LEARNING
TO REALIZE EDUCATION'S PROMISE
LEARNING
TO REALIZE EDUCATION'S PROMISE
Contents

xi Foreword
xiii Acknowledgments
xvii Abbreviations

1 Overview: Learning to realize education’s promise
4 The three dimensions of the learning crisis
16 How to realize education’s promise: Three policy responses
27 Learning to realize education’s promise

37 Part I: Education’s promise
38 Chapter 1: Schooling, learning, and the promise of education
38 Education as freedom
38 Education improves individual freedoms
41 Education benefits all of society
44 Learning and the promise of education

57 Part II: The learning crisis
58 Chapter 2: The great schooling expansion—and those it has left behind
58 Most children have access to basic education
60 Poverty, gender, ethnicity, disability, and location explain most remaining schooling disparities
63 For poor parents, schooling requires trade-offs
68 Spotlight 1: The biology of learning

71 Chapter 3: The many faces of the learning crisis
71 For too many, learning isn’t happening
78 Poor children learn the least, which hurts them the most
78 What is causing the learning crisis?
88 Spotlight 2: Poverty hinders biological development and undermines learning

91 Chapter 4: To take learning seriously, start by measuring it
91 The learning crisis is often hidden—but measurement makes it visible
92 Measures for learning guide action
93 Measures of learning spur action
Choose learning metrics based on what the country needs
Will learning metrics narrow the vision for education?
Six tips for effective learning measurement

Spotlight 3: The multidimensionality of skills

Part III: Innovations and evidence for learning

Chapter 5: There is no learning without prepared, motivated learners
Investing in their early years prepares children for school
Providing demand-side support can get kids to school, but not necessarily to learn
Remedial education can prepare learners for further education and training

Chapter 6: Teacher skills and motivation both matter (though many education systems act like they don’t)
Most teacher training is ineffective, but some approaches work
Helping teachers teach to the level of the student has proven effective
Teacher motivation and incentives make a difference, even with few inputs

Chapter 7: Everything else should strengthen the teacher-learner interaction
Technological interventions increase learning—but only if they enhance the teacher-learner relationship
Other inputs bring learners to school—but promote learning only if they target teaching and learning
School management and governance are crucial, and involving communities can help overcome incentive problems and information failures—but only if communities have capacity

Chapter 8: Build on foundations by linking skills training to jobs
Workplace training can help young people develop skills, yet few benefit from it
Short-term job training offers opportunities, but most programs fail to deliver
TVET can prepare young people for work, but early sorting into TVET can limit career growth
Successful job training programs share several features

Spotlight 5: Technology is changing the world of work: What does that mean for learning?

Part IV: Making the system work for learning at scale

Chapter 9: Education systems are misaligned with learning
Misalignments and incoherence impede learning
Technical complexities make it hard to align education systems with learning

Spotlight 6: Spending more or spending better—or both?

Chapter 10: Unhealthy politics drives misalignments
Unhealthy politics can intensify misalignments in education systems
Multiple actors and interests: Pulling the system out of alignment at each step of the policy cycle
Trapped in low-accountability, low-learning equilibriums
Chapter 11: How to escape low-learning traps

199 Improving information
203 Building coalitions and strengthening incentives
207 Encouraging innovation and agility
211 How can external actors support initiatives to improve learning?

Boxes

1.1 40 Schooling as human capital formation or as a signaling device?
1.2 44 Education can't do it alone
1.3 48 Comparing attainment across countries and economies—learning-adjusted years of schooling
2.1 61 Access denied: The effects of fragility, conflict, and violence
3.1 74 Those who can't read by the end of grade 2 struggle to catch up
3.2 75 Gender-based differences in learning depend on the subject
3.3 82 Teachers may perceive low effort as being justified
4.1 92 Good measures of learning illuminate all parts of the education system
4.2 97 A global learning metric?
5.1 116 Early childhood education prepares young children for school
5.2 118 Communities can leverage the many hours spent outside the classroom to boost learning
5.3 120 Providing information on children's school performance can help parents to motivate their children
6.1 133 The landscape of in-service teacher training
6.2 133 What works in preservice teacher training?
6.3 135 Reaching learners in their own language
6.4 136 Using diagnostic data to deliver better learning in Latin America
6.5 137 Would raising teachers' salaries increase their motivation?
6.6 138 One factor undermining teaching: Poor working conditions
7.1 149 Training better school principals in Jamaica
9.1 172 It's all about (education) systems
9.2 174 Aligning all the ingredients for effective teaching in Shanghai
9.3 176 Can private schooling be aligned to learning for all?
10.1 191 How do teachers' unions affect learning?
10.2 193 How politics can derail learning in conflict-affected states
11.1 201 Using information to align incentives with learning in Brazil
11.2 202 Citizen-led assessments have raised awareness of the learning crisis in South Asia and Sub-Saharan Africa
11.3 204 Using the legal system to press for change
11.4 205 Using “labs” to build coalitions for learning
11.5 205 Reformers in Chile negotiated changes gradually
11.6 208 High-performing schools in the West Bank and Gaza offer some learning lessons
11.7 209 Burundi improved education services by iterating and adapting

Figures

O.1 5 Shortfalls in learning start early
O.2 6 In several countries, the 75th percentile of PISA test takers performs below the 25th percentile of the OECD average
O.3 7 Children from poor households in Africa typically learn much less
O.4 7 Students often learn little from year to year, and early learning deficits are magnified over time
O.5 8 The percentage of primary school students who pass a minimum proficiency threshold is often low
| O.6   | 9   | School completion is higher for richer and urban families, but gender gaps are more context-dependent |
| O.7   | 10  | Why learning doesn’t happen: Four immediate factors that break down |
| O.8   | 11  | Socioeconomic gaps in cognitive achievement grow with age—even in preschool years |
| O.9   | 11  | In Africa, teachers are often absent from school or from classrooms while at school |
| O.10  | 12  | Management capacity is low in schools in low- and middle-income countries |
| O.11  | 13  | Technical and political factors divert schools, teachers, and families from a focus on learning |
| O.12  | 17  | Many countries lack information on learning outcomes |
| O.13  | 19  | Low-performing countries don’t face sharp trade-offs between learning and other education outputs |
| O.14  | 21  | It’s more complicated than it looks: People act in reaction to the choices of others throughout the system |
| O.15  | 26  | Coherence and alignment toward learning |
| 1.1   | 39  | More schooling is systematically associated with higher wages |
| 1.2   | 40  | Mortality rates in the United States are lower for adults with more education |
| 1.3   | 43  | People with higher education hold stronger beliefs about the importance of democracy |
| 1.4   | 45  | Learning varies widely across countries; in 6 of the 10 countries assessed, only half or fewer of primary completers can read |
| 1.5   | 46  | What matters for growth is learning |
| 1.6   | 47  | Increasing learning would yield major economic benefits |
| B1.3.1| 48  | There can be a large gap between learning-adjusted and unadjusted years of schooling |
| 2.1   | 59  | School enrollments have shot up in developing countries |
| 2.2   | 59  | Most of the world’s population with less than a primary education is in South Asia, but rates are similar in Sub-Saharan Africa |
| 2.3   | 60  | National income is correlated with the gap between primary and lower secondary completion rates |
| 2.4   | 61  | Lower-income countries are rapidly expanding secondary education at a time when much of their population has not yet completed primary school |
| 2.5   | 62  | School completion is higher for richer and urban families, but gender gaps are more context-dependent |
| 2.6   | 63  | Multiple exclusions: Girls from poor households often have the lowest rates of education attainment |
| S1.1  | 69  | Synapse development over the first 20 years of life |
| 3.1   | 72  | Most grade 6 students in West and Central Africa are not sufficiently competent in reading or mathematics |
| 3.2   | 72  | Most grade 6 students in southern and East Africa are not sufficiently competent in mathematics, and several countries score poorly in reading as well |
| 3.3   | 73  | Learning outcomes are substantially lower for poor children in Latin America |
| B3.2.1| 75  | Girls outperform boys on reading in all countries and economies, but boys typically do better in mathematics and science |
| 3.4   | 76  | Learning outcomes vary greatly across countries and economies—in several countries, the 75th percentile of PISA test takers performs below the 25th percentile of the OECD average |
| 3.5   | 77  | Middle-income countries tend to have lower rates of literacy proficiency than high-income countries |
| 3.6   | 77  | Reading proficiency is low in many parts of the developing world |
| 3.7   | 78  | Family socioeconomic status significantly affects students’ average PISA scores |
| 3.8   | 79  | The proximate determinants of learning |
| 3.9   | 79  | Socioeconomic gaps in cognitive achievement grow with age—even in preschool years |
| 3.10  | 81  | A lot of official teaching time is lost |
| B3.3.1| 82  | Teachers’ beliefs about their effort and its effects |
3.11 82 Staff compensation consumes the largest share of resources available for public education

3.12 83 Management capacity is low in schools in low- and middle-income countries

S2.1 89 Severe deprivation affects brain structure and function from early in life

S2.2 89 Risk and protective factors affect developmental trajectories

4.1 95 No internationally comparable data on learning are available for most children outside of high-income countries

4.2 96 Low-performing countries don’t face sharp trade-offs between learning and other education outputs

S3.1 103 Cognitive, socioemotional, and technical skills interact

S4.1 108 The number of experimental and quasi-experimental studies of interventions to improve learning has mushroomed in recent decades

S4.2 109 It’s more complicated than it looks: People act in reaction to the choices of others throughout the system

5.1 114 Investments in high-quality programs during children’s early years pay off

5.2 115 Intense deprivation can impair brain development

5.3 117 Integrated programs through the early years are necessary for proper child development

5.4 118 What happens when school fees are eliminated? Evidence from eight countries

5.5 119 Not all education systems are equally productive, but even the least productive deliver some learning to some learners

5.6 120 Young people follow different paths in their education

5.7 121 Workers with higher literacy proficiency are more likely to enter white-collar jobs

6.1 134 Only a small fraction of learners keeps up with the curriculum

6.2 137 Prospective engineers typically score higher than prospective teachers on PISA tests

7.1 146 Information and communication technology has had a mixed impact on learning

7.2 148 Schools vary significantly in management quality

8.1 155 Few benefit from workplace training, and those who do tend to already have better literacy or education

8.2 157 Most vocational training students enroll during upper secondary school

S5.1 165 Technology use has increased dramatically over the past decade—but remains low in many countries

9.1 171 Technical and political barriers pull education systems away from the goal of learning

9.2 173 Simple associations between education spending and learning are weak

B9.3.1 178 In Bangladesh, there are 11 different kinds of nonstate providers of presecondary education

S6.1 184 Governments devote a large share of their budgets to education

S6.2 185 The relationship between changes in public education spending and student learning is often weak

10.1 191 Contradictory interests detract from learning objectives

B10.1.1 192 Teacher unionization varies across countries

10.2 195 Interdependencies characterize the relationship between teachers and politicians

11.1 200 Primary school numeracy has increased dramatically in England

B11.5.1 205 Reading scores have improved in Chile

11.2 207 Problem-driven iterative adaptation drives successful reforms

11.3 210 Trends in public education spending in the Philippines track changes in the broader political and economic context

11.4 212 Most funding for education comes from domestic sources, but international finance is important for low-income countries
Map

B6.3.1 135 Linguistic diversity around the world

Tables

O.1 14 Alignment and coherence both matter
O.2 14 Multiple interests govern the actions of education stakeholders
1.1 39 Examples of education's benefits
1.2 42 More schooling leads to more voting
3.1 80 Few teachers reach minimum thresholds of performance on knowledge assessments
5.1 113 Models of human behavior can guide actions to improve learner preparation: Some examples
6.1 132 Models of human behavior can guide actions to improve teaching: Some examples
7.1 146 Models of human behavior can guide actions to improve the effectiveness of school inputs and governance: Some examples
B9.3.1 176 Private providers account for a significant share of school enrollment
S6.1 186 Inequalities in public education spending are common
11.1 202 Principles for making the most of information and the roles that actors can play
11.2 203 Principles for building effective coalitions and the roles that actors can play
11.3 209 Principles for encouraging innovation at scale and the roles that actors can play
Education and learning raise aspirations, set values, and ultimately enrich lives. The country where I was born, the Republic of Korea, is a good example of how education can play these important roles. After the Korean War, the population was largely illiterate and deeply impoverished. The World Bank said that, without constant foreign aid, Korea would find it difficult to provide its people with more than the bare necessities of life. The World Bank considered even the lowest interest rate loans to the country too risky.

Korea understood that education was the best way to pull itself out of economic misery, so it focused on overhauling schools and committed itself to educating every child—and educating them well. Coupled with smart, innovative government policies and a vibrant private sector, the focus on education paid off. Today, not only has Korea achieved universal literacy, but its students also perform at the highest levels in international learning assessments. It’s a high-income country and a model of successful economic development.

Korea is a particularly striking example, but we can see the salutary effects of education in many countries. Delivered well, education—and the human capital it creates—has many benefits for economies, and for societies as a whole. For individuals, education promotes employment, earnings, and health. It raises pride and opens new horizons. For societies, it drives long-term economic growth, reduces poverty, spurs innovation, strengthens institutions, and fosters social cohesion.

In short, education powerfully advances the World Bank Group’s twin strategic goals: ending extreme poverty and boosting shared prosperity. Given that today’s students will be tomorrow’s citizens, leaders, workers, and parents, a good education is an investment with enduring benefits.

But providing education is not enough. What is important, and what generates a real return on investment, is learning and acquiring skills. This is what truly builds human capital. As this year’s World Development Report documents, in many countries and communities learning isn’t happening. Schooling without learning is a terrible waste of precious resources and of human potential.

Worse, it is an injustice. Without learning, students will be locked into lives of poverty and exclusion, and the children whom societies fail the most are those most in need of a good education to succeed in life. Learning conditions are almost always much worse for the disadvantaged, and so are learning outcomes. Moreover, far too many children still aren’t even attending school. This is a moral and economic crisis that must be addressed immediately.

This year’s Report provides a path to address this economic and moral failure. The detailed analysis in this Report shows that these problems are driven not only by service delivery failings in schools but also by deeper systemic problems. The human capital lost
because of these shortcomings threatens development and jeopardizes the future of people and their societies. At the same time, rapid technological change raises the stakes: to compete in the economy of the future, workers need strong basic skills and foundations for adaptability, creativity, and lifelong learning.

To realize education's promise, we need to prioritize learning, not just schooling. This Report argues that achieving learning for all will require three complementary strategies:

- **First**, assess learning to make it a serious goal. Information itself creates incentives for reform, but many countries lack the right metrics to measure learning.

- **Second**, act on evidence to make schools work for learning. Great schools build strong teacher-learner relationships in classrooms. As brain science has advanced and educators have innovated, the knowledge of how students learn most effectively has greatly expanded. But the way many countries, communities, and schools approach education often differs greatly from the most promising, evidence-based approaches.

- **Third**, align actors to make the entire system work for learning. Innovation in classrooms won’t have much impact if technical and political barriers at the system level prevent a focus on learning at the school level. This is the case in many countries stuck in low-learning traps; extricating them requires focused attention on the deeper causes.

The World Bank Group is already incorporating the key findings of this Report into our operations. We will continue to seek new ways to scale up our commitment to education and apply our knowledge to serve those children whose untapped potential is wasted. For example, we are developing more useful measures of learning and its determinants. We are ensuring that evidence guides operational practice to improve learning in areas such as early-years interventions, teacher training, and educational technology. We are making sure that our project analysis and strategic country diagnoses take into account the full range of system-level opportunities and limitations—including political constraints. And we will continue to emphasize operational approaches that allow greater innovation and agility.

Underlying these efforts is the World Bank Group’s commitment to ensuring that all of the world’s students have the opportunity to learn. Realizing education’s promise means giving them the chance not only to compete in tomorrow’s economy, but also to improve their communities, build stronger countries, and move closer to a world that is finally free of poverty.

Jim Yong Kim  
*President*  
*The World Bank Group*
Acknowledgments

This year’s *World Development Report* (WDR) was prepared by a team led by Deon Filmer and Halsey Rogers. The core team was composed of Samer Al-Samarrai, Magdalena Bendini, Tara Béteille, David Evans, Märt Kivine, Shwetlena Sabarwal, and Alexandria Valerio, together with research analysts Malek Abu-Jawdeh, Bradley Larson, Unika Shrestha, and Fei Yuan. Rafael de Hoyos and Sophie Naudeau were members of the extended team. Stephen Commins provided consultations support. Mary Breeding, Ji Liu, Christian Ponce de León, Carla Cristina Solis Uehara, Alies Van Geldermalsen, and Paula Villaseñor served as consultants. The production and logistics team for the Report consisted of Brônagh Murphy and Jason Victor.

The Report is sponsored by the Development Economics Vice Presidency. Overall guidance for preparation of the Report was provided by Paul Romer, Senior Vice President and Chief Economist, and Ana Revenga, Deputy Chief Economist. In the early months of the Report’s preparation, guidance was provided by Kaushik Basu, former Senior Vice President and Chief Economist, and Indermit Gill, former Director for Development Policy. The team is also grateful for comments and guidance from Shantayanan Devarajan, Senior Director for Development Economics. The Education Global Practice and the Human Development Global Practice Group provided consistent support to the Report team. The team is especially grateful for support and guidance provided by Jaime Saavedra, Senior Director, and Luis Benveniste, Director, of the Education Global Practice.

The team received guidance from an advisory panel composed of Gordon Brown (who, together with the Chief Economist, cochaired the panel), Michelle Bachelet, Rukmini Banerji, Julia Billard, Eric Hanushek, Olli-Pekka Heinonen, Ju-Ho Lee, and Serigne Mbaye Thiam. Although the team valued their advice and found it very useful, the views expressed in the Report do not necessarily reflect those of the panel members.

The team also benefited at an early stage from consultations on emerging themes with the Chief Economist’s Council of Eminent Persons. Council members providing comments were Montek Singh Ahluwalia, François Bourguignon, Heba Handoussa, Justin Yifu Lin, Ory Okolloh, Pepi Patrón, Amartya Sen, Joseph Stiglitz, Finn Tarp, and Maria Herminia Tavares de Almeida.

Paul Holtz was the principal editor of the Report. Bruce Ross-Larson provided editorial guidance, and Sabra Ledent and Gwenda Larsen copyedited and proofread the Report. Kurt Niedermeier was the principal graphic designer. Alejandra Bustamante and Surekha Mohan provided resource management support for the team. Phillip Hay, Mikael Reventar, Anushka Thewarapperuma, and Roula Yazigi, together with Patricia da Carma and Kavita Watsa, provided guidance and support on communication and dissemination. Special thanks are extended to Mary Fisk, Patricia Katayama, Stephen Pazdan, and the World Bank’s Formal Publishing Program. The team would also like to thank Maria Alyanak, Laverne Cook, Maria del Camino Hurtado, Chorching Goh, Vivian Hon, Elena Chi-Lin Lee, Nancy Tee Lim, David Rosenblatt, and Bintao Wang for their coordinating roles.
The team is grateful for generous support for preparation of the Report provided by the Knowledge for Change Program (KCP, a multidonor Trust Fund) and especially from the governments and development agencies of the following KCP donor countries: Finland, France, and Norway. Background and related research, along with dissemination, are being generously supported by the Bill & Melinda Gates Foundation, Early Learning Partnership Trust Fund, LEGO Foundation, and Nordic Trust Fund.

Consultation events attended by government officials, researchers, and civil society organizations were held in Bolivia, Brazil, Canada, China, Côte d’Ivoire, Finland, France, Germany, India, Indonesia, Japan, Kenya, Malaysia, Mexico, Senegal, South Africa, Tanzania, Thailand, Turkey, the United Kingdom, and the United States, with participants drawn from many more countries. The team thanks those who took part in these events for their helpful comments and suggestions. Further information on these events is available at http://www.worldbank.org/wdr2018.

Interagency consultations were held with the Association for the Development of Education in Africa (ADEA), Global Development Network (GDN), Global Partnership for Education (GPE), International Commission on Financing Global Education Opportunity (Education Commission), International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), United Nations Children’s Fund (UNICEF), and United Nations Educational, Scientific, and Cultural Organization (UNESCO). Consultations with bilateral development partners included representatives of the governments of Canada, Finland, Japan, the Republic of Korea, Norway, and Sweden, and of Australia’s Department of Foreign Affairs and Trade (DFAT), the French Development Agency (AFD), German Agency for International Cooperation (GIZ GmbH), German Federal Ministry for Economic Cooperation and Development (BMZ), Japan International Cooperation Agency (JICA), U.K. Department for International Development (DFID), and U.S. Agency for International Development (USAID). The team also held consultations with the advisory board of KCP. The team is grateful to all those who took part in these events.

Civil society organizations (CSOs) represented at consultations included, among others, ActionAid, Bill & Melinda Gates Foundation, Education International, Global Campaign for Education, LEGO Foundation, MasterCard Foundation, ONE Campaign, Oxfam, Save the Children, Teach for All, and World Vision. In addition, a diverse group of CSOs participated in a CSO Forum session held during the 2017 World Bank/IMF Spring Meetings and in an e-forum held in March 2017. The team is grateful to these CSOs for their input and useful engagement.

Researchers and academics provided helpful feedback at WDR-oriented sessions at the 2016 Research on Improving Systems of Education (RISE) Conference at Oxford University, 2017 meetings of the Allied Social Sciences Associations (ASSA), 2017 meetings of the Society for Research on Education Effectiveness (SREE), 2017 Mexico Conference on Political Economy of Education, and 2017 meeting of the Systems Approach for Better Education Results (SABER) Advisory Panel. In addition, events dedicated to the WDR were organized by the Aga Khan Foundation and Global Affairs Canada in Ottawa; Brookings Center for Universal Education in Washington, DC; Columbia School of International and Public Affairs and Cornell University in New York; Development Policy Forum of GIZ GmbH, on behalf of BMZ, in Berlin; JICA in Tokyo; Université Félix Houphouët-Boigny in Abidjan; and USAID in Washington, DC.

This Report draws on background papers prepared by Violeta Arancibia, Felipe Barrera-Osorio, Tessa Bold, Pierre de Galbert, Louise Fox, Dileni Gunewardena, James Habiarima, Michael Handel, Anuradha Joshi, Kanishka Kacker, Michelle Kaffenberger, Upaasna Kaul, Elizabeth M. King, Gayle Martin, Ema Masood, Ezekiel Molina, Sebastián Monroy-Taborda, Kate Moriarty, Anna Popova, Lant Pritchett, Christophe Rockmore, Andrew Rosser, María Laura Sánchez Puerta, Priyam Saraf, M. Najeeb Shafiq, Brian Stacy, Jakob Svensson, Namrata Tognatta, Robert Toutkoushian, Michael Trucano, Waly Wane, Tim Williams, and Atiya Zaidi.
The team drew on the analysis, research, and literature reviews of researchers and specialists from across the world. In addition, the team would like to thank the following for their feedback and suggestions: Christine Adick, Ben Ansell, Manos Antoninis, David Archer, Belinda Archibong, Monazza Aslam, Girindra Beeharry, Penelope Bender, Peter Bergman, Robert Birch, Tarsald Brautaset, Barbara Bruns, Annika Calov, Michael Clemens, Luis Crouch, Rohen d’Aiglepierre, Rossioli Soares da Silva, Momar Dieng, Rob Doble, Amy Jo Dowd, Margaret Dubec, Sandra Dworack, Alex Eble, Marcel Fafchamps, John Floreta, Eli Friedman, Akiihiro Fushimi, Paul Gertler, Rachel Glennerster, Paul Glewwe, Amber Gove, Oliver Haas, James Habyarimana, Jeffrey Hammer, Michael Handel, Christoph Hansert, Blanca Heredia, Sam Hickey, Veronika Hilber, Arja-Sisko Holappa, Naomi Hossain, Huang Xiaoting, Ali Inam, Dhir Jhingran, Emmanuel Jimenez, Maciej Jubiowski, Ravi Kanbur, Cheikh Kane, Jouni Kangasniemi, Devesh Kapur, Vishnu Karki, Nina Kataja, Venita Kaul, Kim Kerr, Elizabeth M. King, Kenneth King, Geeta Kingdon, Eiji Kozuka, Michael Kremer, K. P. Krishnan, Kazuo Kuroda, Elina Lehtomäki, Henry Levin, Brian Levy, Krystelle Lochard, Karen Macours, Lu Mai, Akshay Mangla, M. A. Mannan, Santhosh Mathew, Imran Matin, Jordan Matsudaira, Karthik Muralidharan, Essa Chanie Mussa, Charles Nelson III, Aromie Noe, Munaz Ahmed Noor, Mario Novelli, Mead Over, Jan Pakulski, Benjamin Piper, Lant Pritchett, Ritva Reiniikka, Risto Rinne, Jo Ritzen, Francisco Rivera Batiz, John Rogers, Caine Rolleston, Andrew Rosser, David Sahin, Justin Sandefur, Yasuyuki Sawada, Andreas Schleicher, Ben Ross Schneider, Dorothea Schönfeld, Olaf Seim, Abhijeet Singh, David Skinner, William Smith, Prachi Srivastava, Liesbet Steer, R. Subrahmanyam, Sudarno Sumarto, Jan Svejnar, Jakob Svensson, Soubhy Tawil, Valerie Tessio, Auli Toom, Miguel Urquiola, Jouni Välijärvi, Olli Vesterinen, Joseph Wales, Lant Pritchett, Toby Linden, Oni Lusk-Stover, Francisco Marmolejo, Yasuhiro Matsuda, Muna Meky, Ezequiel Molina, Caitlin Moss, Matiullah Noori, Anna Olefir, Owen Ozier, Andrew Ragatz, Vijayendra Rao, Dan Rogger, Audrey Sacks, Maria Laura Sánchez Puerta, Indhira Santos, William Seitz, Shahnab Sinha, Lars Sondergaard, Dewi Susanti, Christopher Thomas, Michael Trucano, Adam Wagstaff, and Melanie Walker.

A number of World Bank colleagues provided insightful comments, feedback, and collaboration: Junaid Ahmad, Omar Arias, Nina Arnhold, Ana Belver, Hana Brixi, James Brumby, Pedro Cerdan Infantes, Marie-Hélène Cloutier, Aline Coudouel, Amit Dar, Jishnu Das, Amanda Epstein Devercelli, Gregory Elaqua, Diana Hincapie, Peter Holland, Sachiko Kataoka, Stuti Khemani, Igor Kheyfets, Kenneth King, Eva Kloeve, Steve Knack, Xiaoyan Liang, Toby Linden, Oni Lusk-Stover, Francisco Marmolejo, Yasuhiro Matsuda, Muna Meky, Ezequiel Molina, Caitlin Moss, Matiullah Noori, Anna Olefir, Owen Ozier, Andrew Ragatz, Vijayendra Rao, Dan Rogger, Audrey Sacks, Maria Laura Sánchez Puerta, Indhira Santos, William Seitz, Shahnab Sinha, Lars Sondergaard, Dewi Susanti, Christopher Thomas, Michael Trucano, Adam Wagstaff, and Melanie Walker.

The team would also like to thank the World Bank colleagues who helped organize and facilitate consultations and advised on translations: Gabriela Geraldes Bastos, Paolo Belli, Moussa Blimpo, Andreas Blom, Leandro Costa, Oumou Coulibaly, Meaza Zerihun Demissie, Safaa El-Kogali, Tazeen Fasih, Ping Fu, Elena Glinskaya, Marek Hanusch, Pimon Iamsripong, Susiana Iskandar, Nalin Jena, Hamoud Abdel Wedoud Kamil, Adrian Landwehr, Dilaka Lathapipat, Khady Fall Lo, Norman Loayza, André Loureiro, Hope Nanshemeza, Madamba Ndiaye, Koichi Omori, Azeddine Ouerghi, Tigran Shmis, Taleb Ould Sid’ahmed, Lars Sondergaard, Dewi Susanti, Yasusuke Tsukagoshi, and Michael Woolcock.

In addition, the team is grateful to the many World Bank colleagues who provided written comments during the formal Bankwide review process: Cristian Aedo, Inga Afanasieva, Ahmad Ahsan, Edouard Al Dahdah, Ummreen Arif, Tina Arnhold, Anna Autio, Arup Banerji, Elena Bardasi, Saithia Bashir, Ana Belver, Raja Bentaouet Kattan, Luis Benveniste, Moussa Blimpo, Erik Bloom, Vica Bogaerts, Susan Caceres, César Calderón, Ted Haoquan Chu, Punam Chuhuane-Pole, Fernando Ramirez Cortes, Michael Crawford, Laisa Daza, Bénédicte de la Brière, Gabriel Demombynes, Shanta Devarajan, Sangeeta Dey, Usmane Diagne, Ousmane Dione, Safaa El Tayeb El-Kogali, Marianne Fay, Maria Marta Ferreyra, Carina...
The team apologizes to any individuals or organizations inadvertently omitted from this list and expresses its gratitude to all who contributed to this Report, including those whose names may not appear here.

The team members would also like to thank their families for their support throughout the preparation of this Report. And finally, the team members thank the many children and youth who have inspired them through interactions in classrooms around the world over the years—as well as the many others whose great potential has motivated this Report. The World Development Report 2018 is dedicated to them.
Abbreviations

A4L Assessment for Learning
ASER Annual Status of Education Report
BRN Big Results Now in Education (Tanzania)
CAMPE Campaign for Popular Education (Bangladesh)
CCT conditional cash transfer
CSEF Civil Society Education Fund
DISE District Information System for Education (India)
EGRA Early Grade Reading Assessment
GDP gross domestic product
GNECC Ghana National Education Campaign Coalition
I-BEST Integrated Basic Education and Skills Training
ICT information and communication technology
IDEB Índice de Desenvolvimento da Educação Básica (Index of Basic Education Development, Brazil)
LLECE Latin American Laboratory for Assessment of the Quality of Education
MDG Millennium Development Goal
MENA Middle East and North Africa
NAFTA North American Free Trade Agreement
NGO nongovernmental organization
OECD Organisation for Economic Co-operation and Development
PASEC Programme d’Analyse des Systèmes Éducatifs de la Confemé (Programme for the Analysis of Education Systems)
PIAAC Programme for the International Assessment of Adult Competencies
PIRLS Progress in International Reading Literacy Study
PISA Programme for International Student Assessment
PPP purchasing power parity
SACMEQ Southern and Eastern Africa Consortium for Monitoring Educational Quality
SAR special administrative region
SAT Scholastic Aptitude Test
SDG Sustainable Development Goal
SIMCE Sistema de Medición de la Calidad de la Educación (Education Quality Measurement System, Chile)
SNED Sistema Nacional de Evaluación de Desempeño (National Performance Evaluation System, Chile)
SNTE Sindicato Nacional de Trabajadores de la Educación (National Union of Educational Workers, Mexico)
TERCE Third Regional Comparative and Explanatory Study
TIMSS Trends in International Mathematics and Science Study
TVET technical and vocational education and training
UNESCO United Nations Educational, Scientific, and Cultural Organization
UNRWA United Nations Relief and Works Agency
USAID U.S. Agency for International Development
WHO World Health Organization
WIDE World Inequality Database on Education