $_{-1\mathrm{i}}$	0.2 $_{-1}$	0.2 $_{-1\mathrm{i}}$	...	...	TCA
	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	100 $_{-1}$	62 $_{-1}$	...	2 $_{-1}$	3 $_{-1\mathrm{i}}$	4 $_{-1}$	6 $_{-1\mathrm{i}}$	...	...	URY
	...	...	...	...	...	...	...	...	1 $_{-2}$	...	...	...	32 $_{-2\mathrm{i}}$	1	8	VEN

TABLE 6: Continued

Country or territory	A: Extent to which global citizenship education and education for sustainable development are mainstreamed				B
	Education policies/ frameworks	Curriculum	In-service teacher training	Student assessment	% of schools providing life skills-based HIV/AIDS education
SDG indicator	4.7.1				4.7.2
Reference year	2020				2023
Europe and Northern America					
Albania	0.72	...	0.68	0.83	85$_{-2}$
Andorra	1	0.94	0.77	0.92	100
Austria	0.83	...	0.7	...	...
Belarus	...	...	...	...	...
Belgium	0.95	0.88	0.8	1	...
Bermuda	...	...	...	...	...
Bosnia and Herzegovina	0.58	...	...	0.5	...
Bulgaria	0.56	0.65	0.73	0.71	...
Canada	0.88	0.78	0.7	0.83	...
Croatia	...	...	...	...	...
Czechia	0.84	0.47	0.55	...	...
Denmark	...	0.68	0.77	0.83	...
Estonia	0.88	0.83	0.95	0.83	...
Finland	0.88	0.81	0.85	...	100$_{-2}$
France	1	0.99	1	1	...
Germany	1	0.9	0.95	0.92	...
Greece	...	...	...	...	...
Hungary	1	0.86	0.93	0.79	...
Iceland	...	...	...	...	...
Ireland	0.88	0.81	0.85	0.83	...
Italy	0.88	0.88	0.8	0.83	...
Latvia	1	0.86	0.95	1	...
Liechtenstein	...	...	...	...	...
Lithuania	1	0.85	0.9	1	...
Luxembourg	...	...	...	...	...
Malta	0.84	0.72	0.9	0.92	...
Monaco	0.88	0.79	0.85	0.67	100
Montenegro	...	...	...	...	...
Netherlands (Kingdom of the)	...	...	...	...	...
North Macedonia	...	...	...	...	...
Norway	...	...	...	...	...
Poland	1	0.8	0.9	1	...
Portugal	...	...	...	...	...
Republic of Moldova	0.86	0.76	0.75	0.83	100$_{-4}$
Romania	1	0.97	1	1	...
Russian Federation	1	...	0.9	...	...
San Marino	1	0.94	0.9	1	100
Serbia	...	...	...	...	...
Slovakia	0.51	0.64	...	0.25	...
Slovenia	1	0.93	0.85	1	...
Spain	1	0.91	0.95	1	...
Sweden	1	0.8	...	0.83	...
Switzerland	...	...	...	...	...
Ukraine	1	0.92	0.95	1	...
United Kingdom	0.41	0.59	...	0.83	...
United States	...	...	...	...	...

	C			D			E	F	G	H				I		
	% of schools with WASH facilities			% of schools with ICT for pedagogical purposes			% of schools with adapted infrastructure and materials for students with disabilities	% of students experiencing bullying	Number of attacks on education	Internationally mobile tertiary students				Official development assistance, USD (000,000)		
										Mobility rate (%)		Number (000)				
	Basic drinking water	Basic sanitation or toilets	Basic handwashing	Electricity	Internet	Computers				Inbound	Outbound	Inbound	Outbound	Scholarships	Imputed student costs	Country code
	4.a.1							4.a.2	4.a.3					4.b.1		
	2023									2023						
	72$_{-2}$	82$_{-2}$	100$_{-2}$	100$_{-2}$	72$_{-2}$	83$_{-2}$	8$_{-3}$	56$_{-1}$	...	2	12$_{-1i}$	2	15$_{-1i}$	10	39	ALB
	100	100	100	100	100	100	100	...	...	11	113$_{-1i}$	0.3	2$_{-1i}$	...	...	AND
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	...	57$_{-1}$	...	19$_{-1}$	6$_{-1i}$	85$_{-1}$	26$_{-1i}$	...	...	AUT
	100	100	100	100	100	100	...	...	...	7	8$_{-1i}$	22	27$_{-1i}$	5	39	BLR
	...	...	...	...	...	97$_{-4}$	...	59$_{-1}$	...	10$_{-1}$	3$_{-1i}$	56$_{-1}$	18$_{-1i}$	...	...	BEL
	...	...	...	...	...	...	...	...	...	7	...	-	1$_{-1i}$	...	...	BMU
	...	...	...	...	...	28$_{-4}$	...	...	...	8	19$_{-1i}$	6	15$_{-1i}$	3	30	BIH
	...	...	...	...	...	69$_{-2}$	...	49$_{-1}$	...	8$_{-1}$	9$_{-1i}$	19$_{-1}$	20$_{-1i}$	...	...	BGR
	...	...	...	...	...	86$_{-4}$	...	54$_{-1}$	...	19$_{-1}$	3$_{-1i}$	337$_{-1}$	52$_{-1i}$	...	...	CAN
	...	...	...	...	...	42$_{-2}$	...	44$_{-1}$	...	4$_{-1}$	6$_{-1i}$	6$_{-1}$	10$_{-1i}$	...	...	HRV
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	99$_{-1}$	99$_{-1}$	100$_{-1}$	58$_{-1}$	...	16$_{-1}$	4$_{-1i}$	53$_{-1}$	12$_{-1i}$	...	...	CZE
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	69$_{-1}$	...	10$_{-1}$	2$_{-1i}$	31$_{-1}$	6$_{-1i}$	...	...	DNK
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	63$_{-1}$	...	11$_{-1}$	8$_{-1i}$	5$_{-1}$	4$_{-1i}$	...	...	EST
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	49$_{-1}$	...	8$_{-1}$	3$_{-1i}$	27$_{-1}$	9$_{-1i}$	...	...	FIN
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	...	38$_{-2}$	...	59$_{-1}$	...	9$_{-1}$	4$_{-1i}$	263$_{-1}$	114$_{-1i}$	...	...	FRA
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	54$_{-2}$	...	62$_{-1}$	...	12$_{-1}$	4$_{-1i}$	403$_{-1}$	126$_{-1i}$	...	...	DEU
	...	...	...	...	...	...	...	58$_{-1}$	2	3$_{-1}$	4$_{-1i}$	27$_{-1}$	38$_{-1i}$	...	...	GRC
	88$_{-4}$	...	...	91$_{-4}$	...	69$_{-4}$	...	49$_{-1}$	2	14$_{-1}$	5$_{-1i}$	40$_{-1}$	14$_{-1i}$	...	...	HUN
	...	...	...	...	...	...	...	46$_{-1}$	...	10$_{-1}$	12$_{-1i}$	2$_{-1}$	3$_{-1i}$	...	...	ISL
	...	...	...	...	...	67$_{-4}$	...	56$_{-1}$	...	11$_{-1}$	7$_{-1i}$	27$_{-1}$	17$_{-1i}$	...	...	IRL
	...	...	...	...	...	44$_{-2}$	...	48$_{-1}$	4$_{-1}$	4$_{-1}$	4$_{-1i}$	90$_{-1}$	86$_{-1i}$	...	...	ITA
	...	...	...	...	...	58$_{-2}$	...	70$_{-1}$	...	13$_{-1}$	6$_{-1i}$	10$_{-1}$	5$_{-1i}$	...	...	LVA
	...	...	...	...	...	...	...	...	...	86$_{-2}$	124$_{-2i}$	1$_{-2}$	1$_{-1i}$	...	...	LIE
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	95$_{-1}$	96$_{-1}$	63$_{-1}$	47$_{-1}$	...	9$_{-1}$	8$_{-1i}$	9$_{-1}$	8$_{-1i}$	...	...	LTU
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	90$_{-2}$	...	...	50$_{-1}$	173$_{-1i}$	4$_{-1}$	13$_{-1i}$	...	...	LUX
	...	...	...	...	...	99$_{-4}$	...	64$_{-1}$	...	24$_{-1}$	6$_{-1i}$	5$_{-1}$	1$_{-1i}$	...	...	MLT
	100	100	100	100	100	100	100	...	...	85	45$_{-1i}$	1	0.5$_{-1i}$	...	...	MCO
	...	...	...	...	...	51$_{-2}$	...	47$_{-1}$	...	...	24$_{-1i}$	...	5$_{-1i}$	2	3	MNE
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	...	47$_{-1}$	1$_{-1}$	14$_{-2}$	2$_{-2i}$	136$_{-2}$	18$_{-1i}$	...	...	NLD
	...	...	...	...	...	88$_{-2}$	...	44$_{-1}$	...	8$_{-1}$	10$_{-1i}$	5$_{-1}$	6$_{-1i}$	2	12	MKD
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	...	54$_{-1}$	...	4$_{-1}$	5$_{-1i}$	13$_{-1}$	15$_{-1i}$	...	...	NOR
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	51$_{-1}$	...	7$_{-1}$	2$_{-1i}$	92$_{-1}$	25$_{-1i}$	...	...	POL
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	99$_{-2}$	100$_{-2}$	...	43$_{-1}$	...	12$_{-1}$	4$_{-1i}$	50$_{-1}$	18$_{-1i}$	...	...	PRT
	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	97	100	...	67$_{-1}$	...	7	24$_{-1i}$	6	20$_{-1i}$	47	5	MDA
	...	...	...	...	...	...	...	64$_{-1}$	...	6$_{-1}$	6$_{-1i}$	35$_{-1}$	32$_{-1i}$	...	...	ROU
	...	...	...	...	...	38$_{-2}$	...	76$_{-4}$	8	8$_{-1}$	2$_{-1}$	340$_{-1}$	64$_{-1i}$	...	...	RUS
	100	100	100	100	100	100	100	...	...	100	53$_{-1i}$	1	1$_{-1i}$	...	...	SMR
	...	...	...	...	...	42$_{-2}$	...	39$_{-1}$	...	5	6$_{-1i}$	11	15$_{-1i}$	8	23	SRB
	100$_{-1}$	100$_{-2}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	86$_{-1}$	54$_{-1}$	...	12$_{-1}$	22$_{-1i}$	17$_{-1}$	30$_{-1i}$	...	...	SVK
	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	100$_{-1}$	...	47$_{-1}$	...	9$_{-1}$	4$_{-1i}$	8$_{-1}$	3$_{-1i}$	...	...	SVN
	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	52$_{-1}$	1$_{-1}$	4$_{-1}$	2$_{-1i}$	92$_{-1}$	51$_{-1i}$	...	...	ESP
	100$_{-2}$	...	100$_{-2}$	100$_{-2}$	100$_{-2}$	100$_{-2}$	...	55$_{-1}$	...	7$_{-1}$	3$_{-1i}$	34$_{-1}$	14$_{-1i}$	...	...	SWE
	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	59$_{-1}$	1	19$_{-1}$	6$_{-1i}$	65$_{-1}$	19$_{-1i}$	...	...	CHE
	...	...	90	99	99	86	64	...	255	4	5$_{-2i}$	51	77$_{-1i}$	44	124	UKR
	...	...	...	...	...	...	...	66$_{-1}$	1$_{-3}$	22$_{-1}$	1$_{-1i}$	675$_{-1}$	42$_{-1i}$	...	...	GBR
	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	100$_{-4}$	...	54$_{-1}$	...	5$_{-1}$	1$_{-1i}$	833$_{-2}$	115$_{-1i}$	...	...	USA

TABLE 7: SDG 4, Means of implementation of target 4.c – Teachers

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					Primary							Secondary						
	A	B	C	D	E	A	B	C	D	E	F	G	A	B	C	D	E	F	G
	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Relative teacher salary level	% receiving in-service training	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Relative teacher salary level	% receiving in-service training
SDG indicator			4.c.1	4.c.3	4.c.6			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7
Reference year	2023					2023							2023						
Region	**Sum**	**Weighted average**				**Sum**	**Weighted average**						**Sum**	**Weighted average**					
World	13,111$_{i}$	20	85$_{-1i}$	88$_{i}$	12$_{i}$	34,253$_{i}$	27	85$_{i}$	89$_{i}$	6$_{i}$	...	...	40,277$_{i}$	17	84$_{i}$	87$_{i}$	8$_{i}$	...	...
Sub-Saharan Africa	624$_{-1i}$	37$_{i}$	63$_{-1i}$	71$_{-1i}$	...	4,943$_{i}$	41	64$_{-1i}$	79$_{-1i}$	...	...	...	3,668$_{i}$	22$_{i}$	58$_{-2i}$	66$_{-1i}$	...	...	...
Northern Africa and Western Asia	454$_{i}$	20$_{i}$	84$_{i}$	82$_{i}$	6$_{i}$	3,001$_{i}$	24	83$_{i}$	78$_{i}$	5$_{-1i}$	...	...	3,439$_{i}$	17$_{i}$	89$_{-1i}$	88$_{i}$	4$_{i}$	...	...
Northern Africa	174$_{i}$	22$_{i}$	88$_{i}$	...	3$_{i}$	1,255	29	94$_{i}$	98$_{-3}$	3$_{i}$	...	...	1,308	...	96$_{-1i}$	90$_{i}$	3$_{i}$	...	...
Western Asia	280$_{i}$	19$_{i}$	81$_{i}$	85$_{i}$	...	1,745$_{i}$	16$_{i}$	75$_{i}$	...	...	...	...	2,131$_{i}$	16$_{i}$	81$_{i}$	86$_{i}$	...	...	...
Central and Southern Asia	3,706	13	88	93	14	6,914	33	90	94	5	...	...	9,551	19	90	92	7	...	...
Central Asia	242$_{i}$	13$_{i}$	87$_{i}$	89$_{i}$	...	309$_{i}$	21	93$_{i}$	89$_{i}$	5$_{i}$	...	...	904$_{-1i}$	12	90$_{-1i}$	94$_{-1i}$	...	...	...
Southern Asia	3,463	13	88	93	14	6,605	33	90	94	5	...	...	8,616	20	90	92	7	...	...
Eastern and South-eastern Asia	4,505	14	...	93	12	11,133$_{i}$	17	...	96$_{i}$	7	...	...	11,390$_{i}$	16	...	95$_{i}$	9	...	...
Eastern Asia	3,526	15	...	97	15	7,443	16	...	98	8	...	...	8,282	13	...	95	5	...	...
South-eastern Asia	986$_{-1i}$	13	82$_{-1i}$	77$_{-1i}$	6	3,684$_{-2i}$	21	94$_{-2i}$	90$_{-2i}$	6$_{-4i}$	...	...	3,071$_{-2i}$	24$_{i}$	95$_{-2i}$	97$_{-4i}$	18	...	...
Oceania	62$_{i}$	...	...	...	...	199$_{i}$	...	...	...	...	1.06$_{i}$	...	158$_{i}$	...	...	...	...	1.05$_{i}$	...
Latin America and the Caribbean	1,107$_{i}$	21	81$_{-1i}$	...	...	3,207$_{i}$	20	80$_{i}$	76$_{i}$	...	...	...	4,307$_{i}$	16	77$_{-1i}$	...	...	...	...
Caribbean	...	19$_{i}$	...	...	42$_{i}$	...	13$_{i}$	...	...	...	...	...	...	10$_{i}$	...	...	4$_{i}$	...	...
Central America	...	22	...	...	...	...	24	...	...	...	1.11	...	...	16	...	...	...	1.4	...
South America	...	21	...	...	...	...	18	...	...	...	...	...	...	16	...	...	...	...	...
Europe and Northern America	2,639$_{i}$	15	88$_{-3i}$	...	...	4,851$_{i}$	14	93$_{i}$	93$_{i}$	...	0.73	...	7,731$_{i}$	12	82$_{i}$	...	...	0.78	...
Europe	2,070$_{i}$	16$_{i}$	...	...	...	2,790$_{i}$	15	91$_{-3i}$	...	...	0.78$_{i}$	...	5,810$_{i}$	10	78$_{i}$	86$_{i}$	...	0.83$_{i}$	...
Northern America	570$_{i}$	15	99$_{i}$	100$_{i}$	...	2,060$_{i}$	13	97$_{i}$	98$_{i}$	...	0.69	...	1,921$_{i}$	15	96$_{i}$	98$_{i}$	...	0.72	...
Low income	334$_{-1i}$	35	57$_{-3i}$	72$_{-3i}$	...	3,104$_{i}$	42	53$_{i}$	81$_{i}$	...	...	...	2,005$_{i}$	26$_{i}$	57$_{-2i}$	72$_{-2i}$	...	...	...
Middle income	10,459$_{i}$	17	85$_{-1i}$	90$_{i}$	13$_{i}$	25,057$_{i}$	27	87$_{-1i}$	89$_{i}$	6$_{i}$	...	...	30,265$_{i}$	18	86$_{i}$	87$_{i}$	8$_{i}$	...	...
Lower middle	4,469$_{i}$	19$_{i}$	87$_{i}$	90$_{i}$	13$_{i}$	11,029$_{i}$	34	85$_{i}$	87$_{i}$	6$_{i}$	...	...	12,754	19	85$_{i}$	87	7$_{i}$	...	...
Upper middle	5,334	15	...	90	12$_{i}$	13,677$_{i}$	18	...	91$_{i}$	7$_{i}$	...	...	16,133$_{i}$	16	...	88$_{i}$	9$_{i}$	...	...
High income	2,851$_{i}$	17	89$_{-3i}$	92$_{i}$	...	6,160$_{i}$	14	92$_{i}$	94$_{i}$	...	0.79	...	9,113$_{i}$	12	83$_{i}$	92$_{i}$	...	0.82$_{i}$	...

A Number of classroom teachers.
B Pupil/teacher ratio, headcount basis.
C Percentage of teachers with the minimum required qualifications (received at least the minimum organized and recognized pre-service and in-service pedagogical training) to teach at a given level of education.
D Percentage of teachers qualified according to national standards.
E Teacher attrition rate (%).
F Ratio of actual teacher salaries (primary/lower secondary) to comparable workers.
G Percentage of teachers (primary/lower secondary) who received in-service training in the last 12 months.

Source: UIS unless noted otherwise. Data refer to school year ending in 2023 unless noted otherwise.
Aggregates represent countries listed in the table with available data and may include estimates for countries with no recent data.
(-) Magnitude nil or negligible.
(...) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2021 instead of 2023).
(i) Estimate and/or partial coverage.

TABLE 7: Continued

Country or territory	Pre-primary					Primary							Secondary							Country code
	A Classroom teachers (000)	B Pupil/teacher ratio	C % of trained teachers	D % of qualified teachers	E Teacher attrition rate (%)	A Classroom teachers (000)	B Pupil/teacher ratio	C % of trained teachers	D % of qualified teachers	E Teacher attrition rate (%)	F Relative teacher salary level	G % receiving in-service training	A Classroom teachers (000)	B Pupil/teacher ratio	C % of trained teachers	D % of qualified teachers	E Teacher attrition rate (%)	F Relative teacher salary level	G % receiving in-service training	
SDG indicator			4.c.1	4.c.3	4.c.6			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7	
Reference year	2023					2023							2023							
Sub-Saharan Africa																				
Angola	18$_{-1}$	44$_{-1}$	65$_{-1}$	65$_{-2}$	...	97$_{-1}$	54$_{-1}$	93$_{-2}$	81$_{-2}$	...	...	...	88$_{-2}$	28$_{-2}$	92$_{-2}$	83$_{-2}$	...	...	...	AGO
Benin	7$_{-2}$	...	53$_{-2}$	53$_{-2}$	2$_{-2}$	60$_{-1}$	40$_{-1}$	75$_{-2}$	75$_{-2}$	28$_{-1}$	1.69$_{-1i}$	...	57$_{-1}$	16$_{-1}$	36$_{-1}$	94$_{-1}$	...	...	...	BEN
Botswana	3$_{-1}$	13$_{-1}$	92$_{-1}$	86$_{-1}$	...	17$_{-1}$	23$_{-1}$	100$_{-1}$	98$_{-1}$	...	...	...	15$_{-2}$	11$_{-2}$	...	...	...	...	...	BWA
Burkina Faso	7	20	43	89	2	84	34	91	100	9	1.35$_{-1i}$	...	68	18	65	70	8	2.15$_{-1i}$	...	BFA
Burundi	2$_{-3}$	52$_{-3}$	...	94$_{-3}$	...	52$_{-3}$	44$_{-3}$	100$_{-4}$	94$_{-3}$	...	...	...	26$_{-4}$	...	...	99$_{-4}$	...	...	...	BDI
Cabo Verde	1$_{-3}$	17$_{-3}$	30$_{-3}$	30$_{-3}$	...	3$_{-2}$	20$_{-2}$	93$_{-2}$	99$_{-2}$	3$_{-3}$	...	...	4$_{-2}$	15$_{-2}$	95$_{-2}$	93$_{-2}$	4$_{-3}$	...	...	CPV
Cameroon	30$_{-1}$	...	73$_{-1}$	22$_{-1}$	...	114$_{-1}$	...	82$_{-1}$	15$_{-1}$	...	...	...	118	17	60	41	...	...	...	CMR
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	CAF
Chad	1	27	78	22	...	51	58	64	36	...	...	...	33	23	61	39	...	...	...	TCD
Comoros	...	...	...	...	...	4	28	75	75	...	...	...	...	...	...	...	...	...	...	COM
Congo	2	13	...	100	...	23	38	...	50	...	...	...	38	...	...	69	...	...	...	COG
Côte d'Ivoire	11	23	100	100	4	106	44	100	100	6	...	...	97	32	100	100	...	...	...	CIV
D. R. Congo	38	22	86	14	-$_{-2}$	561	38	13	87	-$_{-2}$	...	...	622	13	...	...	...	...	...	COD
Djibouti	0.3	24	6	100	...	3	25	66	100	1	...	...	4	20	76	100	4	...	...	DJI
Equat. Guinea	...	...	...	...	...	5$_{-4}$	23$_{-4}$	...	...	...	...	...	...	...	...	...	...	...	...	GNQ
Eritrea	2$_{-1}$	29$_{-1}$	40$_{-1}$	69$_{-1}$	...	12$_{-1}$	33$_{-1}$	77$_{-1}$	85$_{-1}$	...	...	...	10$_{-1}$	27$_{-1}$	...	88$_{-1}$	...	...	...	ERI
Eswatini	...	...	...	...	...	9	25	...	...	...	...	...	...	...	...	...	...	...	...	SWZ
Ethiopia	72	56	...	80$_{-1}$	...	358	43	...	94	...	...	...	129$_{-2}$	...	...	10$_{-2}$	...	...	...	ETH
Gabon	5$_{-4}$	...	40$_{-4}$	54$_{-4}$	...	10$_{-4}$	...	52$_{-4}$	77$_{-4}$	...	...	...	10$_{-4}$	...	...	72$_{-4}$	...	...	...	GAB
Gambia	4$_{-2}$	...	75$_{-2}$	75$_{-2}$	...	12$_{-2}$	...	88$_{-2}$	88$_{-2}$	...	...	...	12$_{-2}$	30$_{-2}$	72$_{-2}$	72$_{-2}$	...	...	...	GMB
Ghana	64$_{-2}$	...	61$_{-2}$	61$_{-2}$	...	173$_{-2}$	...	66$_{-2}$	66$_{-2}$	...	...	...	196$_{-2}$	...	78$_{-2}$	78$_{-2}$	...	...	...	GHA
Guinea	6$_{-2}$	37$_{-2}$	35$_{-3}$	89$_{-2}$	...	46$_{-2}$	45$_{-2}$	69$_{-2}$	97$_{-2}$	...	...	...	33$_{-2}$	23$_{-2}$	50$_{-4}$	95$_{-2}$	...	...	...	GIN
Guinea-Bissau	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	GNB
Kenya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	KEN
Lesotho	...	...	...	...	...	10	31	100	100	...	...	...	6	...	98	100	...	...	...	LSO
Liberia	28$_{-1}$	...	34$_{-1}$	72$_{-3}$	...	37$_{-1}$	15$_{-1}$	62$_{-1}$	75$_{-2}$	...	0.77$_{-3i}$	...	18$_{-3}$	15$_{-3}$	...	...	...	0.89$_{-3i}$	...	LBR
Madagascar	44$_{+1}$	24$_{+1}$	44$_{-4}$	99$_{-4}$	...	139$_{+1}$	38$_{+1}$	15$_{-4}$	100$_{-4}$	...	...	...	82$_{-4}$	...	...	...	...	...	...	MDG
Malawi	...	...	...	...	...	85	54	...	100	...	...	...	15$_{-4}$	68$_{-4}$	...	58$_{-4}$	...	...	...	MWI
Mali	6	26	17	59	...	60	50	37	24	...	...	...	80	16	41	40	...	...	...	MLI
Mauritania	...	...	...	...	...	22	39	97$_{-4}$	...	16$_{-4}$	...	...	9$_{-4}$	...	93$_{-4}$	...	3$_{-4}$	...	...	MRT
Mauritius	2	14	100	100	15$_{-2}$	6	16	100	100	1$_{-2}$	0.84$_{-2i}$	...	9	...	56	100	14$_{-2}$	1.11$_{-2i}$	...	MUS
Mozambique	...	...	...	...	...	134$_{-1}$	...	99$_{-1}$	100$_{-1}$	...	...	...	...	...	...	...	...	...	...	MOZ
Namibia	...	...	...	...	...	20$_{-1}$	28$_{-1}$	96$_{-1}$	90$_{-1}$	...	...	...	...	...	...	...	...	...	...	NAM
Niger	6	34	95	100	11$_{-1}$	68	44	98	100	3	...	...	25	36	31	94	...	...	...	NER
Nigeria	...	...	...	...	...	913$_{-2}$	33$_{-2}$	...	...	...	...	...	912$_{-2}$	15$_{-2}$	...	...	...	...	...	NGA
Rwanda	9	58	53	99	18	68	42	68	100	8	...	...	34	24	76	91	6	...	...	RWA
Sao Tome and Principe	1$_{-4}$	...	27$_{-4}$	...	...	1$_{-4}$	...	...	...	...	...	...	...	...	...	...	...	...	...	STP
Senegal	16	19	39	35	...	72	32	74	69	...	...	...	56	23	73	96	...	...	...	SEN
Seychelles	0.2	19	73	80	2	1	14	80	89	6$_{-1}$	...	...	1	11	90	98	5	...	...	SYC
Sierra Leone	6	27	59	66	15$_{-1}$	46	44	66	75$_{-1}$	22	0.57$_{-2i}$	...	...	...	...	...	...	0.63$_{-2i}$	...	SLE
Somalia	1$_{-1}$	23$_{-1}$	39$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SOM
South Africa	...	...	...	...	...	...	...	...	...	...	2.36$_{-4i}$	90$_{-2i}$	182$_{-1}$	30$_{-1}$	...	...	5$_{-1}$	2.36$_{-4i}$	91$_{-4i}$	ZAF
South Sudan	4$_{-2}$	43$_{-2}$	50$_{-2}$	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SSD
Togo	7	35	79	39	19	39	43	80	51	10	1.68$_{-1i}$	...	51	18	34$_{-2}$	69$_{-2}$	...	1.94$_{-1i}$	...	TGO
Uganda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	UGA
United Republic of Tanzania	16	102	...	80	...	207	55	...	98	0.1$_{-2}$	...	...	106$_{-3}$	...	...	99$_{-3}$	...	...	...	TZA
Zambia	...	...	...	...	...	83$_{-3}$	41$_{-3}$	...	...	...	...	...	...	...	...	...	...	...	...	ZMB
Zimbabwe	18$_{-1}$	36$_{-1}$	77$_{-1}$	68$_{-3}$	...	84$_{-1}$	35$_{-1}$	98$_{-1}$	99$_{-3}$	...	...	...	...	...	...	...	...	...	...	ZWE

TABLE 7: Continued

Country or territory	Pre-primary					Primary							Secondary							Country code
	A	B	C	D	E	A	B	C	D	E	F	G	A	B	C	D	E	F	G	
	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Relative teacher salary level	% receiving in-service training	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Relative teacher salary level	% receiving in-service training	
SDG indicator			4.c.1	4.c.3	4.c.6			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7	
Reference year	2023					2023							2023							
Northern Africa and Western Asia																				
Algeria	20	26	100	7	$-_{-2}$	212	24	92	13	1	...	...	...	...	...	...	...	...	...	DZA
Armenia	9	8	74	100	0.2	8	20	84	100	7	0.91_{-1i}	54_{-4i}	24	12	85	100	6	0.91_{-1i}	...	ARM
Azerbaijan	12	17	91	96	2	40	16	99	100	4	...	97_{-2i}	116	9	99	100	4	...	...	AZE
Bahrain	2	13	100	100	0.3	9	13	100	100	6	...	94_{-2i}	9	12	100	100	4	...	95_{-4i}	BHR
Cyprus	2_{-1}	14_{-1}	100_{-2}	100_{-2}	...	5_{-1}	11_{-1}	100_{-2}	100_{-2}	...	...	93_{-2i}	7_{-1}	8_{-1}	100_{-2}	100_{-2}	...	...	97_{-4i}	CYP
Egypt	59	21	81_{-2}	83	3_{-3}	427	32	87_{-2}	87	1_{-2}	...	98_{-2i}	463	...	85_{-2}	83	3_{-2}	...	87_{-4i}	EGY
Georgia	17	9	...	...	...	32	11	...	...	6	...	89_{-2i}	43_{-3}	...	...	...	...	...	98_{-1i}	GEO
Iraq	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	IRQ
Israel	...	...	...	...	...	85_{-1}	12_{-1}	...	...	...	0.68_{-1}	92_{-1i}	...	...	...	...	...	0.73_{-1}	89_{-4i}	ISR
Jordan	9	17	100	100	12_{-2}	63	18	100	100	16	...	94_{-2i}	73	14	100	100	7_{-2}	...	74_{-4i}	JOR
Kuwait	9_{-2}	7_{-2}	100_{-2}	92_{-3}	...	33_{-2}	8_{-2}	100_{-2}	75_{-3}	...	...	94_{-4i}	47_{-2}	...	100_{-2}	...	...	...	96_{-4i}	KWT
Lebanon	13	16	40	60	14	36	14	41	59	12	...	...	...	...	...	...	...	...	85_{-4i}	LBN
Libya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	LBY
Morocco	...	...	100_{-1}	100_{-1}	...	181	26	100	100	1	...	70_{-2i}	169	20	100	100	5_{-2}	...	92_{-1i}	MAR
Oman	5_{i}	...	100_{i}	100_{i}	38_{-2}	30_{i}	...	100_{i}	100_{i}	4_{-1}	...	98_{-2i}	43_{i}	...	98_{i}	98_{i}	...	...	89_{-4i}	OMN
Qatar	3	16	100	100	19	14	12	100	100	6	1.94_{-4i}	96_{-2i}	12	13	100	100	4	1.94_{-4i}	96_{-4i}	PSE
Saudi Arabia	21_{-1}	23_{-1}	100_{-1}	100_{-1}	...	235_{-1}	14_{-1}	100_{-1}	100_{-1}	...	...	86_{-2i}	237_{-1}	14_{-1}	100_{-1}	100_{-1}	...	...	93_{-4i}	QAT
State of Palestine (the)	10	17	100	32	47_{-2}	25	21	100	39	5	1.63_{-1i}	...	51	17	100	36	4	1.63_{-1i}	...	SAU
Sudan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	SDN
Syrian Arab Republic	6	25	11	60	3_{-2}	146	15	43	70	...	...	...	53	25	44	93	...	...	...	SYR
Tunisia	4	...	100	100	...	85	16	100	100	3_{-1}	1.71_{-1i}	...	90	...	96	96	0.2_{-1}	1.92_{-1i}	...	TUN
Türkiye	107_{-1}	17_{-1}	...	...	...	310_{-1}	18_{-1}	...	...	...	1.32_{-1}	55_{-2i}	766_{-1}	15_{-1}	...	...	...	1.34_{-1}	61_{-4i}	TUR
United Arab Emirates	17	14	100	100	...	37	15	100	100	...	...	94_{-2i}	97	9	100	100	...	...	98_{-1i}	ARE
Yemen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	YEM
Central and Southern Asia																				
Afghanistan	...	...	...	...	...	136_{-4}	50_{-4}	...	83_{-4}	...	...	...	...	...	...	...	...	...	...	AFG
Bangladesh	...	...	...	...	...	385	42	77	100	2_{-2}	...	...	547	29	65	100	...	...	...	BGD
Bhutan	1_{-1}	11_{-1}	100_{-3}	100_{-1}	...	3_{-1}	25_{-1}	100_{-1}	100_{-1}	4_{-1}	...	...	7_{-1}	10_{-1}	98_{-1}	98_{-1}	46_{-4}	...	...	BTN
India	2,593	13	93	99	14	4,825	27	95	95	5	...	...	6,730	20	92	93	7	...	...	IND
Iran, Islamic Republic of	...	...	...	...	...	...	...	...	...	...	...	93_{-1i}	...	...	...	...	...	...	86_{-4i}	IRN
Kazakhstan	108_{+1}	9_{+1}	100_{+1}	100_{+1}	1_{+1}	114_{+1}	14_{+1}	100_{+1}	100_{+1}	2_{+1}	...	96_{-2i}	252_{+1}	10_{+1}	100_{+1}	100_{+1}	...	...	94_{-4i}	KAZ
Kyrgyzstan	10_{+1}	27_{+1}	93_{+1}	...	...	26_{+1}	23_{+1}	96_{+1}	...	...	...	...	63_{-1}	...	...	...	...	...	...	KGZ
Maldives	2_{-1}	12_{-1}	65_{-1}	100_{-1}	...	5_{-1}	...	87_{-1}	100_{-1}	...	...	...	3_{-1}	...	98_{-1}	100_{-1}	...	...	...	MDV
Nepal	57_{+1}	21_{+1}	82_{-2}	98_{+1}	1	161_{+1}	22_{+1}	96_{+1}	94_{+1}	4_{+1}	...	...	111_{+1}	33_{+1}	93_{+1}	95_{+1}	6_{-3}	...	...	NPL
Pakistan	...	...	...	...	...	461_{-1}	52_{-1}	80_{-1}	...	...	...	62_{-4i}	$1,361_{-1}$	12_{-1}	71_{-1}	...	...	...	...	PAK
Sri Lanka	34_{-1}	13_{-1}	47_{-1}	80_{-1}	32_{-2}	72_{-1}	23_{-1}	87_{-1}	98_{-1}	3_{-1}	0.87_{-3i}	...	155_{-1}	16_{-1}	81_{-1}	96_{-1}	...	0.87_{-3i}	...	LKA
Tajikistan	10	10	...	...	...	38_{+1}	27_{+1}	...	...	...	...	...	...	...	...	...	...	...	...	TJK
Turkmenistan	...	...	...	...	...	24_{-1}	26_{-1}	100_{-2}	100_{-1}	...	...	...	81_{-1}	11_{-1}	100_{-2}	100_{-1}	...	...	...	TKM
Uzbekistan	132	...	100	100	...	126_{+1}	21_{+1}	100_{+1}	100_{+1}	...	...	100_{-2i}	329_{+1}	13_{+1}	100_{+1}	100_{+1}	...	...	...	UZB
Eastern and South-eastern Asia																				
Brunei Darussalam	1	15	63	74	13	4	10	85	92	5	...	...	5	8	91	91	3	...	...	BRN
Cambodia	6	70	100	100	...	45	49	100	100	...	...	...	107_{-2}	...	100_{-2}	...	...	...	...	KHM
China	3,302	14	...	98	15	6,719	16	...	99	8	...	...	7,252	13	...	95	5	...	...	CHN
DPR Korea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	PRK
Hong Kong, China	13	12	97	100	13	29	12	94	100	7	1.41_{-2i}	92_{-2i}	32	11	91	100	8	1.55_{-2i}	99_{-1i}	HKG
Indonesia	691	7	3	28	3	1,464	20	35	96	4	...	...	1,005	27	38	98	27	...	...	IDN
Japan	98_{-1}	28_{-1}	...	...	...	439_{-1}	14_{-1}	...	...	...	...	67_{-4i}	630_{-1}	11_{-1}	...	...	...	...	81_{-4i}	JPN
Lao PDR	13_{+1}	14_{+1}	11_{+1}	...	4_{-2}	24_{+1}	31_{+1}	66_{+1}	...	5_{-2}	...	...	36_{-1}	...	94_{-1}	...	5_{-2}	...	...	LAO
Macao, China	1	13	100	100	4	3	13	99	100	2	1.41_{-1i}	95_{-2i}	3	11	94	100	1	1.46_{-1i}	99_{-1i}	MAC
Malaysia	66	14	37	84	1	255	12	90	100	4	0.91_{-2i}	...	239	11	87	100	2	0.91_{-2i}	97_{-1i}	MYS
Mongolia	9	27	98_{-1}	93	3_{-1}	12	33	98	98	1_{-2}	...	...	22_{-4}	...	87_{-4}	94_{-4}	5_{-4}	...	...	MNG
Myanmar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	MMR
Philippines	77_{-1}	...	100_{-1}	100_{-1}	6_{-2}	524_{-1}	...	100_{-1}	100_{-1}	1_{-1}	1.09_{-3i}	85_{-4i}	478_{-1}	...	100_{-1}	100_{-1}	3_{-1}	1.09_{-3i}	...	PHL
Republic of Korea	82_{-1}	12_{-1}	100_{-1}	100_{-1}	...	169_{-1}	16_{-1}	100_{-1}	100_{-1}	...	1.33_{-1}	78_{-4i}	229_{-1}	11_{-1}	100_{-1}	100_{-1}	...	1.33_{-1}	97_{-1i}	KOR
Singapore	...	...	...	...	...	17_{-1}	14_{-1}	98_{-1}	100_{-1}	...	1.48_{-2i}	85_{-2i}	14_{-1}	12_{-1}	98_{-1}	100_{-1}	...	1.48_{-2i}	97_{-4i}	SGP
Thailand	155_{+1}	11_{+1}	100_{+1}	100_{+1}	...	308_{+1}	15_{+1}	100_{+1}	100_{+1}	...	...	...	250_{+1}	20_{+1}	100_{+1}	100_{+1}	...	...	...	THA
Timor-Leste	1_{-3}	35_{-3}	...	33_{-3}	...	7	32	...	76_{-3}	...	...	...	6_{-3}	26_{-3}	...	85_{-3}	...	...	...	TLS
Viet Nam	355	12	86	86	13	379	24	83	83	18	...	...	456_{-1}	21_{-1}	91_{-1}	91_{-1}	...	...	...	VNM

TABLE 7: Continued

Country or territory	Pre-primary					Primary							Secondary							Country code
	A	B	C	D	E	A	B	C	D	E	F	G	A	B	C	D	E	F	G	
	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Relative teacher salary level	% receiving in-service training	Classroom teachers (000)	Pupil/teacher ratio	% of trained teachers	% of qualified teachers	Teacher attrition rate (%)	Relative teacher salary level	% receiving in-service training	
SDG indicator			4.c.1	4.c.3	4.c.6			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7	
Reference year			2023					2023							2023					
Oceania																				
Australia	...	...	...	...	...	...	...	...	...	...	1.08_{-1}	91_{-2i}	...	...	...	...	...	1.08_{-1}	99_{-1i}	AUS
Cook Islands	-	17	100	41	10	0.1	16	100	46	23	...	...	0.1	18	98	68	25	...	...	COK
Fiji	1	16	92	100	22	7	17	96	100	2	...	...	...	...	...	...	...	...	...	FJI
Kiribati	1	12	95	96	...	1	24	92	100	...	...	...	...	...	...	...	...	...	...	KIR
Marshall Islands	...	...	...	...	...	0.5_{-1}	12_{-1}	52_{-1}	67_{-1}	3_{-1}	1.07_{-1i}	...	0.4_{-1}	13_{-1}	74_{-1}	79_{-1}	...	1.07_{-1i}	...	MHL
Micronesia, F. S.	0.2_{-1}	10_{-1}	14_{-2}	92_{-1}	3_{-4}	1_{-1}	16_{-1}	28_{-2}	89_{-1}	2_{-3}	...	...	1_{-2}	...	31_{-2}	92_{-2}	11_{-2}	...	...	FSM
Nauru	$-_{-3}$	20_{-3}	...	92_{-4}	...	0.1	33	16	84	...	...	...	-	76	88_{-1}	100	32	...	...	NRU
New Zealand	15_{-1}	7_{-1}	...	...	...	27_{-1}	14_{-1}	...	...	...	0.94_{-1}	83_{-2i}	37_{-1}	15_{-1}	...	...	...	0.94_{-1}	87_{-4i}	NZL
Niue	-	4	33	33	...	-	10	100_{-1}	100	...	...	...	-	6	14	86	...	...	...	NIU
Palau	-	21	83	33	...	0.1	11	94	65	38_{-1}	...	...	0.2	9	91	78	...	...	...	PLW
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	PNG
Samoa	0.4	13	...	100	...	2	22	...	100	...	0.97_{-3i}	...	...	...	...	...	...	0.97_{-3i}	...	WSM
Solomon Is	1	36	...	...	11_{-4}	6	17	82_{-4}	82_{-4}	1_{-4}	...	...	...	...	...	...	...	...	...	SLB
Tokelau	-	11	33	100	$-_{-2}$	-	9	44	100	$-_{-2}$	...	...	-	4	95	100	$-_{-2}$	...	...	TKL
Tonga	0.2	12	81	83	...	1	20	93	98	3_{-1}	...	...	...	...	...	...	...	...	...	TON
Tuvalu	0.1	10	92	83_{-1}	9_{-3}	0.1	15	65	35	9	...	...	0.1	10	58	34	48	...	...	TUV
Vanuatu	1	12	100_{-1}	100	...	2	25	100_{-1}	100	7_{-1}	...	...	1	43	100_{-2}	100	...	...	...	VUT
Latin America and the Caribbean																				
Anguilla	$-_{-1}$	9_{-1}	...	...	...	0.1_{-1}	19_{-1}	...	...	...	...	...	0.1_{-1}	7_{-1}	...	...	...	...	...	AIA
Antigua and Barbuda	...	...	...	...	...	1_{-4}	12_{-4}	48_{-4}	...	...	...	...	1_{-4}	...	50_{-4}	...	...	...	...	ATG
Argentina	91_{-2}	...	...	...	...	292_{-1}	16_{-1}	...	...	...	0.96_{-2i}	79_{-4i}	...	...	...	...	...	0.78_{-2i}	...	ARG
Aruba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	ABW
Bahamas	0.4	9	94	94	...	2	11	92	92	...	...	...	3	11	91	91	...	...	...	BHS
Barbados	0.4	12	70	100	...	2	11	75	100	...	1.14_{-2i}	...	1	15	51	100	...	1.14_{-2i}	...	BRB
Belize	0.4	18	74	26	...	3	18	89	11	...	1.14_{-3i}	...	2	16	73	27	...	...	...	BLZ
Bolivia, P. S.	12	28	89	11	7	76	18	90	10	5	1.34_{-1i}	...	71	18	90	10	4	1.53_{-1i}	...	BOL
Brazil	344_{-1}	15_{-1}	81_{-2}	...	...	813_{-1}	19_{-1}	93_{-2}	...	...	...	90_{-2i}	$1,496_{-1}$	15_{-1}	81_{-2}	...	...	...	97_{-1i}	BRA
British Virgin Islands	0.1_{-3}	...	49_{-3}	$-_{-1}$	...	0.3_{-1}	8_{-1}	50_{-1}	$-_{-1}$	11_{-1}	...	...	0.3_{-1}	7_{-1}	48_{-1}	1_{-1}	...	...	...	VGB
Cayman Islands	0.1_{-1}	...	85_{-1}	85_{-1}	60_{-1}	0.4	12	98	100	4_{-2}	...	...	0.4	11	99	100	1_{-2}	...	...	CYM
Chile	27_{-1}	22_{-1}	...	...	...	94_{-1}	17_{-1}	...	...	...	0.77_{-3}	75_{-4i}	93_{-1}	17_{-1}	...	...	...	0.77_{-3}	73_{-4i}	CHL
Colombia	47_{-1}	40_{-1}	97_{-1}	97_{-1}	10_{-2}	181_{-1}	23_{-1}	98_{-1}	98_{-1}	6_{-2}	1.94_{-1i}	73_{-4i}	191_{-1}	25_{-1}	98_{-1}	98_{-1}	3_{-1}	1.94_{-1i}	95_{-1i}	COL
Costa Rica	12_{-1}	11_{-1}	90_{-3}	97_{-3}	2_{-3}	43_{-1}	11_{-1}	94_{-3}	98_{-3}	10_{-3}	0.97_{-1}	66_{-4i}	37_{-1}	14_{-1}	97_{-3}	99_{-3}	6_{-3}	1.00_{-1}	91_{-1i}	CRI
Cuba	20	18	100	70	...	87	8	100	72	1_{-4}	...	88_{-4i}	84	8	100	73	3_{-4}	...	...	CUB
Curaçao	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	CUW
Dominica	0.2	7	54	46	27_{-1}	1	10	66	74	$-_{-1}$	...	...	1	9	44	57	$-_{-1}$	...	...	DMA
Dominican Republic	19	17	-	100	39_{-2}	79	15	-	100	8_{-2}	1.49_{-1i}	83_{-4i}	81	11	-	100	...	1.49_{-1i}	98_{-1i}	DOM
Ecuador	31	20	93	95	8	80	22	90	95	7	1.57_{-1i}	80_{-4i}	93	20	77	97	8	1.57_{-1i}	...	ECU
El Salvador	7	27	98	100	...	23	27	98	100	...	...	65_{-4i}	19	24	95	100	...	...	...	SLV
Grenada	0.3_{-1}	12_{-1}	51_{-1}	51_{-1}	...	1_{-1}	...	60_{-1}	60_{-1}	...	...	...	1_{-1}	...	39_{-1}	19_{-1}	...	...	...	GRD
Guatemala	32	21	...	...	...	103	23	...	...	...	...	49_{-4i}	93	12	...	...	...	...	...	GTM
Guyana	2	13	66	22	...	5	17	66	23	...	...	...	5	13	71	25	...	...	...	GUY
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	HTI
Honduras	3_{-1}	...	...	65_{-1}	75_{-1}	42_{-1}	...	...	73_{-1}	12_{-1}	...	63_{-4i}	49_{-1}	...	...	72_{-1}	6_{-1}	...	...	HND
Jamaica	9	11	86	100	82_{-1}	13	16	95	100	4_{-3}	...	...	13	15	100	100	4	...	...	JAM
Mexico	227_{-1}	18_{-1}	81_{-2}	81_{-2}	...	568_{-1}	24_{-1}	91_{-2}	91_{-2}	...	1.11_{-1}	62_{-4i}	861_{-1}	15_{-1}	88_{-2}	...	...	1.42_{-1}	...	MEX
Montserrat	$-_{-3}$	5_{-3}	69_{-4}	100_{-4}	...	$-_{-3}$	...	76_{-4}	100_{-4}	...	...	...	$-_{-3}$	...	46_{-4}	100_{-4}	...	...	...	MSR
Nicaragua	3	79	55	96	...	30	30	59	89	...	...	61_{-4i}	13	36	18	87	...	...	...	NIC
Panama	5_{-2}	...	...	...	...	22_{-2}	...	...	...	...	...	84_{-4i}	...	...	...	...	...	...	97_{-1i}	PAN
Paraguay	...	...	...	...	...	...	...	...	...	...	...	90_{-4i}	...	...	...	...	...	...	...	PRY
Peru	88	18	...	...	...	217	17	13	81	...	...	95_{-4i}	220	15	29	63	...	...	98_{-1i}	PER
Saint Kitts and Nevis	0.1_{-2}	10_{-2}	17_{-4}	...	...	0.4_{-2}	13_{-2}	68_{-2}	32_{-2}	...	...	...	1_{-2}	8_{-2}	...	...	...	...	...	KNA
Saint Lucia	0.2_{-1}	...	...	...	...	1	14	77	100	...	...	...	1	10	68	98	...	...	...	LCA
Saint Vincent/Grenadines	...	...	...	...	...	1	12	79	...	...	...	...	1	12	61	...	...	...	...	VCT
Sint Maarten	...	...	...	...	...	0.4	10	...	...	...	...	...	...	...	...	...	...	...	...	SXM
Suriname	0.1	170	100	93	7_{-3}	1	30	100	100	...	...	...	5	13	...	...	...	...	...	SUR
Trinidad and Tobago	2	11	100	100_{-2}	2_{-3}	8	16	81	100	...	1.35_{-2i}	...	7	12	91_{-3}	100_{-1}	...	1.64_{-3i}	...	TTO
Turks and Caicos Islands	0.1	19	81	56	...	0.3	13	80	71	24_{-2}	...	...	0.3	11	93	85	10_{-2}	...	...	TCA
Uruguay	5_{-1}	26_{-1}	...	100_{-1}	...	20_{-1}	15_{-1}	100_{-1}	100_{-1}	...	0.76_{-2i}	49_{-4i}	...	...	...	...	...	0.76_{-2i}	...	URY
Venezuela, B. R.	114	15	95	5	...	283	12	88	12	...	...	...	272	10	88	12	...	...	...	VEN

TABLE 7: Continued

Country or territory	Pre-primary					Primary							Secondary							Country code
	A Classroom teachers (000)	B Pupil/teacher ratio	C % of trained teachers	D % of qualified teachers	E Teacher attrition rate (%)	A Classroom teachers (000)	B Pupil/teacher ratio	C % of trained teachers	D % of qualified teachers	E Teacher attrition rate (%)	F Relative teacher salary level	G % receiving in-service training	A Classroom teachers (000)	B Pupil/teacher ratio	C % of trained teachers	D % of qualified teachers	E Teacher attrition rate (%)	F Relative teacher salary level	G % receiving in-service training	
SDG indicator			4.c.1	4.c.3	4.c.6			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7			4.c.1	4.c.3	4.c.6	4.c.5	4.c.7	
Reference year	2023					2023							2023							
Europe and Northern America																				
Albania	5	13	53$_{-2}$	68$_{-2}$	1$_{-2}$	10	15	62$_{-2}$	80$_{-2}$	5$_{-2}$	0.84$_{-1i}$	92$_{-2i}$	23	9	67$_{-2}$	57$_{-2}$	8$_{-2}$	0.88$_{-1i}$	...	ALB
Andorra	0.2	12	100	100	10	0.4	10	100	100	7	...	...	1	8	100	100	8	...	...	AND
Austria	26$_{-1}$	10$_{-1}$	...	...	...	31$_{-1}$	11$_{-1}$	...	...	...	0.65$_{-1}$	84$_{-2i}$	75$_{-1}$	9$_{-1}$	...	...	...	0.66$_{-1}$	...	AUT
Belarus	44	7	95	56	5	22	...	99	100	4	...	...	73	...	97	100	...	...	...	BLR
Belgium	38$_{-1}$	11$_{-1}$	...	...	...	80$_{-1}$	10$_{-1}$	...	...	...	...	73$_{-4i}$	137$_{-1}$	8$_{-1}$	...	...	...	...	...	BEL
Bermuda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	BMU
Bosnia and Herzegovina	2	12	...	...	...	10	15	...	...	...	...	47$_{-4i}$	27	8	...	...	...	...	...	BIH
Bulgaria	19$_{-1}$	11$_{-1}$	...	...	...	23$_{-1}$	10$_{-1}$	...	...	...	0.65$_{-1}$	61$_{-2i}$	42$_{-1}$	12$_{-1}$	...	...	...	0.65$_{-1}$	...	BGR
Canada	...	...	...	...	...	...	...	...	...	...	1.18$_{-2}$	81$_{-4i}$	...	...	...	...	...	1.18$_{-2}$	...	CAN
Croatia	10$_{-1}$	11$_{-1}$	...	...	...	13$_{-1}$	11$_{-1}$	...	...	...	...	93$_{-2i}$	53$_{-1}$	6$_{-1}$	...	...	...	...	...	HRV
Czechia	...	...	...	...	...	...	...	...	...	...	0.55$_{-1}$	71$_{-2i}$	...	...	...	...	...	0.55$_{-1}$	...	CZE
Denmark	20$_{-1}$	9$_{-1}$	...	...	...	43$_{-1}$	10$_{-1}$	...	...	...	0.74$_{-1}$	53$_{-2i}$	53$_{-1}$	10$_{-1}$	...	...	...	0.75$_{-1}$	...	DNK
Estonia	...	...	...	...	...	8$_{-1}$	11$_{-1}$	...	...	...	...	...	9$_{-2}$	...	...	...	...	...	...	EST
Finland	22$_{-1}$	9$_{-1}$	...	...	...	29$_{-1}$	13$_{-1}$	...	...	...	0.76$_{-1}$	46$_{-2i}$	42$_{-1}$	13$_{-1}$	...	...	...	0.81$_{-1}$	71$_{-4i}$	FIN
France	...	...	...	...	...	...	...	...	...	...	0.64$_{-1}$	64$_{-2i}$	458$_{-4}$	...	...	...	...	0.69$_{-1}$	87$_{-4i}$	FRA
Germany	351$_{-1}$	7$_{-1}$	...	...	...	265$_{-1}$	12$_{-1}$	...	...	...	0.96$_{-1}$	66$_{-2i}$	601$_{-1}$	11$_{-1}$	...	...	...	1.04$_{-1}$	98$_{-1i}$	DEU
Greece	20$_{-1}$	9$_{-1}$	...	...	...	75$_{-1}$	8$_{-1}$	...	...	...	0.72$_{-1}$	...	81$_{-1}$	9$_{-1}$	...	...	...	0.72$_{-1}$	...	GRC
Hungary	26$_{-1}$	12$_{-1}$	...	...	...	38$_{-1}$	10$_{-1}$	...	...	...	0.40$_{-1}$	58$_{-4i}$	81$_{-1}$	10$_{-1}$	...	...	...	0.40$_{-1}$	64$_{-4i}$	HUN
Iceland	3$_{-1}$	4$_{-1}$	...	...	...	4$_{-1}$	9$_{-1}$	...	...	...	...	...	...	...	...	...	...	...	...	ISL
Ireland	...	...	...	...	...	41$_{-1}$	13$_{-1}$	...	...	...	0.98$_{-1}$	76$_{-4i}$	32$_{-1}$	14$_{-1}$	...	...	...	0.99$_{-1}$	97$_{-4i}$	IRL
Italy	128$_{-1}$	10$_{-1}$	...	...	...	250$_{-1}$	11$_{-1}$	...	...	...	0.63$_{-1}$	93$_{-2i}$	478$_{-1}$	10$_{-1}$	...	...	...	0.68$_{-1}$	84$_{-4i}$	ITA
Latvia	8$_{-1}$	10$_{-1}$	100$_{-2}$	...	...	10$_{-1}$	12$_{-1}$	100$_{-2}$	...	...	...	95$_{-2i}$	13$_{-1}$	9$_{-1}$	100$_{-2}$	...	...	...	...	LVA
Liechtenstein	0.1$_{-2}$	7$_{-2}$	...	...	...	0.3$_{-2}$	7$_{-2}$	...	...	...	...	...	0.3$_{-2}$	10$_{-2}$	...	...	...	...	...	LIE
Lithuania	13$_{-1}$	8$_{-1}$	83$_{-3}$	83$_{-3}$	...	9$_{-1}$	14$_{-1}$	91$_{-3}$	91$_{-3}$	...	1.10$_{-1}$	87$_{-2i}$	27$_{-1}$	9$_{-1}$	95$_{-3}$	95$_{-3}$	...	1.10$_{-1}$	96$_{-4i}$	LTU
Luxembourg	3$_{-1}$	7$_{-1}$	...	...	...	6$_{-1}$	7$_{-1}$	...	...	...	1.21$_{-1}$	...	6$_{-1}$	8$_{-1}$	...	...	...	1.30$_{-1}$	...	LUX
Malta	1$_{-2}$	...	92$_{-2}$	...	...	2$_{-2}$	...	84$_{-2}$	...	...	...	89$_{-2i}$	5$_{-2}$	...	68$_{-2}$	...	...	...	...	MLT
Monaco	0.1	16	82	92	15	0.2	11	77	78	3	...	...	0.4	8	71	88	18	...	...	MCO
Montenegro	2	12	...	100	...	...	...	...	...	...	...	88$_{-2i}$	7	8	...	100	...	...	...	MNE
Netherlands (Kingdom of the)	32$_{-1}$	15$_{-1}$	...	...	...	102$_{-1}$	11$_{-1}$	...	...	...	0.84$_{-1}$	61$_{-2i}$	118$_{-1}$	14$_{-1}$	...	...	...	0.90$_{-1}$	...	NLD
North Macedonia	...	...	...	...	...	8$_{-1}$	14$_{-1}$	...	...	...	...	81$_{-2i}$	19$_{-1}$	8$_{-1}$	...	...	...	...	...	MKD
Norway	16$_{-1}$	10$_{-1}$	...	...	...	52$_{-1}$	8$_{-1}$	...	...	...	0.69$_{-1}$	58$_{-2i}$	57$_{-1}$	8$_{-1}$	...	...	...	0.69$_{-1}$	60$_{-4i}$	NOR
Poland	115$_{-1}$	13$_{-1}$	100$_{-4}$	...	...	131$_{-1}$	12$_{-1}$	100$_{-4}$	...	...	0.60$_{-1}$	80$_{-2i}$	326$_{-1}$	10$_{-1}$	100$_{-4}$	...	...	0.60$_{-1}$	...	POL
Portugal	17$_{-1}$	16$_{-1}$	100$_{-3}$	100$_{-3}$	...	52$_{-1}$	11$_{-1}$	100$_{-3}$	100$_{-3}$	...	1.21$_{-1}$	78$_{-2i}$	...	...	100$_{-3}$	100$_{-3}$	...	1.21$_{-1}$	97$_{-1i}$	PRT
Republic of Moldova	10$_{+1}$	12$_{+1}$	100	92	...	7$_{+1}$	18$_{+1}$	100	99	...	...	...	20	...	100	96	...	...	...	MDA
Romania	36$_{-1}$	14$_{-1}$	...	...	...	47$_{-1}$	18$_{-1}$	...	...	...	0.74$_{-1}$	...	125$_{-1}$	12$_{-1}$	...	...	...	0.74$_{-1}$	71$_{-4i}$	ROU
Russian Federation	...	...	...	...	...	327	23	96	96$_{-1}$	...	...	94$_{-2i}$	1,336	8	80	80$_{-1}$	...	...	98$_{-4i}$	RUS
San Marino	0.1	6	40	60	...	0.2	...	35	65	...	...	...	0.3	6	...	96	...	...	...	SMR
Serbia	16$_{-1}$	11$_{-1}$	...	100$_{-1}$	...	19$_{-1}$	14$_{-1}$	...	100$_{-1}$	...	...	89$_{-2i}$	67$_{-1}$	7$_{-1}$	...	100$_{-1}$	...	...	...	SRB
Slovakia	16$_{-1}$	11$_{-1}$	98$_{-1}$	100$_{-1}$	...	19$_{-1}$	12$_{-1}$	98$_{-1}$	100$_{-1}$	...	0.48$_{-1}$	70$_{-2i}$	37$_{-1}$	12$_{-1}$	98$_{-1}$	100$_{-1}$	...	0.48$_{-1}$	...	SVK
Slovenia	3$_{-1}$	18$_{-1}$	...	...	...	...	...	...	...	...	0.85$_{-1}$	79$_{-2i}$	...	...	...	...	...	0.85$_{-1}$	...	SVN
Spain	100$_{-1}$	12$_{-1}$	100$_{-1}$	100$_{-1}$	...	244$_{-1}$	12$_{-1}$	100$_{-1}$	100$_{-1}$	...	1.06$_{-1}$	79$_{-2i}$	331$_{-1}$	11$_{-1}$	100$_{-1}$	100$_{-1}$	...	1.18$_{-1}$	...	ESP
Sweden	38$_{-1}$	12$_{-1}$	...	...	...	71$_{-1}$	12$_{-1}$	...	...	...	0.80$_{-2}$	78$_{-2i}$	77$_{-1}$	13$_{-1}$	...	...	...	0.81$_{-2}$	77$_{-4i}$	SWE
Switzerland	16$_{-1}$	11$_{-1}$	...	...	...	56$_{-1}$	10$_{-1}$	...	...	...	...	...	65$_{-1}$	9$_{-1}$	...	...	...	...	...	CHE
Ukraine	...	...	...	...	...	106	14	90	10	...	...	...	283	9	95	5	...	...	...	UKR
United Kingdom	31$_{-1}$	54$_{-1}$	...	...	...	282$_{-1}$	17$_{-1}$	...	...	...	...	...	386$_{-1}$	16$_{-1}$	...	...	...	...	...	GBR
United States	555$_{-1}$	15$_{-1}$	100$_{-1}$	100$_{-1}$	...	1,774$_{-1}$	13$_{-1}$	100$_{-1}$	100$_{-1}$	...	0.65$_{-1}$	93$_{-4i}$	1,737$_{-1}$	15$_{-1}$	100$_{-1}$	100$_{-1}$	...	0.68$_{-1}$	94$_{-4i}$	USA

Students and teacher are sitting and waiting for the school exam in the classroom on the March 25 2021 in Ratchaburi, Thailand.

Credit: Saksorn kumjit/Shutterstock.com*

Aid tables

INTRODUCTION

The data in the following four tables on official development assistance (ODA) are derived from the International Development Statistics (IDS) database of the Organisation for Economic Co-operation and Development (OECD). The IDS database records information provided annually by all members of the OECD Development Assistance Committee (DAC), as well as a growing number of non-DAC donors. The IDS database includes the DAC database and the Creditor Reporting System (CRS) database of individual projects. Figures for ODA come from the DAC database, while figures for aid to education come from the CRS database. Figures in the DAC and CRS databases are expressed in constant 2022 US dollars. The DAC and CRS databases are available at: www.oecd.org/dac/stats/idsonline.htm. In 2019, the methodology of defining ODA changed:

In 2019, the methodology of defining ODA changed:

- The cash-flow approach, used for Tables 2 to 4, includes both grants and loans that (a) are undertaken by the official sector, (b) have promotion of economic development and welfare as their main objective and, for loans, (c) are at concessional financial terms (having a grant element of at least 25%).
- The new grant-equivalent approach, which is used for Table 1, counts only grants and the grant element of concessional loans as ODA.

The DAC glossary of terms and concepts is available at: www.oecd.org/dac/financing-sustainable-development/development-finance-data/dac-glossary.htm.

AID RECIPIENTS AND DONORS

The DAC list of ODA recipients consists of all low- and middle-income countries, based on the World Bank income classification. For further information, see: www.oecd.org/development/financing-sustainable-development/development-finance-standards/historyofdaclistsofaidrecipientcountries.htm.

Bilateral donors are countries that provide development assistance directly to recipient countries. Most are DAC members. 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 many or all of their activities supporting development and aid recipient countries. They include multilateral development banks (e.g. World Bank, regional development banks), United Nations agencies and regional agencies.

- Bilateral flows refers to bilateral donors contracting with multilateral donors to deliver a programme.
- Multilateral flows refers to bilateral donor contributions pooled with other contributions and disbursed at the discretion of the multilateral donor to fund its own programmes and running costs.

For a list of bilateral and multilateral donors, see the 'Donors' worksheet at: https://webfs.oecd.org/oda/DataCollection/Resources/DAC-CRS-CODES.xls.

TABLE 1: DEVELOPMENT AND HUMANITARIAN ASSISTANCE

ODA comprises bilateral and multilateral development assistance, both sector allocable and non-allocable (e.g. general budget support, humanitarian aid and debt relief). ODA disbursements are reported as follows:

- Total ODA
  - As volume, in million US dollars
  - As a share of gross national income (GNI)
- Contributions to multilateral donors (a subset of total ODA)
  - As volume, in million US dollars
  - As a share of total ODA disbursements.

Reported humanitarian assistance is a subset of total ODA from the OECD CRS database. It has been estimated using the cash-flow approach.

TABLES 2 AND 3: DEVELOPMENT ASSISTANCE TO EDUCATION BY DONOR AND BY RECIPIENT

Direct aid to education is aid reported in the CRS database as direct allocations to the education sector. Four education levels are distinguished:

- *Basic* covers primary education, basic life skills for youth and adults, and early childhood education.
- *Secondary* covers general secondary education and vocational training.
- *Post-secondary* covers tertiary education as well as advanced technical and managerial training.
- *Level unspecified* 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 in this subcategory.

Total aid to education adds to direct aid a component of general budget support (i.e. aid provided to governments without being earmarked for specific projects or sectors). It is reported as follows:

- *Total aid to education* is direct aid to education plus 20% of general budget support.
- *Total aid to basic education* is direct aid to basic education plus 50% of 'level unspecified' and 10% of general budget support.
- *Total aid to secondary education* is direct aid to secondary education plus 25% of 'level unspecified' and 5% of general budget support.
- *Total aid to post-secondary education* is direct aid to post-secondary education plus 25% of 'level unspecified' and 5% of general budget support.

The *share of education in total ODA* is calculated using total ODA as reported in Table 1.

TABLE 4: DEVELOPMENT ASSISTANCE TO EDUCATION BY DONOR – TOP 3 RECIPIENTS

This table reports the amount and share of bilateral and multilateral donor assistance to education and to basic education allocated to the top 3 recipients of assistance from each donor.

TABLE 1: Development and humanitarian assistance

Donor	OFFICIAL DEVELOPMENT ASSISTANCE (ODA)**** Disbursements																TOTAL HUMANITARIAN ASSISTANCE		
	Total								Of which, contributions to multilaterals										
	Constant 2022 USD millions				As a share of gross national income (%)				Constant 2022 USD millions				As a share of total grant equivalents (%)				Constant 2022 USD millions		
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022
Australia	3293	3535	3046	3278	0.21	0.22	0.19	0.19	631	476	456	535	19	13	15	16	267	336	391
Austria	1263	1373	1847	1771	0.30	0.31	0.39	0.38	754	733	767	839	60	53	42	47	65	115	155
Belgium	2363	2463	2657	2643	0.48	0.43	0.45	0.44	1195	1192	1349	1334	51	48	51	50	201	212	152
Bulgaria*	88	88	232	163	0.13	0.12	0.27	0.19	79	75	94	136	89	85	40	84	2	5	2
Canada	6034	6506	7836	8266	0.31	0.32	0.37	0.38	1382	1417	2035	1838	23	22	26	22	559	868	1036
Croatia*	79	85	138	141	0.13	0.13	0.19	0.20	59	62	64	81	75	73	46	57	3	1	4
Czechia	333	369	1051	690	0.13	0.13	0.38	0.24	252	280	316	266	76	76	30	39	22	16	38
Denmark	2725	2805	2771	3048	0.72	0.71	0.67	0.74	980	872	757	925	36	31	27	30	384	339	435
Estonia*	57	62	201	98	0.17	0.16	0.54	0.28	38	37	44	45	67	59	22	46	5	3	4
Finland	1270	1351	1616	1461	0.47	0.47	0.57	0.52	618	693	596	642	49	51	37	44	99	72	101
France	13611	14195	16014	14251	0.53	0.51	0.56	0.50	4797	5686	6641	6100	35	40	41	43	115	75	302
Germany	28730	31149	35640	33559	0.73	0.76	0.85	0.79	6596	7954	7322	7679	23	26	21	23	1839	2833	3410
Greece	330	326	360	300	0.17	0.16	0.17	0.14	244	255	260	296	74	78	72	99	0	1	1
Hungary*	421	405	371	255	0.27	0.28	0.26	0.15	193	169	77	62	46	42	21	24	8	4	53
Iceland	67	72	94	111	0.27	0.28	0.34	0.36	14	14	22	29	20	19	23	26	5	8	15
Ireland	978	1095	2410	2643	0.31	0.30	0.63	0.67	461	505	586	633	47	46	24	24	122	144	198
Israel	319	412	494	399	0.07	0.09	0.09	0.07	54	91	47	51	17	22	10	13	0	0	34
Italy	4089	5572	6646	5612	0.22	0.29	0.33	0.27	2974	3464	3320	3144	73	62	50	56	152	222	402
Japan	13216	14770	17500	20244	0.31	0.34	0.39	0.44	2502	3281	2622	3831	19	22	15	19	513	796	537
Kuwait*	399	430	264	..	0.28	0.29	0.16	0.00	33	30	2	..	8	7	1	..	1	23	0
Lithuania*	82	89	243	171	0.13	0.14	0.36	0.28	69	70	103	82	83	78	42	48	2	2	50
Luxembourg	463	509	530	520	1.03	0.99	1.00	0.99	150	165	157	145	32	32	30	28	63	63	82
Netherlands	5375	4964	6470	6670	0.59	0.52	0.67	0.66	1671	1406	2167	2064	31	28	33	31	189	123	832
New Zealand**	562	648	515	728	0.26	0.28	0.22	0.30	102	100	100	120	18	15	19	16	51	29	32
Norway	6162	5349	5161	6756	1.11	0.93	0.86	1.09	1585	1352	1043	1243	26	25	20	18	936	664	761
Poland	844	939	3496	2216	0.14	0.15	0.53	0.34	615	657	833	731	73	70	24	33	38	23	225
Portugal	408	429	523	478	0.18	0.18	0.21	0.19	250	272	312	282	61	64	60	59	6	4	36
Qatar	608	656	833	675	0.42	0.38	0.37	0.31	51	63	100	81	8	10	12	12	0	356	428
Republic of Korea	2140	2578	2810	3106	0.14	0.16	0.17	0.18	474	632	589	829	22	25	21	27	143	138	147
Romania*	318	405	412	523	0.13	0.15	0.14	0.16	240	321	309	323	76	79	75	62	4	3	16
Saudi Arabia	1872	7020	6628	..	0.25	1.01	0.59	0.00	306	475	302	..	16	7	5	..	232	401	78
Slovakia	143	148	172	156	0.14	0.14	0.15	0.14	105	113	131	123	74	76	76	78	1	1	7
Slovenia	92	110	169	145	0.17	0.19	0.29	0.24	61	66	81	85	67	60	48	58	1	3	7
Spain	2947	3373	4276	3533	0.23	0.26	0.30	0.24	1976	2026	2069	2120	67	60	48	60	108	143	211
Sweden	6289	5334	5458	5572	1.14	0.91	0.89	0.91	2756	1811	1969	2247	44	34	36	40	33	566	546
Switzerland	3637	3840	4497	4808	0.49	0.50	0.56	0.60	886	941	811	936	24	25	18	19	629	396	552
Türkiye	8701	8088	7116	5912	1.14	0.96	0.79	0.60	97	87	142	29	1	1	2	0	7787	7116	5301
United Arab Emirates*	1905	1438	1411	1791	0.52	0.40	0.28	0.37	25	95	25	30	1	7	2	2	0	2	0
United Kingdom**	18744	14807	15762	17667	0.70	0.50	0.51	0.58	6403	5544	3878	6340	34	37	25	36	1054	559	863
United States	39827	51171	60522	63645	0.17	0.20	0.23	0.24	6408	9954	8327	6598	16	19	14	10	10563	16766	16551
EU Institutions	19318	17725	22534	24788					248	32	17	4	1	0	0	0	3228	2598	3263
TOTAL* **	**202183**	**217275**	**251529**	**249548**	**0.34**	**0.34**	**0.38**	**0.38**	**49032**	**53697**	**51139**	**53184**	**24**	**25**	**20**	**21**	**33094**	**39308**	**48328**

Source: OECD-DAC (2024) and CRS (2024).

* Not part of the Development Assistance Committee (DAC) but included in its Creditor Reporting System (CRS) database.

** Includes funds disbursed to overseas territories.

*** Includes ODA from other bilaterals and multilaterals not listed above.

**** ODA disbursements and contributions to multilaterals are calculated using a new grant-equivalent methodology.

(...) Data not available.

TABLE 2: Development assistance to education by donor

Donor	TOTAL ODA								DIRECT ODA								SHARE					
	Education		Basic education		Secondary education		Post-secondary education		Education		Basic education		Secondary education		Post-secondary education		Education in sector allocable ODA		Basic education in total ODA to education		Secondary education in total ODA to education	
	Constant 2022 USD millions								Constant 2022 USD millions								%					
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Australia	227	227	137	121	51	45	40	61	209	221	88	68	27	19	16	35	9	11	60	53	22	20
Austria	38	36	5	6	20	16	13	14	38	36	4	4	19	15	13	13	8	7	13	16	52	45
Belgium	112	114	22	21	35	34	56	59	112	114	17	16	33	32	53	57	15	17	19	18	31	30
Canada	287	283	170	150	78	91	39	42	285	282	123	105	54	69	15	20	8	10	59	53	27	32
Croatia*	2	2	1	0	0	0	1	2	2	2	1	0	0	0	1	2	11	5	43	8	0	0
Czechia	7	7	1	1	1	1	5	5	7	7	0	0	1	1	5	4	12	15	13	14	16	19
Denmark	73	77	40	41	12	14	21	22	73	77	17	16	1	1	9	9	6	9	55	54	16	18
Estonia*	3	2	1	0	1	1	1	1	3	2	0	0	0	0	1	1	20	27	30	20	26	27
Finland	93	57	61	37	20	12	12	8	93	57	42	27	10	7	3	3	22	13	66	65	21	21
France	719	758	243	239	217	258	260	261	697	732	159	145	174	210	218	214	7	8	34	32	30	34
Germany	1328	1344	521	424	539	652	268	268	1328	1344	255	231	406	555	135	171	7	6	39	32	41	49
Greece	2	2	0	0	0	0	2	2	2	2	0	0	0	0	2	2	6	8	2	1	0	1
Hungary*	119	143	10	1	2	1	108	141	119	143	7	0	0	0	106	140	53	60	8	1	1	0
Iceland	7	5	4	3	2	1	1	1	7	5	1	1	0	0	0	0	16	13	56	57	24	23
Ireland	42	43	27	27	6	5	9	10	42	43	23	23	4	3	7	8	14	13	64	64	14	12
Italy	188	407	81	153	30	85	77	168	188	384	55	17	17	17	64	100	17	27	43	38	16	21
Japan	709	922	261	389	121	132	326	401	479	605	71	165	26	20	231	289	4	4	37	42	17	14
Kuwait*	38	34	19	17	10	8	10	8	38	34	0	0	0	0	0	0	5	7	50	50	25	25
Lithuania*	5	6	1	0	1	0	4	6	5	6	0	0	0	0	3	6	36	42	18	2	13	1
Luxembourg	47	40	15	13	27	21	6	6	47	40	7	5	22	17	1	2	21	18	32	33	56	53
Netherlands	87	80	14	40	6	5	67	35	87	80	14	39	6	5	67	34	3	3	16	50	7	7
New Zealand**	80	42	23	13	13	6	45	23	58	35	5	5	4	2	36	19	17	13	28	31	16	15
Norway	418	255	315	169	50	37	52	49	412	245	275	136	31	21	33	33	14	9	75	66	12	15
Poland	14	16	2	4	1	2	11	11	14	12	1	1	0	1	11	9	5	5	15	23	6	11
Portugal	47	51	16	16	9	10	22	24	47	46	2	2	3	3	15	17	35	36	33	32	20	20
Qatar	126	152	45	79	20	3	61	69	126	148	4	74	0	0	40	67	56	58	36	52	16	2
Republic of Korea	188	235	41	51	56	59	91	125	188	235	28	25	49	46	84	111	10	12	22	22	30	25
Romania*	62	58	0	2	0	1	61	55	62	56	0	0	0	0	61	55	78	94	1	3	0	1
Saudi Arabia	1310	1211	603	552	306	273	401	386	337	195	1	11	5	2	101	115	25	19	46	46	23	23
Slovakia	2	4	0	0	0	1	2	2	2	4	0	0	0	1	2	2	9	13	13	13	15	22
Slovenia	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	2	1	1	7	14	13
Spain	66	69	30	31	19	17	16	20	66	69	16	16	12	10	9	13	7	7	46	45	29	25
Sweden	113	98	69	47	11	17	33	34	113	98	60	35	7	10	29	28	4	4	61	48	10	17
Switzerland	165	165	72	66	68	73	26	26	164	165	46	43	55	61	13	14	8	10	44	40	41	44
Türkiye	440	227	122	21	67	16	251	190	434	227	5	2	8	6	192	180	71	50	28	9	15	7
United Arab Emirates*	88	213	39	101	21	51	28	62	57	81	5	3	4	2	11	13	9	10	44	47	24	24
United Kingdom**	596	443	255	196	135	99	206	148	596	443	125	120	71	61	141	111	10	9	43	44	23	22
United States	1416	1265	1137	924	88	102	191	239	1380	1228	1090	814	65	47	168	184	8	4	80	73	6	8
TOTAL bilaterals	**9279**	**9173**	**4407**	**3965**	**2044**	**2155**	**2828**	**3052**	**7929**	**7581**	**2554**	**2151**	**1117**	**1248**	**1901**	**2145**	**9**	**7**	**47**	**43**	**22**	**23**
African Development Fund	99	27	45	6	31	16	23	4	20	25	0	0	9	13	1	1	1	2	45	24	32	59
Asian Development Bank	269	307	63	65	176	194	30	49	269	307	28	2	159	163	13	17	8	9	23	21	65	63
EU Institutions	1375	3112	583	1485	436	808	356	818	979	1322	150	250	219	191	140	201	6	8	42	48	32	26
International Monetary Fund (Concessional Trust Funds)	819	506	409	253	205	127	205	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UN Relief and Works Agency for Palestine Refugees	428	503	428	503	0	0	0	0	428	503	428	503	0	0	0	0	76	75	100	100	0	0
UNICEF	67	68	45	38	12	13	10	17	67	68	25	16	2	2	0	6	18	18	67	56	18	19
World Bank (International Development Association)	1814	2588	717	1190	644	904	453	494	1814	2588	398	706	484	662	294	253	9	12	40	46	35	35
TOTAL multilaterals* **	**5003**	**7398**	**2345**	**3670**	**1555**	**2127**	**1102**	**1601**	**3702**	**5035**	**1068**	**1537**	**916**	**1060**	**464**	**534**	**7**	**8**	**47**	**50**	**31**	**29**
TOTAL	**14281**	**16570**	**6752**	**7635**	**3598**	**4282**	**3930**	**4653**	**11631**	**12616**	**3622**	**3688**	**2033**	**2308**	**2365**	**2680**	**8**	**7**	**47**	**46**	**25**	**26**

Source: OECD-DAC, CRS database (2024).

* Not part of the Development Assistance Committee (DAC) but included in its Creditor Reporting System (CRS) database.

** Includes funds disbursed to overseas territories.

*** Includes ODA from other multilaterals not listed above.

TABLE 3: Development assistance to education by recipient

Region	TOTAL ODA								DIRECT ODA								SHARE					
	Education		Basic education		Secondary education		Post-secondary education		Education		Basic education		Secondary education		Post-secondary education		Education in sector allocable ODA		Basic education in total ODA to education		Secondary education in total ODA to education	
	Constant 2022 USD millions								Constant 2022 USD millions								%					
Country	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**
Sub-Saharan Africa	**3975**	**4390**	**1990**	**2204**	**1177**	**1358**	**808**	**829**	**3334**	**4105**	**1254**	**1464**	**809**	**987**	**440**	**459**	**9**	**9**	**49**	**47**	**29**	**30**
Unallocated within the region	112	97	64	48	26	24	22	24	108	90	46	30	17	15	13	15	4	4	57	50	23	25
Angola	33	21	12	5	11	2	10	13	30	20	10	3	9	1	9	12	12	11	37	25	32	11
Benin	45	73	21	25	15	35	9	13	45	73	16	18	13	31	6	9	6	8	47	35	34	48
Botswana	5	2	1	1	3	1	1	1	5	2	1	0	3	1	0	0	5	2	24	31	62	41
Burkina Faso	169	94	75	68	44	10	49	16	160	94	55	59	34	5	39	12	13	8	45	72	26	10
Burundi	33	24	17	10	8	10	8	3	18	24	7	7	3	9	3	2	4	4	51	44	25	42
Cabo Verde	14	10	5	4	5	2	4	4	12	10	1	1	2	1	2	2	8	9	37	39	32	24
Cameroon	72	93	38	44	15	35	19	14	61	90	26	38	9	32	12	11	6	9	53	47	21	37
C. A. R.	24	30	12	16	7	7	5	7	17	18	6	5	4	2	2	2	6	6	49	52	30	23
Chad	58	47	28	24	15	14	14	9	36	42	10	16	6	10	6	5	11	9	49	51	26	30
Comoros	17	19	4	3	6	8	7	8	13	18	2	2	5	7	6	7	12	15	25	18	34	41
Congo	17	120	8	61	2	30	6	29	17	32	7	14	2	6	5	6	9	12	49	51	15	25
Côte d'Ivoire	74	168	23	72	34	78	17	17	73	167	14	67	30	76	12	15	5	10	31	43	46	47
D. R. Congo	315	319	211	278	60	26	43	15	217	317	149	271	29	23	12	12	11	12	67	87	19	8
Djibouti	22	21	12	9	4	4	6	8	19	17	8	4	2	1	4	5	13	11	57	44	17	18
Equat. Guinea	2	2	1	1	0	0	0	0	2	2	1	1	0	0	0	0	18	18	69	74	6	11
Eritrea	4	2	1	0	1	1	1	1	4	2	0	0	1	0	1	1	9	3	35	19	34	32
Eswatini	3	2	2	1	1	0	1	1	3	2	1	0	0	0	0	1	2	2	57	45	22	14
Ethiopia	156	264	77	158	52	64	28	41	156	264	65	128	46	49	22	26	6	8	49	60	33	24
Gabon	35	31	16	14	9	8	10	9	35	31	1	2	1	2	3	3	31	21	46	45	24	27
Gambia	30	41	13	11	5	20	11	10	17	41	5	5	1	17	7	7	10	15	44	27	18	49
Ghana	91	92	30	27	35	21	26	44	91	92	19	16	29	16	21	38	6	8	33	29	38	23
Guinea	27	29	14	14	4	5	9	10	26	29	13	11	3	4	8	8	5	6	53	49	15	18
Guinea-Bissau	18	14	11	7	3	3	4	3	13	11	7	5	1	2	2	2	10	8	62	55	18	23
Kenya	154	202	59	73	50	57	45	72	95	202	20	27	30	34	26	49	3	7	38	36	32	28
Lesotho	8	5	4	2	2	1	1	1	8	5	3	1	2	1	0	0	4	3	55	47	31	31
Liberia	57	44	39	28	13	12	4	3	52	44	35	25	11	10	2	2	11	10	69	65	23	27
Madagascar	68	45	41	23	15	15	12	7	47	45	25	19	7	13	4	5	6	5	60	51	22	33
Malawi	111	167	75	87	20	48	17	33	111	163	60	57	12	33	10	18	10	12	67	52	18	29
Mali	101	112	64	66	21	29	16	17	88	92	50	46	14	19	8	7	8	10	64	59	21	26
Mauritania	53	50	26	30	18	11	10	9	29	31	11	17	10	4	2	3	9	9	49	60	33	22
Mauritius	51	5	25	1	13	2	13	1	5	5	2	1	2	2	1	1	7	4	49	26	26	45
Mozambique	172	179	107	121	31	32	34	26	172	179	83	90	19	17	22	11	8	7	62	67	18	18
Namibia	14	46	3	18	7	15	4	12	14	16	2	2	6	7	3	4	6	7	25	40	49	33
Niger	206	186	65	96	117	52	24	39	184	149	24	26	96	17	3	4	14	10	32	51	57	28
Nigeria	323	444	155	152	117	240	51	52	323	444	118	106	98	217	32	29	11	11	48	34	36	54
Rwanda	145	168	61	55	49	91	34	22	136	168	49	33	43	80	28	11	12	16	42	33	34	54
S. Tome/Principe	11	10	7	6	3	2	2	2	10	7	5	3	2	1	0	1	17	12	62	56	24	24
Senegal	143	130	74	60	46	49	23	22	129	128	56	43	37	40	15	13	10	9	52	46	32	37
Sierra Leone	95	87	53	45	26	28	16	13	76	87	25	23	12	17	2	3	14	17	55	52	28	33
Somalia	87	81	52	47	20	20	15	14	81	77	36	30	11	12	7	6	8	7	60	58	23	25
South Africa	53	37	23	12	15	13	15	12	53	37	11	6	10	10	10	9	3	3	42	33	29	35
South Sudan	112	62	67	36	26	15	19	11	77	61	35	18	10	6	2	2	10	6	60	59	24	24
Togo	22	36	14	13	4	16	4	7	22	36	12	8	3	13	3	4	7	8	62	37	19	44
Uganda	161	152	71	72	38	29	53	51	105	150	24	43	15	14	29	37	5	7	44	47	24	19
U. R. Tanzania	358	390	165	198	120	113	74	79	243	389	70	108	72	68	26	34	12	14	46	51	33	29
Zambia	62	123	31	53	22	49	9	20	62	85	24	23	19	34	5	5	6	5	50	43	36	40
Zimbabwe	32	19	10	8	18	8	4	4	32	19	6	4	16	6	2	2	4	3	31	39	57	42
Northern Africa and Western Asia	**4052**	**3505**	**2215**	**1973**	**874**	**740**	**962**	**792**	**2577**	**2260**	**993**	**1178**	**263**	**342**	**351**	**394**	**12**	**11**	**48**	**46**	**22**	**22**
Unallocated within the region	50	52	32	27	9	16	9	9	47	51	28	22	7	14	7	6	4	5	65	52	18	31
Algeria	35	31	4	2	6	5	26	24	35	31	1	1	5	4	25	24	16	15	10	7	17	15
Armenia	22	17	9	6	4	3	9	7	22	15	3	1	1	1	6	5	7	3	41	36	16	19
Azerbaijan	29	17	8	3	6	3	14	11	29	17	1	1	3	2	10	10	17	11	29	17	22	17
Egypt	1192	1094	574	524	289	267	329	302	222	94	19	21	12	15	51	51	6	4	48	48	24	24
Georgia	29	38	12	14	9	13	8	11	27	31	8	6	7	9	6	7	3	6	41	37	32	33

TABLE 3: Continued

Region	TOTAL ODA								DIRECT ODA								SHARE					
	Education		Basic education		Secondary education		Post-secondary education		Education		Basic education		Secondary education		Post-secondary education		Education in sector allocable ODA		Basic education in total ODA to education		Secondary education in total ODA to education	
	Constant 2022 USD millions								Constant 2022 USD millions								%					
Country	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**
Iraq	56	47	31	17	7	8	18	23	56	47	20	13	1	6	12	21	4	3	56	36	12	16
Jordan	674	402	482	288	88	51	104	63	593	325	325	236	9	25	26	37	29	23	72	72	13	13
Lebanon	201	219	143	143	22	33	36	43	201	219	130	135	15	29	29	40	23	25	71	65	11	15
Libya	11	8	3	2	3	2	5	4	11	8	0	1	1	2	4	3	4	4	27	26	25	27
Morocco	253	306	83	147	84	74	87	85	220	286	58	114	71	57	74	69	13	13	33	48	33	24
State of Palestine	401	441	329	366	37	32	34	44	394	435	293	335	19	16	16	28	36	32	82	83	9	7
Sudan	348	39	167	14	89	10	91	16	37	39	6	9	8	7	11	13	2	6	48	35	26	25
Syrian A. R.	115	105	61	62	20	15	33	28	115	105	46	52	12	10	26	22	11	11	53	60	17	14
Tunisia	135	176	54	79	44	47	37	50	69	104	15	21	25	18	17	21	5	7	40	45	33	27
Turkey	345	369	140	200	122	128	82	40	345	369	11	173	58	115	17	27	17	18	41	54	35	35
Yemen	157	145	82	79	36	34	40	32	157	85	28	36	9	13	13	10	10	6	52	55	23	23
Central and Southern Asia	**1696**	**1719**	**647**	**607**	**500**	**492**	**549**	**619**	**1636**	**1539**	**361**	**259**	**356**	**318**	**406**	**445**	**9**	**11**	**30**	**31**	**26**	**23**
Unallocated within the region	18	20	5	4	7	10	6	7	18	20	4	2	6	9	6	6	4	4	29	18	37	48
Afghanistan	209	214	132	123	28	34	48	57	178	193	102	66	13	6	34	28	9	12	63	57	14	16
Bangladesh	349	355	105	100	206	202	38	54	349	340	70	39	188	171	21	23	7	6	30	28	59	57
Bhutan	5	16	1	6	3	7	1	3	5	11	0	1	3	4	1	1	4	6	18	36	54	42
India	276	190	42	24	48	14	186	152	270	190	16	16	35	10	173	148	5	3	15	13	17	7
Iran	14	30	2	1	0	1	12	28	14	30	1	1	0	1	11	28	6	11	13	3	4	2
Kazakhstan	36	39	1	1	1	1	35	38	36	39	0	0	1	0	34	38	35	37	2	2	2	2
Kyrgyzstan	77	152	24	58	20	41	33	53	77	88	9	11	13	17	26	30	15	16	31	38	27	27
Maldives	3	3	1	1	0	0	1	2	3	3	1	1	0	0	1	2	2	2	31	36	15	9
Nepal	204	176	124	84	49	59	31	33	204	161	84	36	29	36	10	9	13	14	61	48	24	34
Pakistan	331	293	149	110	84	58	97	125	331	283	40	33	30	20	42	87	9	11	45	37	25	20
Sri Lanka	64	57	21	26	23	12	20	20	64	52	14	20	20	9	17	17	9	12	33	45	36	21
Tajikistan	40	37	15	15	13	11	12	12	40	37	8	8	9	8	9	8	7	6	38	39	32	30
Turkmenistan	3	3	0	1	1	0	2	2	3	3	0	1	0	0	2	2	9	17	9	27	20	5
Uzbekistan	69	133	25	56	16	43	27	33	46	88	11	23	9	27	20	17	4	6	37	42	23	33
Eastern and South-eastern Asia	**897**	**1111**	**307**	**332**	**280**	**422**	**311**	**357**	**834**	**1003**	**141**	**145**	**197**	**328**	**228**	**263**	**9**	**10**	**32**	**32**	**22**	**24**
Unallocated within the region	15	26	4	9	2	6	8	11	15	26	3	0	2	2	8	7	4	8	27	33	16	24
Cambodia	141	169	61	76	49	51	30	42	102	139	26	25	31	25	13	16	9	9	44	45	35	30
China	158	150	14	21	104	84	40	45	158	150	2	1	98	73	34	35	15	13	9	14	66	56
DPR Korea	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	7	3	0	2	0
Indonesia	79	244	31	27	15	181	33	35	79	244	17	16	8	175	26	30	4	10	39	11	19	74
Lao PDR	103	76	52	33	23	18	27	25	103	75	30	26	12	14	16	21	17	12	51	44	23	24
Malaysia	12	18	2	2	1	1	9	15	12	18	0	1	1	1	8	15	15	25	15	10	11	6
Mongolia	38	36	7	7	7	4	24	25	38	36	5	5	6	3	23	24	10	9	19	20	18	10
Myanmar	76	62	34	37	24	12	18	13	52	62	13	31	13	8	8	9	5	7	45	61	31	19
Philippines	56	49	31	25	4	3	21	21	56	49	27	21	2	1	19	19	3	2	55	51	8	6
Thailand	24	101	5	42	3	22	16	37	23	25	2	1	1	1	15	16	7	6	20	42	11	22
Timor-Leste	32	31	20	21	5	4	7	7	31	31	11	14	1	0	3	3	15	15	62	66	16	12
Viet Nam	165	148	45	30	43	37	77	81	165	148	6	4	23	24	58	67	8	7	27	21	26	25
Oceania	**380**	**365**	**156**	**146**	**124**	**113**	**100**	**106**	**237**	**269**	**30**	**30**	**61**	**55**	**37**	**47**	**14**	**14**	**42**	**45**	**31**	**28**
Unallocated within the region	36	43	11	9	5	5	20	29	36	43	3	3	2	2	16	25	6	11	30	21	15	12
Fiji	53	30	26	14	13	8	14	8	13	14	2	1	1	1	2	1	4	5	49	47	25	26
Kiribati	14	11	6	5	4	2	5	3	14	10	0	1	1	0	2	1	20	12	39	50	29	21
Marshall Is	23	26	11	13	7	7	5	6	8	10	1	1	1	1	0	0	21	16	48	51	28	26
Micronesia	32	32	16	17	8	8	8	8	11	13	1	2	0	0	0	0	34	26	51	53	24	24
Nauru	2	5	1	3	1	1	0	1	1	4	0	1	0	0	0	0	3	14	34	54	38	22
Niue	3	3	2	1	1	1	1	1	1	1	0	0	0	0	0	0	5	5	49	47	22	26
Palau	1	3	1	2	0	0	0	0	1	2	0	1	0	0	0	0	1	3	64	66	15	16
Papua N. Guinea	72	42	38	19	16	8	18	14	25	42	8	8	2	3	3	9	3	6	53	46	23	20
Samoa	18	18	7	6	3	4	7	8	14	16	2	2	1	2	5	6	20	14	41	33	19	21
Solomon Is	31	28	17	17	7	5	7	6	26	26	9	9	3	1	3	1	12	11	56	61	22	19
Tokelau	2	2	1	1	1	1	0	0	1	0	0	0	0	0	0	0	13	22	40	41	40	39
Tonga	12	42	3	18	6	13	3	10	8	11	1	0	5	4	2	1	10	10	26	44	47	31

TABLE 3: Continued

Region	TOTAL ODA								DIRECT ODA								SHARE					
	Education		Basic education		Secondary education		Post-secondary education		Education		Basic education		Secondary education		Post-secondary education		Education in sector allocable ODA		Basic education in total ODA to education		Secondary education in total ODA to education	
	Constant 2022 USD millions								Constant 2022 USD millions								%					
Country	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**
Tuvalu	4	4	2	2	1	1	1	1	4	3	1	1	0	0	1	0	11	5	48	53	17	23
Vanuatu	29	29	9	11	12	11	7	7	28	29	1	1	8	6	3	2	20	24	33	39	42	38
Wallis and Futuna	48	47	6	6	39	38	3	3	47	47	1	0	37	35	0	0	47	44	12	13	83	80
Latin America and the Caribbean	**555**	**654**	**265**	**301**	**147**	**157**	**143**	**196**	**543**	**518**	**182**	**171**	**105**	**92**	**102**	**131**	**6**	**5**	**39**	**34**	**29**	**31**
Unallocated within the region	27	13	4	4	3	3	20	5	27	13	4	2	3	3	20	4	3	1	15	32	11	27
Antigua/Barbuda	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	43	0
Argentina	9	20	3	2	2	2	5	15	9	20	2	2	1	2	4	15	5	6	29	12	17	11
Belize	2	2	0	0	1	1	0	0	2	2	0	0	1	1	0	0	4	5	19	19	70	62
Bolivia	24	20	8	7	9	9	7	4	24	20	4	3	7	7	4	2	4	4	34	35	38	45
Brazil	41	62	13	19	5	11	23	32	41	62	4	3	1	3	18	25	3	7	31	30	13	17
Colombia	38	66	19	35	8	14	11	17	38	36	12	16	5	4	7	8	2	2	50	53	22	21
Costa Rica	10	41	4	20	2	10	3	11	10	6	3	1	1	1	2	2	7	1	44	48	22	25
Cuba	7	3	1	1	1	1	5	2	7	3	0	0	0	1	5	2	5	3	15	17	12	34
Dominica	1	2	0	1	0	1	0	1	1	1	0	0	0	0	0	0	1	1	6	34	47	35
Dominican Rep.	11	48	9	25	1	11	2	13	11	10	8	4	0	1	2	2	2	4	75	51	6	23
Ecuador	20	13	7	5	6	4	7	5	20	13	4	3	4	3	5	4	8	4	36	35	29	27
El Salvador	14	14	9	8	3	5	2	2	14	14	7	6	2	4	1	1	6	2	61	54	22	33
Grenada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	76	75
Guatemala	55	58	40	45	11	9	4	4	55	58	38	44	10	8	2	4	12	15	73	77	20	15
Guyana	7	18	4	3	2	14	1	2	7	18	2	1	1	13	1	1	5	8	54	16	26	76
Haiti	63	81	41	53	15	16	7	12	62	66	37	41	13	10	5	5	8	10	65	66	23	19
Honduras	91	64	43	38	38	15	10	10	83	47	26	21	29	6	1	2	15	6	47	60	42	23
Jamaica	4	2	2	1	0	1	1	1	4	2	2	0	0	1	1	1	6	3	53	22	10	31
Mexico	26	24	10	7	6	7	10	11	26	24	5	5	3	6	8	10	4	4	40	27	22	29
Montserrat	2	4	1	2	1	1	1	1	2	4	0	0	0	0	0	0	6	10	48	49	24	25
Nicaragua	36	53	15	8	16	11	5	34	36	53	11	6	14	10	3	33	5	4	43	15	44	21
Panama	2	2	1	1	0	0	1	1	2	2	1	1	0	0	1	1	2	2	60	41	3	11
Paraguay	17	14	8	7	4	2	6	4	17	14	3	4	1	1	3	2	8	10	47	53	20	17
Peru	21	17	8	6	6	5	7	6	21	17	3	3	3	3	5	5	6	2	39	35	27	28
St Lucia	6	4	1	1	4	2	1	1	6	4	0	0	4	2	0	1	9	14	10	15	76	64
St Vincent/Grenad.	5	1	3	1	1	0	1	0	3	1	0	0	0	0	0	0	5	9	50	42	25	28
Suriname	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1	0	4	5	2	0	28	66
Venezuela, B. R.	14	6	10	3	2	1	2	2	14	6	8	3	1	1	1	1	12	7	71	55	13	19
Europe and Northern America	**631**	**2624**	**194**	**1172**	**175**	**622**	**261**	**830**	**376**	**719**	**40**	**28**	**98**	**50**	**184**	**258**	**7**	**8**	**35**	**38**	**27**	**25**
Unallocated within the region	128	138	21	20	34	18	73	100	117	138	10	12	29	14	67	96	8	9	16	14	27	13
Albania	80	71	31	25	27	22	23	23	39	66	6	1	15	10	10	11	8	16	38	36	34	32
Belarus	23	10	1	1	2	2	19	7	23	10	0	0	2	1	18	7	15	8	6	11	10	17
Bosnia and Herzegovina	45	32	21	15	11	8	13	9	17	12	5	4	3	2	5	3	3	3	46	47	25	25
Moldova	86	115	15	31	13	20	58	63	70	82	3	2	7	6	52	49	13	12	17	27	15	18
Montenegro	9	22	4	10	2	5	4	7	3	2	0	0	0	0	2	2	2	3	41	46	19	23
North Macedonia	32	33	14	14	10	9	9	9	13	12	3	1	4	2	3	3	5	6	43	44	30	28
Serbia	39	67	6	28	22	18	11	21	39	66	3	1	20	4	9	8	4	6	16	42	56	26
Ukraine	188	2136	82	1027	54	520	51	590	56	330	10	7	18	10	15	80	4	2	44	48	29	24
Unspecified by region	2096	2203	978	900	323	379	796	924	2095	2203	621	414	144	135	617	681	9	9	48	45	21	22
Low income	2971	2655	1597	1539	750	635	624	481	2277	2485	942	1078	422	405	297	251	9	9	52	50	24	26
Lower middle income	6684	8772	3083	3949	1858	2411	1743	2411	4984	5390	1458	1450	1046	1162	930	1162	10	10	43	42	29	26
Upper middle income	2063	2464	928	1106	535	717	599	641	1832	2074	491	669	317	498	381	422	9	8	36	36	27	28
High income	11	26	6	7	3	15	3	4	11	24	3	2	1	13	2	2	3	8	37	37	28	36
Unspecified by income	2552	2654	1139	1034	452	503	961	1116	2528	2642	728	488	247	230	756	843	10	10	40	37	26	30
TOTAL	**14281**	**16570**	**6752**	**7635**	**3598**	**4282**	**3930**	**4653**	**11631**	**12616**	**3622**	**3688**	**2033**	**2308**	**2365**	**2680**	**8**	**7**	**47**	**46**	**25**	**26**

Source: OECD-DAC, CRS database (2024).

Notes: The country groupings by level of income are as defined by the World Bank but include only countries shown in the table. They are based on the list of countries by income group as revised in July 2023.

Imputed student costs are excluded.

All data represent gross disbursements.

Sector allocable ODA does not include budget support.

TABLE 4: Development assistance to education by donor – top 3 recipients, annual average 2020-2022

		EDUCATION			BASIC EDUCATION		
	Donor	Recipient	Constant 2022 USD millions	Recipient %	Recipient	Constant 2022 USD millions	Recipient %
Bilateral	Australia	Oceania, Unallocated	27	14	Indonesia	11	15.8
		Papua New Guinea	25	13	Unspecified by region	10	14.2
		Vanuatu	18	9	Solomon Islands	9	12.2
	Austria	Unspecified by region	6	17	Mexico	2	70.9
		Türkiye	5	15	Europe and Northern America, Unallocated	0	9.0
		Guatemala	4	12	Rep. Moldova	0	8.8
	Belgium	Unspecified by region	40	36	Unspecified by region	8	50.5
		Democratic Republic of the Congo	15	13	Viet Nam	1	9.1
		Uganda	9	8	Zambia	1	8.2
	Canada	Unspecified by region	56	9	Unspecified by region	32	26.6
		Jordan	17	5	Burkina Faso	7	6.2
		Tanzania	14	4	Mozambique	7	6.0
	Denmark	Unspecified by region	70	40	Northern Africa and Western Asia, Unallocated	8	61.7
		Northern Africa and Western Asia, Unallocated	8	10	Myanmar	2	11.8
		Ethiopia	2	2	Afghanistan	1	8.3
	Finland	Unspecified by region	15	20	Sub-Saharan Africa, Unallocated	0	0.7
		Mozambique	11	16	Ethiopia	5	17.7
		Nepal	9	12	Mozambique	5	17.4
	France	Unspecified by region	109	15	Lebanon	24	16.4
		Morocco	56	8	Niger	10	7.0
		Wallis and Futuna	50	7	Unspecified by region	8	5.8
	Germany	Unspecified by region	314	23	Jordan	47	16.5
		China	116	8	Lebanon	33	11.7
		Jordan	114	8	Türkiye	27	9.5
	Hungary	Jordan	10	8	Ukraine	2	85.6
		Syrian Arab Republic	9	7	Serbia	0	4.8
		China	5	4	Lebanon	0	3.8
	Ireland	Unspecified by region	14	17	Unspecified by region	10	45.0
		Mozambique	5	13	Mozambique	5	22.6
		State of Palestine	4	11	Uganda	1	4.3
	Israel	India	11	49			
		China	4	17			
		Ukraine	2	8			
	Italy	Ukraine	71	31	Jordan	13	43.7
		Unspecified by region	27	12	Senegal	2	7.2
		Jordan	14	6	Lebanon	2	6.3
	Japan	Unspecified by region	154	29	Morocco	34	33.4
		Morocco	36	7	Burkina Faso	7	7.4
		India	30	6	Syrian Arab Republic	7	6.6
	Kuwait	Jordan	9	31			
		China	6	20			
		Ghana	4	14			
	Netherlands	Unspecified by region	79	88	Unspecified by region	31	90.3
		Burkina Faso	3	4	Burkina Faso	2	6.0
		Ethiopia	1	1	Burundi	1	3.2
	New Zealand	Oceania, Unallocated	9	16	Timor-Leste	3	44.6
		Solomon Islands	6	11	Oceania, Unallocated	1	19.8
		Samoa	6	10	Solomon Islands	1	18.3
	Norway	Unspecified by region	169	44	Unspecified by region	145	58.1
		Malawi	23	6	Malawi	16	6.5
		Ethiopia	21	5	Ethiopia	10	4.0
	Poland	Belarus	5	41	Ukraine	0	50.3
		Ukraine	3	24	Burundi	0	15.0
		United Republic of Tanzania	0	4	United Republic of Tanzania	0	10.7
	Portugal	Timor-Leste	11	24	Sao Tome and Principe	2	94.6
		Mozambique	9	19	Mozambique	0	5.1
		Brazil	7	15	Guinea-Bissau	0	0.3
	Qatar	State of Palestine	9	8	Colombia	2	8.6
		Pakistan	9	8	Somalia	2	8.5
		Türkiye	9	8	Uganda	2	8.1
	Rep. of Korea	Viet Nam	13	6	Cambodia	4	13.5
		Uzbekistan	12	6	Cameroon	2	8.5
		Ghana	10	5	Jordan	2	6.0

TABLE 4: Continued

	Donor	EDUCATION			BASIC EDUCATION		
		Recipient	Constant 2022 USD millions	Recipient %	Recipient	Constant 2022 USD millions	Recipient %
	Romania	Moldova	48	80	Ukraine	0	64.0
		Serbia	3	4	Rep. Moldova	0	25.0
		Ukraine	2	3	Georgia	0	7.3
	Saudi Arabia	Yemen	54	21	Yemen	7	70.0
		Egypt	42	16	Morocco	2	15.3
		Unspecified by region	13	5	Niger	1	7.5
	Spain	Morocco	6	9	Northern Africa and Western Asia, Unallocated	2	14.7
		Unspecified by region	9	7	Haiti	2	10.7
		Bolivia	3	5	Guatemala	1	8.0
	Sweden	Unspecified by region	21	18	Unspecified by region	21	37.3
		United Republic of Tanzania	18	15	Sub-Saharan Africa, Unallocated	13	24.2
		Sub-Saharan Africa, Unallocated	14	12	Afghanistan	8	15.4
	Switzerland	Unspecified by region	34	21	Unspecified by region	8	19.2
		Benin	7	4	Mali	4	9.6
		Burkina Faso	7	4	Burkina Faso	4	8.8
	Türkiye	Unspecified by region	102	34	Northern Africa and Western Asia, Unallocated	4	58.5
		Europe and Northern America, Unallocated	39	13	Unspecified by region	1	12.9
		Kazakhstan	22	8	Syrian Arab Republic	0	7.6
	U. A. Emirates	Unspecified by region	41	52	Colombia	2	51.0
		Jordan	4	5	Uganda	0	7.9
		Sudan	4	5	India	0	6.6
	United Kingdom	Unspecified by region	233	40	Unspecified by region	54	37.6
		Pakistan	38	7	Pakistan	12	8.6
		Nigeria	25	4	Jordan	10	6.8
	United States	Unspecified by region	261	19	Unspecified by region	206	20.3
		Jordan	91	7	Jordan	89	8.8
		Morocco	70	5	Afghanistan	48	4.7
Multilateral	Asian Development Bank	Bangladesh	100	34	Bangladesh	28	93.0
		Nepal	45	16	Nepal	1	2.2
		Afghanistan	25	9	Micronesia	1	2.0
	EU Institutions	Unspecified by region	345	28	Unspecified by region	60	27.2
		Türkiye	217	17	Türkiye	55	25.1
		Morocco	63	5	Morocco	22	9.9
	Inter-American Development Bank Special Fund	Honduras	12	28	Dominica	0	0.1
		Nicaragua	11	25	Argentina	0	0.1
		Guatemala	7	16	Belize	0	0.2
	Islamic Development Bank	State of Palestine	13	37	State of Palestine	1	28.4
		Nigeria	3	8	Burkina Faso	1	23.5
		Niger	3	8	Djibouti	0	15.2
	OPEC Fund for International Development	China	21	61	Zimbabwe	2	51.4
		Burkina Faso	5	13	Côte d'Ivoire	1	25.4
		Malawi	2	6	Gambia	1	23.2
	UN Relief and Works Agency for Palestine Refugees	State of Palestine	296	63	State of Palestine	296	62.6
		Jordan	101	21	Jordan	101	21.4
		Lebanon	50	11	Lebanon	50	10.6
	UNICEF	Democratic Republic of the Congo	7	10	India	3	11.9
		India	5	8	Ethiopia	1	6.3
		Pakistan	5	7	Democratic Republic of the Congo	1	4.5
	World Bank (International Development Association)	Nigeria	202	10	Democratic Republic of the Congo	117	23.4
		United Republic of Tanzania	186	9	Nigeria	60	12.1
		Pakistan	168	8	Ethiopia	51	10.2

Source: OECD-DAC, CRS database (2024).

Glossary

Attainment rate. Number of persons in a particular age group by the highest level of education attained, expressed as a percentage of the total population in that age group (see *Completion rate*).

Age-specific enrolment ratio. 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. An example is global indicator 4.2.2, the participation rate in organized learning (one year before the official primary entry age).

Completion rate. 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 completion 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 1 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. 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 Childhood Development Index 2030. Index of fulfilment of developmental potential that assesses children aged 24 to 59 months in 20 questions across 3 domains: health, learning and psychosocial well-being. The information is collected through the UNICEF Multiple Indicator Cluster Surveys. A child is 'on track' if they meet age-specific cut scores.

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. 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, sciences, art and music.
- *Secondary education (ISCED levels 2 and 3).* 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. Teaching in upper secondary education (ISCED 3) is often organized even more along subject lines and teachers typically need a higher or more subject-specific qualification.
- *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 and 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. 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. 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.

Gross enrolment ratio. 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. It can exceed 100% because of early or late entry and/or grade repetition.

Gross intake rate. 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. The value of all final goods and services produced in a country in one year (GDP) plus income that residents have received from abroad, minus income claimed by non- residents.

Information and communication technology 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; using basic arithmetic formulas in a spreadsheet; connecting and installing new devices; finding, downloading, installing and configuring software; creating electronic presentations with presentation software; 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.

Literacy rate. Number of literate people in a particular age group, expressed as a percentage of the total population in that age group.

- **Adult.** Aged 15 and above.
- **Youth.** Aged 15 to 24.

Minimum proficiency level. Benchmark of basic knowledge in mathematics and reading, measured through learning assessments. Until such time as common standards are validated by the international community or countries, the definitions of minimum proficiency published by agencies specialized in cross-national learning assessments are being used.

Net attendance rate. Number of students 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 rate. Enrolment of the official age group for a given level of education, expressed as a percentage of the population in that age group. There are two additional variations of this indicator:

- Adjusted net enrolment rate. 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.
- Total net enrolment rate. Enrolment of the official age group *in any level of education*, expressed as a percentage of the population in that age group.

New entrants. Students 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 number. Those not enrolled, defined over the following populations:

- Children of official primary school age.
- Adolescents of official lower secondary school age.
- Youth of official upper secondary school age.

Out-of-school rate. Those of the official age group for a given level of education not enrolled, expressed as a percentage of the population in that age group.

Over-age for grade rate. The percentage of students 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. 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 value above 1.03 indicates disparity in favour of the disadvantaged group. An adjusted parity index is symmetrical around 1 and limited to a range between 0 and 2. 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 for public and private institutions.

Pupil/teacher ratio. Average number of pupils per 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.

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. Programmes designed mainly to prepare students for direct entry into a particular occupation or trade (or class of occupations or trades).

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 national policy or law.

Transition rate. Number of new entrants to the first grade of an education level in a given year, expressed as a percentage of the number of students who were enrolled in the final grade of the previous education level in the previous year and who do not repeat that grade the following year.

LEADERSHIP TERMS

Accountability: An obligation, based on a legal, political, social or moral justification, to provide an account of how clearly defined responsibilities (defined as actions or results), have been met.

Appointment: A process of making a job offer which is accepted and the successful applicant commences employment in a vacant position.

Appraisal: Evaluation of job performance based on established criteria.

Autonomy: Authority to make decisions over the allocation of resources.

Certification: A process that confirms professional achievement beyond the acquisition of minimum qualifications.

Coaching: A structured and non-directive professional development process of personalized guidance, support and feedback from experienced to less experienced individuals to help them improve their practices and achieve their goals. It typically has a short duration and requires specific qualifications of the coach (see *mentoring*).

Distributed leadership: An approach to leadership where practice takes shape through the interactions and the situation of multiple members of an organization or team, rather than the actions of an individual leader (see *shared leadership*).

Education administration: A process of coordinating financial, human, and material resources to enable an education institution to achieve its goals.

Education leadership: A process of social influence, which maximizes the efforts of others, towards the achievement of an education goal.

Education management: A process of planning, organizing, directing and controlling resources to enable an education institution to achieve its goals while ensuring its functioning and development.

Induction: A professional development process for individuals who are new to a position or institution, aimed at easing their transition, familiarizing them with institutional policies and promoting effectiveness. It includes, but goes beyond, coaching and mentoring.

Instructional leadership: An approach to leadership which focuses on improving teaching and learning processes to enhance student achievement relative to standards. It includes teaching supervision, curriculum implementation coordination, student progress monitor, and administration of learning-related tasks (also: *pedagogical leadership*).

Licensing: A process that screens candidates to ensure they have a minimum set of qualifications so that they are permitted to practice an occupation.

Mentoring: A directive and less structured professional development process of personalized guidance, support and feedback from experienced to less experienced individuals to help them improve their practices and achieve their goals. It can last a long time and does not require specific qualifications of the mentor (see *coaching*).

Merit-based selection: A selection process which seeks to establish whether an individual applicant has the objective and clearly articulated expected qualities required for good performance in a particular position.

Open competition: A selection process in which candidates compete through examinations, presentation of qualifications and other objective criteria.

Preparation: A process to develop the knowledge, skills, and competencies that aspiring applicants need to possess prior to being appointed to a position in order to be effective.

Principal: A school leader responsible for exercising administration, management and leadership to enable an institution to achieve its goals (which may include community engagement and a positive learning environment) (also: *director, headmaster, headteacher, manager*).

Professional learning community: A group of professionals who meet regularly to share expertise and works collaboratively to improve their skills.

Professional standards: A set of guidelines and expectations outlining the knowledge, skills and practices required to ensure quality, accountability, and continuous improvement in a profession.

Professionalization: A process of giving an occupation, activity, or group professional qualities by increasing training or raising required qualifications, which may aim at improving the quality of service but also the enhancement of status among group members.

Recruitment: A process of seeking and attracting a pool of qualified applicants from which candidates for job vacancies can be selected.

School leadership: Roles, responsibilities and practices involved in a process of social influence, which aims to maximize the efforts of other school community members towards the achievement of the school's goal.

Selection: A process of collecting and using relevant information to make an employment decision about applicants for a vacant position.

Shared leadership: An approach to leadership where practice takes shape through the interactions and situation of multiple members of an organization, rather than the actions of an individual leader, in which other team members also have decision-making authority (see: *distributed leadership*).

Student council: Elected representative body of students that provides a platform for students' participation in school governance and voicing their concerns.

Student leadership: A process through which students, through formal positions or informally, influence others toward the achievement of an education or social goal.

System leadership: Roles and responsibilities of central and local officials involved in a process of social influence, which aims to maximize the efforts of others, towards the achievement of the system's goals.

Teacher leadership: A process through which teachers, through formal positions (oversight of departments, grades or key initiatives) or informally, influence others toward the achievement of a goal (also: *middle leadership*).

Transformational leadership: An approach to leadership which focuses on inspiring and motivating positive change in individuals and organizations.

Acronyms and Abbreviations

AMPL	Assessment for Minimum Proficiency Level
BRACE	Building the Climate Resilience of Children and Communities through the Education
C	Celsius
CBSE	Central Board of Secondary Education
CTE	College of teacher education
DAC	Development Assistance Committee
ECCE	Early Childhood Care and Education
EEA	European Economic Area
EU	European Union
FONERWA	National Environment Fund (Rwanda)
GDP	Gross domestic product
GEM	Global Monitoring Report
GNI	Gross national income
ICCS	International Civic and Citizenship Education Study
ICT	Information and communication technology
ISCED	International Standard Classification of Education
ISCED-T	International Standard Classification of Teacher Training Programmes
ISSP	International Study of Principal Preparation
MECCE	Monitoring and Evaluating Climate Communication and Education
MEXT	Ministry of Education, Culture, Sports, Science and Technology (Japan)
MICS	Multiple Indicator Cluster Surveys
NGO	Non-governmental organization
NPQEL	National Professional Qualification for Educational Leaders
NSW	New South Wales
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
PASEC	Program for the Analysis of Educational Systems of CONFEMEN
PEER	Profiles Enhancing Reviews in Education
PIAAC	Programme for International Assessment of Adult Competencies
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
SDG	Sustainable Development Goal
SEAMEO	Southeast Asian Ministers of Education Organization
STEM	Science, technology, engineering and mathematics
TALIS	Teaching and Learning International Survey
TIMSS	Trends in International Mathematics and Science Study
TOSSD	Total Official Support for Sustainable Development
TVET	Technical and vocational education and training

UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNRWA	United Nations Relief and Works Agency for Palestine Refugees
US	United States
WASH	Water, sanitation and hygiene
WFP	World Food Programme

Leadership in education

LEAD FOR LEARNING

Education leaders shape the direction of their teams, institutions and countries. There is no one way to lead, making it difficult to measure leaders' impact. Yet good school, system and political leaders are acutely needed to help drive education in the right direction, as the challenges remain daunting.

The concept of school leadership has played out differently across countries and over time. The scope to exercise functions and make decisions, the working context and personal backgrounds shape leaders' actions. Moreover, there is growing recognition of the need to shift the emphasis on administrative and bureaucratic functions to education outcomes, such as learning, inclusion and well-being.

The *2024/5 Global Education Monitoring Report* assesses progress towards the 2030 targets and shows that, while more children are in school and completing secondary education than ever before, there is stagnation in many areas. Leadership is central to addressing this. There are no schools that improve student outcomes without a good leader showing the way. Building on a review of legislation and policies on the selection, preparation and working conditions of school principals in 211 education systems, the report discusses policy levers to attract and retain talented leaders.

Leadership's potential is not limited to school leaders: it extends to individuals in positions elsewhere in the education system as well as outside of it, from assistant principals, teachers and students, when leadership is shared, to political leaders, civil society, international organizations, unions and the media, who help shape education goals.

The report calls for efforts to develop leaders in four key leadership dimensions so that they can *set expectations, focus on learning, foster collaboration and develop people*. For these dimensions to be realized, people in leadership positions should be trusted and empowered; recruited through fair hiring practices; supported to grow; and encouraged to develop collaborative cultures. The report also calls for investment in education officials' capacity to serve as system leaders, with a particular emphasis on instructional leadership and quality assurance.

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Global Education Monitoring Report

Sustainable Development Goals

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