2021 Report

EGER
EVIDENCE FOR GENDER AND EDUCATION RESOURCE

GIRLS' EDUCATION ROADMAP



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Girls' Education Roadmap Reports seek to accelerate progress in global girls' education by forging a shared path for policymakers, NGOs, advocates, donors, and researchers based on needs and evidence.

Suggested citation: Psaki, S., N. Haberland, M. Kozak, and L. Woyczynski. 2021. "Girls' Education Roadmap: 2021 Report." EGER Reports. New York: Population Council.

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Report design: Owl's Head Solutions

Road·map /'rōdmap/ [noun]

A detailed plan to guide progress toward a goal; a detailed explanation

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Acknowledgments

This report would not have been possible without the contributions of our colleagues Barbara Mensch and Erica Chuang, who helped lead the systematic review of programs designed to address gender-related barriers to schooling for girls. We are also grateful to our colleague Cara Kraus-Perrotta, who has provided administrative and technical support for this work. Joyce Altman provided extraordinary editorial support; we thank her for pulling the Roadmap all the way through the final mile with us.

We are grateful for the ongoing support of our advisory group members, who provided input and guidance for this work over the last three years, including: Hendrina Doroba (African Development Bank Group); Amanda Braga and Christina Kwauk (Brookings Institution's Center for Universal Education); David Evans (Center for Global Development); Victoria Mall and Magdalene Lagu (the UK Foreign, Commonwealth & Development Office); Martha Muhwezi (Forum for African Women Educationalists); Raphaelle Martinez, Jane Davies, Christin McConnel, and Helena Murseli (Global Partnership for Education); Cynthia Lloyd (Independent Consultant); Birte Snilstveit (International Initiative for Impact Evaluation); Matthew Jukes (RTI International); Lucina Di-Meco and Christine Beggs (Room to Read); Nora Fyles (United Nations Girls' Education Initiative); and Patrick McEwan (Wellesley College).

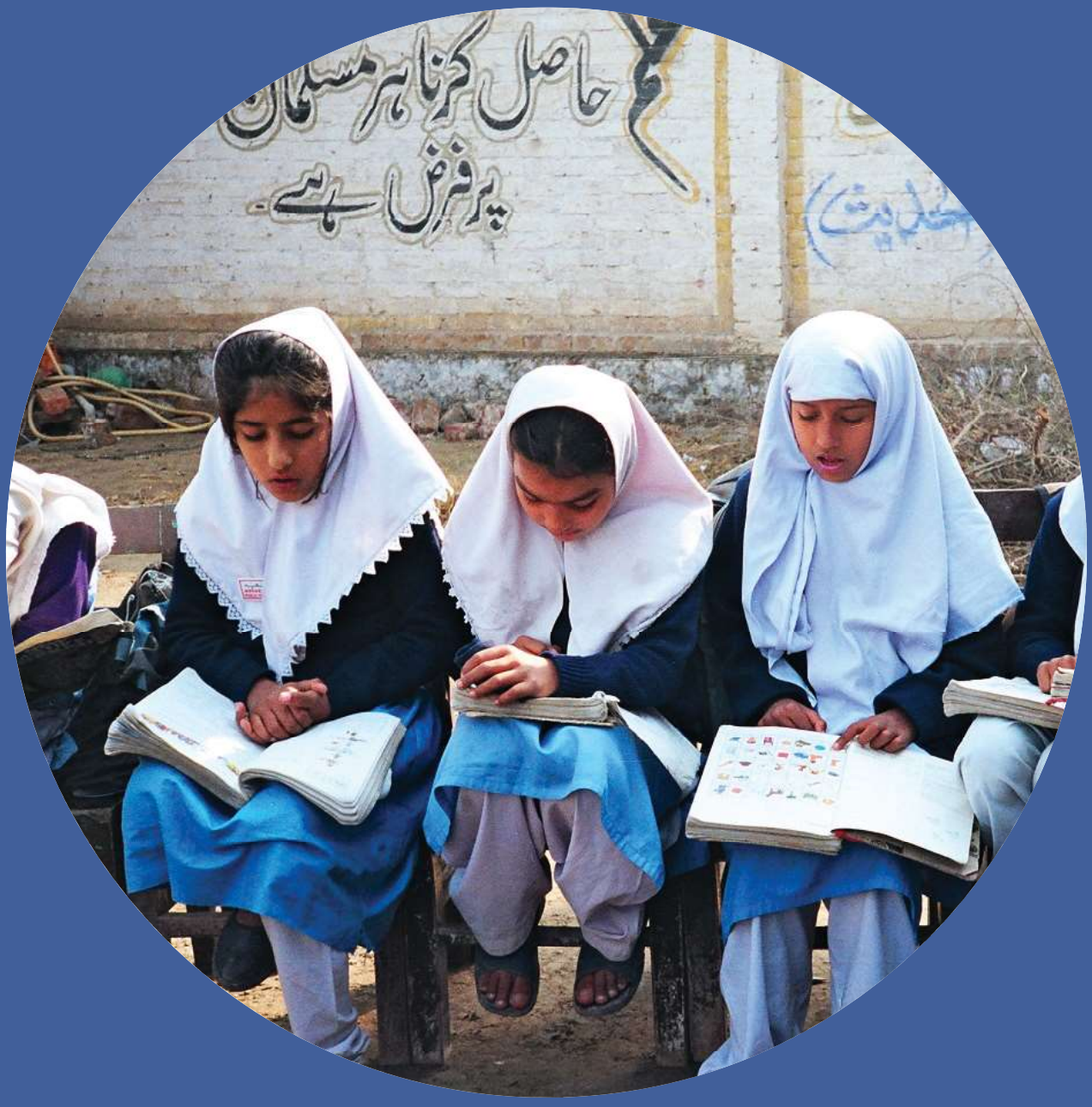
In addition to the advisory group, we thank the following individuals for providing expert reviews and feedback on the draft Roadmap: Karen Austrian (Population Council Kenya) and Nidhi Khurana (Population Council India); Clio Dintilhac (Bill & Melinda Gates Foundation); Linda Weisert, Manjula Singh, Anindya Gupta, and Akanksha Gautam (Children's Investment Fund Foundation); Priyanka Varma and Radhika Bhula (Abdul Latif Jameel Poverty Action Lab); Lucia Fry and Carron Mann (Malala Fund); Tsehaitu Retta (Obama Foundation); Natasha Somji (ONE Campaign); Elspeth McOmish (UNESCO); Ingrid Sanchez Tapia, Takudzwa Kanyangarara, Omar Robles, Sagri Singh (UNICEF); and former Echidna Global Scholar Anil Paudel.

We thank our team of current and former graduate interns and staff who contributed to this work, including: Nura Anwar, Roxanne Bangalan, Samantha Berg, Hannah Braunlin, Fiona Gambanga, Craig Heck, Hayley Herzog, Delanie Honda, Joy Koech, Helena Lowcock, Isabel Odean, Rachel Passmore, Aditi Patrikar, Lisa Polen, Jamie Quam, Kayla Savage, Grace Sheehy, Jeanette Shekelle, Anupam Shukla, Anne Smith, Sarah Steirer, and Lili Warren.

This report would not be possible without the early financial support from Echidna Giving, and the expert guidance from their team, including Erin Ganju, Emily Kaiser-Termes, Dana Schmidt, Lexie Wagner, and Kim Wright-Violich. As we look toward the next phase of work on the Evidence for Gender and Education Resource (EGER), we are grateful for ongoing support from Echidna Giving, as well as the support, vision, and partnership from Jess Atkinson and Rachel Hinton at the UK FCDO, and Asyia Kazmi at the Bill & Melinda Gates Foundation.

Lastly, we extend our gratitude to the many organizations who have contributed information to the EGER database. We look forward to ongoing collaboration and transformation.

A roadmap for investments in girls' education



SECTION 1

The Roadmap Summary

Prior to the COVID-19 pandemic, millions of young people, especially girls, were out of school. We faced a global learning crisis, with widespread illiteracy and innumeracy, even among those attending primary school.

The world has changed dramatically over the last year, deepening existing inequalities, and creating even more uncertainty about the way forward in global girls' education. Against this backdrop of shrinking economies and growing needs, the question of how we will invest valuable resources is more pressing than ever.

While insufficient to meet the vast needs, billions of dollars are being invested in girls' education advocacy, program, and policy solutions around the world. At the same time, hundreds of millions are invested in research about what works in education. And yet, the policies and approaches that are pursued often don't line up with what researchers find is effective.

The result is that governments, international organizations, and NGOs are too often investing scarce resources in policies or interventions without knowing whether they work. Researchers are too often testing interventions they find interesting, rather than asking whether the most common approaches in the field are delivering results. And donors and policymakers are left scratching their heads wondering where to invest.

That's where the Roadmap for Girls' Education comes in. In a first-of-its-kind report, we reviewed thousands of studies and assessed hundreds of organizations working across dozens of countries to figure out who's doing what, what's working where, and what are the biggest needs facing girls.

OUR GOALS ARE SIMPLE: to make sure governments, NGOs, and donors are investing in what works and to make sure researchers are focusing on answering the most urgent and important questions for the field.

How can we better align needs, evidence, and practice in girls' education?



Investments that will make the biggest difference for girls' education

The **most effective interventions** will depend on the particular challenges facing girls and their families in each setting. Understanding those challenges—and tailoring our responses effectively—will be key to success.

Programs or policies that work to improve school enrollment and enhance educational attainment for girls:

- Addressing the cost of schooling (e.g. through conditional cash transfers, scholarships, provision of school materials/uniforms)
- Improving access to school (e.g. through construction, community schools, transportation, access to remote learning)
- Providing proper sanitation facilities in schools, especially sex-specific toilets
- Providing food in school or as take-home rations

Key recommendations for policymakers, NGOs, advocates, and donors

- **Focus efforts in the places and stages where there are still gender gaps in enrollment and completion**. Depending on location, this may be in primary completion, the transition to secondary, or secondary completion.
- **In the context of COVID-19, additional efforts are needed to address issues of cost** (through reducing fees, providing materials), food insecurity (through school feeding), accessibility (through safely opening schools, expanding access to remote learning as needed), and competing demands on girls' time (through incentives to get girls back to school,

Programs that we know work when it comes to improving learning for both girls and boys:



Improving pedagogy, for example, structured pedagogy, and competency grouping. Computer/instructional technology can be useful in aiding improved pedagogy when linked closely with the curriculum.



Remedial education or tutoring for girls who are falling behind in school



Improving school governance/ accountability



Ongoing teacher training or coaching



Merit-based scholarships



Teacher contracts



Providing food in school or as take-home rations

Key recommendations for policymakers, NGOs, advocates, and donors

- **Shift resources to focus more on improving learning**, which is a near universal challenge, often faced by both girls and boys. A core goal of every girls' education program should be to ensure that girls are literate.
- **In the context of COVID-19, additional efforts are needed to support teachers in addressing new challenges to learning as children return to school, including skill loss** (e.g. through competency grouping), and adapt effective pedagogical approaches to remote learning as needed.

Here are ways to better integrate evidence into common approaches to improving girls' education:

1 Plan trainings in gender-sensitive pedagogy to include training on improved pedagogy, and using competency grouping

2 Combine efforts focused on building reading skills (using improved pedagogy) with content integrating messages on gender, rights, and power

3 Explore opportunities to add food provision into existing efforts to make schooling more affordable, which could help narrow gender gaps while also supporting children from the poorest households

4 Partner with ongoing programs outside of the education space that focus on delaying marriage and childbearing and preventing violence against children and young people

Where to focus research efforts

Prioritize evaluation of common interventions, often developed in response to perceived needs on the ground.

Here are the most commonly used approaches in the girls' education field that have not yet been shown to improve education outcomes:

- Life skills education, including content on gender, rights, and power, empowerment training, sexual and reproductive health education, and provision of safe spaces and social connections
- Efforts to create more gender-sensitive school environments, including through training in gender-responsive pedagogy
- Community engagement and efforts to increase support for girls' education
- Efforts to provide teaching materials and/or school supplies

Key recommendations for policymakers, NGOs, advocates, and donors

- **The most useful evaluations will be those that test multicomponent programs** in a way that offers insights into which components, or combinations of components, are most effective and most cost-effective in which settings.
- **More research is needed in the settings where girls' education needs are greatest**, including parts of West Africa, South Asia, and settings affected by conflicts and crises.
- **Adapt and extend evidence on what works to improve learning** (e.g. improved pedagogy) to understand whether and how these approaches work best for girls. At a minimum, this means reporting results from evaluations for girls and boys separately.
- **Develop a shared framework of gender-related barriers to education**. Include clear definitions of barriers, data sources to track progress, and guidance on which approaches address each barrier most effectively. Develop easy-to-use tools to guide program and policy design based on a diagnosis of barriers in each setting.

Right now, how can the entire global girls' education community accelerate progress?

SEEK OPPORTUNITIES TO COLLABORATE MORE CLOSELY, and more regularly, with organizations playing different roles in this field. As the work of all actors continues to evolve rapidly, such collaborations will help better align needs, evidence, and practice in global girls' education.

BY SHIFTING OUR APPROACH AS A FIELD—linking our paths more closely together rather than moving forward on our own—we can address gaps among needs, evidence, and practice and accelerate progress.

The Evidence for Gender and Education Resource, or EGER, offers a platform and resource for the global girls' education community to do just that. **Visit EGER at egeresource.org and share your work.**



SECTION 2

Background

KEY TAKEAWAYS

1 The world has made great progress in girls' education. But even before COVID-19, much more work was needed to make sure all young people, especially girls, were in school and learning. The pandemic is layering new pressure on top of existing challenges.

2 As we face these challenges, aligning policies and programs with the greatest needs and the most effective solutions is more important than ever.

3 The Evidence for Gender and Education Resource (EGER) is a freely available online tool designed to drive better education results. EGER includes information on current needs, current practice, and evidence of what works in global girls' education.

4 The 2021 Girls' Education Roadmap Report shares insights derived from the data in EGER, with topline messages and recommendations shared in Section 1.

Where have we been?

From the 1960s to the 1990s, when many countries were experiencing their first decades of independence from colonialism, governments invested heavily in education, and the world saw an enormous expansion in access to school for all children (Lloyd, Kaufman & Hewett 2000). During this period an "education transition" took shape in many countries, where primary school enrollment increased for both girls and boys, followed by similar trends at the secondary levels in some countries (Wils & Goujon 1998). Notably, during these education transitions, gender gaps initially widened in many countries, as boys' enrollment increased first, followed later by increases for girls (Evans, Akmal & Jakiela 2020).

In a 1990 meeting in Thailand, the Education for All movement was launched, focusing global attention on girls' education for the first time. Then in 2000, this movement was renewed, when world leaders gathered in Senegal to commit to eliminating gender disparities in education by 2015 (Psaki, McCarthy & Mensch 2018). In a great success story of human development, the world made huge advances toward achieving that goal, driven in large part by government commitments to and investments in schooling around the world (Lloyd, Kaufman & Hewett 2000). Globally, gender gaps in primary and secondary education have declined significantly—as of 2015, the same percent of girls and boys were in school around the world (UNESCO 2016).

As a community, we have great momentum to build on.

Where were we before COVID-19?

Despite enormous advances in expanding access to school in low- and middle-income countries (LMICs) over the past decades, progress in increasing attainment had stagnated and significant gender gaps remained—even before COVID-19. (Psaki, McCarthy & Mensch 2018; Evans, Akmal & Jakiela 2020). Although the percentage of those out of school had declined, more young people, especially girls, were out of school in low-income countries than ever before (UNESCO 2018). The Global Education Monitoring (GEM) Report (UNESCO 2020) showed that, before COVID-19, nine million (1 in 12) primary school-age children, and 61 million (1 in 6) lower secondary school-age children were out of school. Half of out of school children were living in sub-Saharan Africa. Gender disparities persisted, including in enrollment: in low-income countries, 94 girls for every 100 boys were enrolled in primary school, 87 girls for every 100 boys were enrolled in secondary school, and just 80 girls for every 100 boys were enrolled in upper secondary (UNESCO 2020).

Even when girls and boys were in school, they were often unable to gain basic skills, resulting in a global learning crisis (World Bank 2018). Globally, six out of 10 adolescents were unable to meet minimum proficiency standards in reading and mathematics (UIS 2017), with rates in sub-Saharan Africa (88%) and Central and South Asia (81%) far higher. Girls in sub-Saharan Africa fared especially poorly—90% were not achieving minimum proficiency levels in reading (versus 86% of boys) and 86% were not achieving minimum levels for mathematics (versus 82% of boys) (UIS 2017). Even worse, some young people, especially girls, were losing the skills they gained in school after leaving, especially when they were unable to apply those skills in the outside world (Soler-Hampejsek et al. 2018; Psaki et al. 2019).

In short, even before COVID-19 there was still much more work to be done to make sure all young people, especially girls, were in school and learning.

Implications of COVID-19

While the full educational repercussions of COVID-19 have not yet unfolded, the pandemic is layering unprecedented pressures on top of existing challenges. In June 2020, the World Bank estimates that COVID-19-related closures are likely to shave off 0.6 years of schooling for children worldwide, an estimate that might turn out to be conservative. The Bank's projections also anticipate that an additional seven million primary and secondary students may drop out as a consequence of COVID-19's economic impact alone (Azevedo et al. 2020).

In terms of impacts on learning, the Education Commission points out that before COVID-19, for every 100 primary school-age children in low- and middle-income countries, nine were already out of school, and an additional 53 were in school but not learning. They estimate that an additional 10 out of every 100 school-aged children will enter "learning poverty" as a result of COVID-19, meaning they will either be out of school, or in school but unable to read a basic text by age 10 (Save Our Future 2020).

Without concerted efforts, those who will be hit hardest by the effects of COVID-19 are those who were at a greater disadvantage to begin with. We need to support those whose education has been disrupted by the pandemic. But this is not a one-time fix. Many young people were already left behind before COVID-19 and will be thereafter if we do not effectively address these inequalities.

Where are we going?

A global community of policymakers, advocates, civil society organizations, researchers, and funders is working tirelessly to support schools, teachers and students to achieve Sustainable Development Goal 4, adapting and innovating in the face of COVID-19. But in many ways, this community's hands are tied. Resources are scarce and dwindling (UNESCO 2020) and the barriers are mounting.

As we face the challenge of continuing to educate children through the COVID-19 pandemic and rebuilding on the other side, aligning policies and programs with the greatest needs and the most effective solutions is more pressing than ever. Yet too often, decisions about philanthropic and foundation giving—as well as government investments—are not based on evidence. Instead, they may be based on emotion—namely, moving speeches by charismatic leaders and programs that tug at heartstrings and sound compelling. These gut instincts to make the world a better place for all children are essential, but with shrinking resources and expanding needs, we must direct them toward effective solutions that reach the most vulnerable and provide the greatest benefits with limited resources. Anything less will simply perpetuate disparities.

Therefore, the girls' education field must answer key remaining questions:

- What are the most important barriers to receiving a high-quality education, and how do those barriers differ for girls?
- What are the most effective policies or programs to address those barriers?
- How does COVID-19 change what we know about the barriers to education for girls, and solutions to addressing them?

Why girls? Why not all children?



A focus on girls is about inclusion rather than exclusion. It draws on four core realities:

1 Addressing Needs
The settings where girls are at the greatest disadvantage also tend to be the settings where the education systems are weak overall, and where investments are most needed to improve outcomes for all children (Psaki, McCarthy & Mensch 2018; Evans, Akmal & Jakiela 2020).

2 Adjusting our lens
By default, systems are designed to maintain the status quo, which often means they cater to the needs of those in power—often boys and men—to the exclusion of others. But gender norms can also be detrimental to boys and men, so transforming norms can benefit communities.

3 Considering return on investments
Investments in girls' education may have even larger social and economic benefits than investments in boys' education (Psacharopoulos & Patrinos 2018).

4 Finding evidence-based solutions
Solutions for girls are not necessarily exclusive to girls. Interventions like building toilets or preventing school-related gender-based violence may well benefit all young people.

What is the Evidence for Gender and Education Resource?

In partnership with Echidna Giving, the GIRL Center at the Population Council developed the Evidence for Gender and Education Resource (EGER), an interactive online database that practitioners, researchers, donors, and decisionmakers can use to drive better results for girls, boys, and communities around the world. EGER is intended to address one of the most pressing challenges facing the girls' education ecosystem: how to ensure that limited resources are invested in the most effective solutions to achieve gender equality in education.

Over the last two years we have mapped the ongoing global work in this field—who is doing what, where, and how, while assessing where the needs are greatest. At the same time, we have reviewed the evidence of what works to improve girls' education outcomes. By using data visualizations to show the greatest needs for girls and boys, what is being done to meet them on the ground, and where research gaps exist, EGER is designed to foster coordination and drive better decisions about programming, investments, and policy and research priorities.

EGER provides an interactive way to access information from three interconnected datasets:

- **Needs:** Indicators, many of which are linked to the Sustainable Development Goals (SDGs), to help identify the countries where gender and education needs are greatest;
- **Organizations and Programs:** Data on more than 250 organizations and nearly 550 gender and education projects implemented by those organizations; and
- **Evidence:** Summary assessments of the state of the evidence on the most effective gender and education policies and programs.

EGER is an organic resource—we're constantly adding new organizations and programs to better reflect the changing state of girls' education work.

What is the 2021 Girls' Education Roadmap Report?

The process of developing EGER, and the resulting data, have provided valuable insights into gaps and opportunities for the global girls' education field. The goal of the 2021 Girls' Education Roadmap Report is to share those insights and continue a conversation about how to better align the greatest needs with the strongest evidence and the best practices.

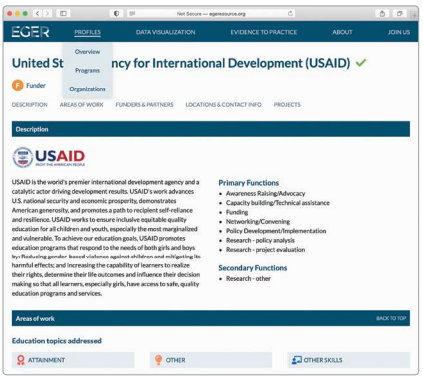
By providing specific examples of areas where needs, current practice, and evidence are not well aligned, this Roadmap Report aims to help the global girls' education field direct limited resources toward the best investments. The Roadmap Report can be read on its own, or alongside the Evidence for Gender and Education Resource (EGER) site. A summary of the key insights from this report is available in Section 1, or as a separate document through the EGER site.

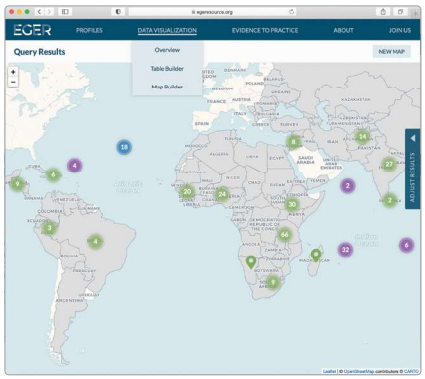
Explore the EGER web portal to find out more: egeresource.org

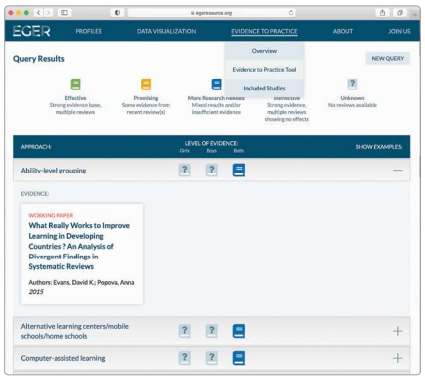
Organization & Program Profiles
The organization and program profiles provide general information about each organization and their girls' education activities.

Data Visualizations
Create your own maps, tables, and graphs to get an overarching view of what's happening in the girls' education space.

Evidence to Practice Tool
Search program approaches and outcomes to understand the current state of gender and education evidence and where research gaps remain.







SECTION 3

Needs



KEY TAKEAWAYS

How are girls faring relative to boys? Based on recent data from 44 low- and middle-income countries.

1 Gender gaps in primary/secondary attainment:

- Despite progress over time, most of the 44 profiled countries were far from achieving the SDG goal of universal secondary completion, especially for girls, even pre-COVID-19.
- Some gender gaps in attainment are due to gaps in primary school enrollment, while others emerge or grow due to higher dropout by girls. The distinction is important when designing interventions.

2 Gender gaps in learning:

- In over a third of countries profiled, less than half of girls who complete primary school can read a simple sentence. While learning levels are low for boys as well, among those who complete primary school, boys fare better than girls in about half the countries. This may be due to different experiences during or after leaving school.
- Higher national attainment does not always mean more learning overall. In some countries with high primary school attainment, graduates are less likely to be literate than in "low attainment" countries, reflecting the challenges of delivering a high-quality education while also expanding access to school.

3 Why might girls be faring worse than boys?

Effective interventions to improve education for girls need to do two things at once: 1) address general barriers that are shared by girls and boys to improve education for all; and 2) address any additional or heightened barriers that girls face to close gender gaps. Examples of gender-related barriers to education include:

- **Poverty:** Both girls and boys in the poorest households are less likely to complete primary school, but in most countries attainment is lowest for girls from poor households.
- **Child marriage and adolescent childbearing:** Girls who marry and/or give birth before age 18 complete less education, reflecting both the incompatibility between schooling and marriage/childbearing, and a process of joint decision-making about the timing of these events.
- **Gender-based violence:** Women with more education are often less likely to experience gender-based violence, perhaps because education is protective, or because girls living in communities that condone violence also receive less education, or both.
- **COVID-19:** Using recent data from Kenya, we show that many adolescents report remote learning using a diversity of methods, but a majority also report increased food insecurity due to COVID-19.

While the full course of the COVID-19 pandemic and its economic impacts are still emerging, we already know who will bear the brunt of the pandemic's effects. Crises reliably target the most vulnerable and exacerbate existing inequalities. In order to direct investments effectively toward progress in girls' education, especially in light of the COVID-19 pandemic, it is essential to understand where the needs are greatest in terms of levels and progress in education, and how those needs might vary across and within contexts.

In this section we examine gender gaps in educational attainment and learning and explore possible barriers that contribute to inequalities in education. A clear picture of girls' education needs is the first step to ensuring that policies, programs, and investments will achieve their goals.

Global patterns mask important differences between countries. We explore those differences using Demographic and Health Survey data from 44 countries collected in the last 10 years.[1] While these data only represent a subset of low- and middle-income countries—for example, they represent over half the population of sub-Saharan Africa and about three-quarters of South Asia's[2]—we use these examples to highlight important patterns and challenges in the field of girls' education, and to extend beyond common education indicators to examine underlying drivers of inequality.

We first explore gender gaps in educational attainment and learning in this subset of countries. Then we consider several possible explanations for why girls may be faring worse: 1) poverty, which affects everyone, but may in some settings particularly affect girls; 2) child marriage and early childbearing, which are unique barriers for girls; 3) violence; and 4) COVID-19, which may impact girls and boys differently.

How are girls faring relative to boys?

Gender gaps in primary and secondary attainment

Sustainable Development Goal (SDG) 4 includes specific targets for educational attainment, literacy, and reduced disparities. By 2030, SDG Target 4.1 aims for all girls and boys to complete primary and secondary education. The graphs below show the percent of males and females completing primary school (**FIGURE 1**) and secondary school (**FIGURE 2**), with clear progress toward universal education over time (across cohorts).

In almost all countries, we observe substantial improvements for both boys and girls over time. And yet, in 25% of the countries, less than half of girls complete primary school, versus just 5% of the countries for boys. There is a long way to go to universal primary completion.

Of equal concern is the persistence of gender disparities in attainment at both the primary and secondary levels:

- Gender gaps have decreased in some countries, such as Nepal (12 percentage point gender gap in primary completion in younger cohort vs. 41 percentage points in the older cohort; and 11 versus 36, respectively, for secondary completion).
- Gaps have remained relatively unchanged in other countries, such as Ethiopia (7 percentage point gap for both younger and older cohorts for primary school; and 6 percentage point gap for both younger and older cohorts for secondary school).
- And gaps have grown in other countries, such as Burkina Faso (14 percentage point gap for primary school in the younger cohort vs. just 4 percentage point gap in the older cohort; 13 percentage point gap in the younger cohort from a 2 percentage point gap in the older cohort for secondary school).

Overall, girls remain less likely than boys to complete primary or secondary school in the vast majority (75% and 77%) of the countries profiled here.

1. All data were processed, analyzed, and visualized in R 4.0.2. Appropriate sample weights were applied to calculate national indicator levels.
2. Approximate percent of the population represented by these countries, by region: Latin America & Caribbean: 12% (very few DHS in this region); Western Asia/North Africa: 0%; South-Eastern Asia: 3%; South Asia: 74%; West Africa: 81%; East Africa & Southern Africa: 63%.

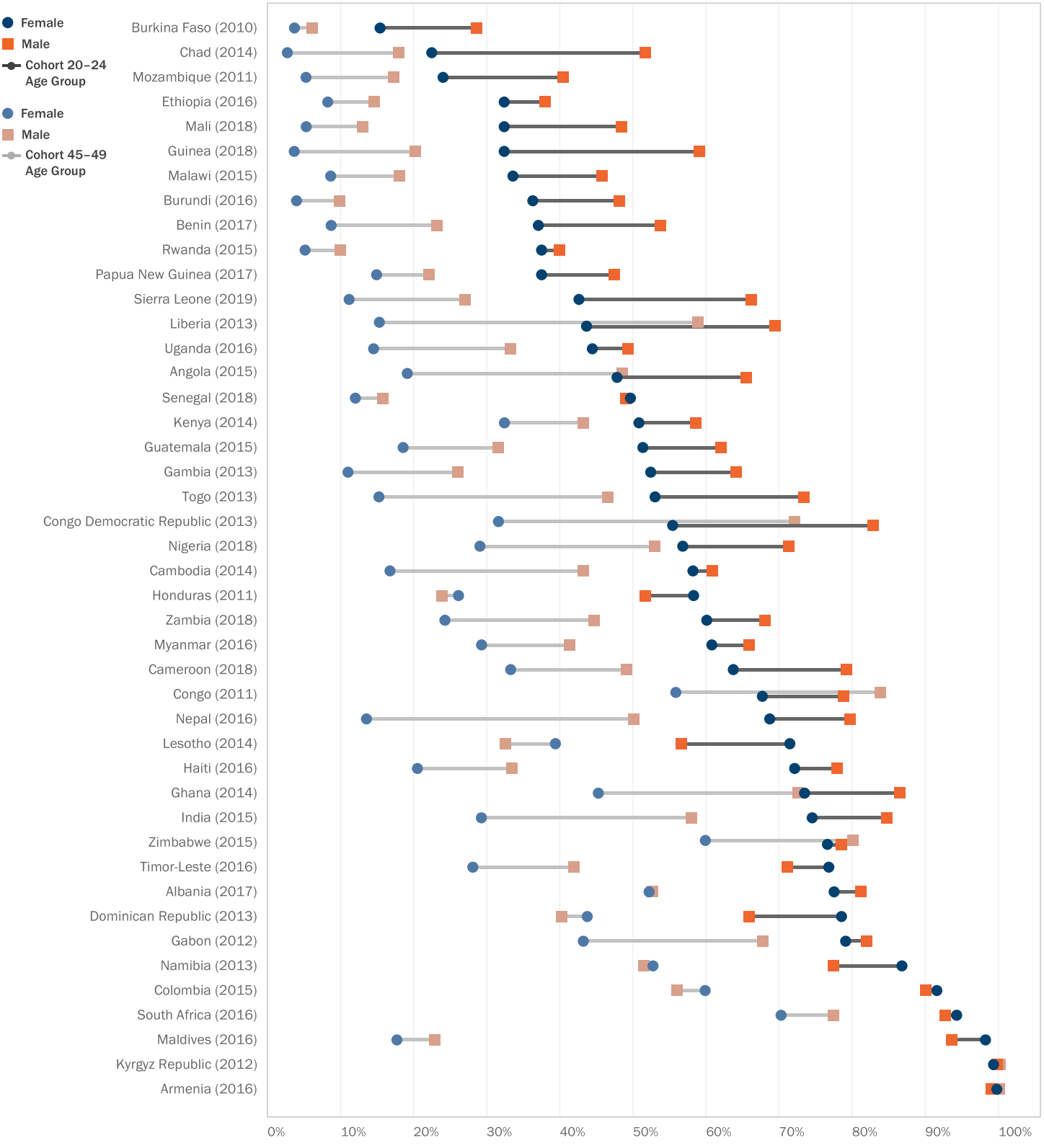
FIGURE 1 Primary school completion by cohort and sex

Gender gaps in primary school attainment are shown here across two cohorts of women in 44 countries. 20–24-year-old men and women are shown in an opaque barbell, where blue represents the percent of the female population that completed primary school, and orange shows the same for men. The 45–49 age group is shown in faded colors. The gap between these two shows progress over time.



FIGURE 2 Secondary school completion by cohort and sex

Gender gaps in secondary school attainment are shown here across two cohorts of women in 44 countries. 20–24-year-old men and women are shown in an opaque barbell, where blue represents the percent of the female population that completed secondary school, and orange shows the same for men. The 45–49 age group is shown in faded colors. The gap between these two shows progress over time.



When do gender gaps emerge?

To effectively target programs and policies it is important to see when in the educational cycle gender gaps emerge. For example, is a country's gender gap in attainment due to differences in primary school enrollment or retention? In FIGURE 3 we show two numbers: the first is the gender gap in primary school completion (in teal), the second is the gender gap in primary school completion, among those who enrolled in primary school (orange). The orange bar thus shows the gender gap in primary school dropout.

We observe four general patterns underlying gender disparities in primary attainment:

Group 1: In some countries, such as Burkina Faso, Ethiopia, India, and Nigeria, the gender gap in primary school completion is almost completely explained by girls' lower enrollment relative to boys.

Group 2: In other countries, such as the Republic of the Congo and Kenya, substantial proportions of the gap in completion are due to gender gaps in enrollment but higher rates of school leaving among girls compared to boys also play a role.

Group 3: In contrast, gender gaps in primary completion are almost completely due to primary school dropout in Zambia and Uganda.

Group 4: The bars that fall below the line show gender disparities that favor girls, such as in South Africa and Zimbabwe.

Gender gaps in learning outcomes

Too many children across the globe cannot read and have not mastered basic math skills (UNESCO 2020; UIS 2017). FIGURE 4 shows that, even among young women and young men who completed primary school, many do not have basic literacy skills.[3] Indeed, among those who completed primary school, the proportion of 20 to 24 year olds who are literate is less than 50 percent in over a third of the countries in our sample (41% of countries for girls and 38% for boys).

Whether or not gender gaps in learning exist in LMICs remains an open question due to difficulties with existing data (Jakiela & Hares 2019), and the answer likely varies by context. While some, such as the GEM Gender Report 2020 and World Bank World Development Report 2018, argue that girls tend to outperform boys in reading, their findings are based on data from high- and middle-income countries. In an analysis translating country-based test scores, Patel and Sandefur (2020) find that among girls who go to school, girls' scores are often higher than boys. Our analysis here suggests this may not be the case in all LMICs. In our sample, which is limited to 20 to 24 year olds who completed primary school or higher, males fare better in about half the countries. Percentages of girls and boys who are literate are roughly equivalent (within 3 percentage points) in 6 countries, and the remaining countries are split in terms of whether the gender gaps in literacy skills favor boys (16 countries) or girls (15 countries).

We see three patterns across countries in our sample:

Group 1: Countries where boys outperform girls, such as Burkina Faso, Ethiopia, Ghana, and India.

Group 2: Countries such as Nepal and Nigeria where both females and males perform equally (within 3 percentage points).

Group 3: Countries such as Uganda and Mali where girls outperform boys.

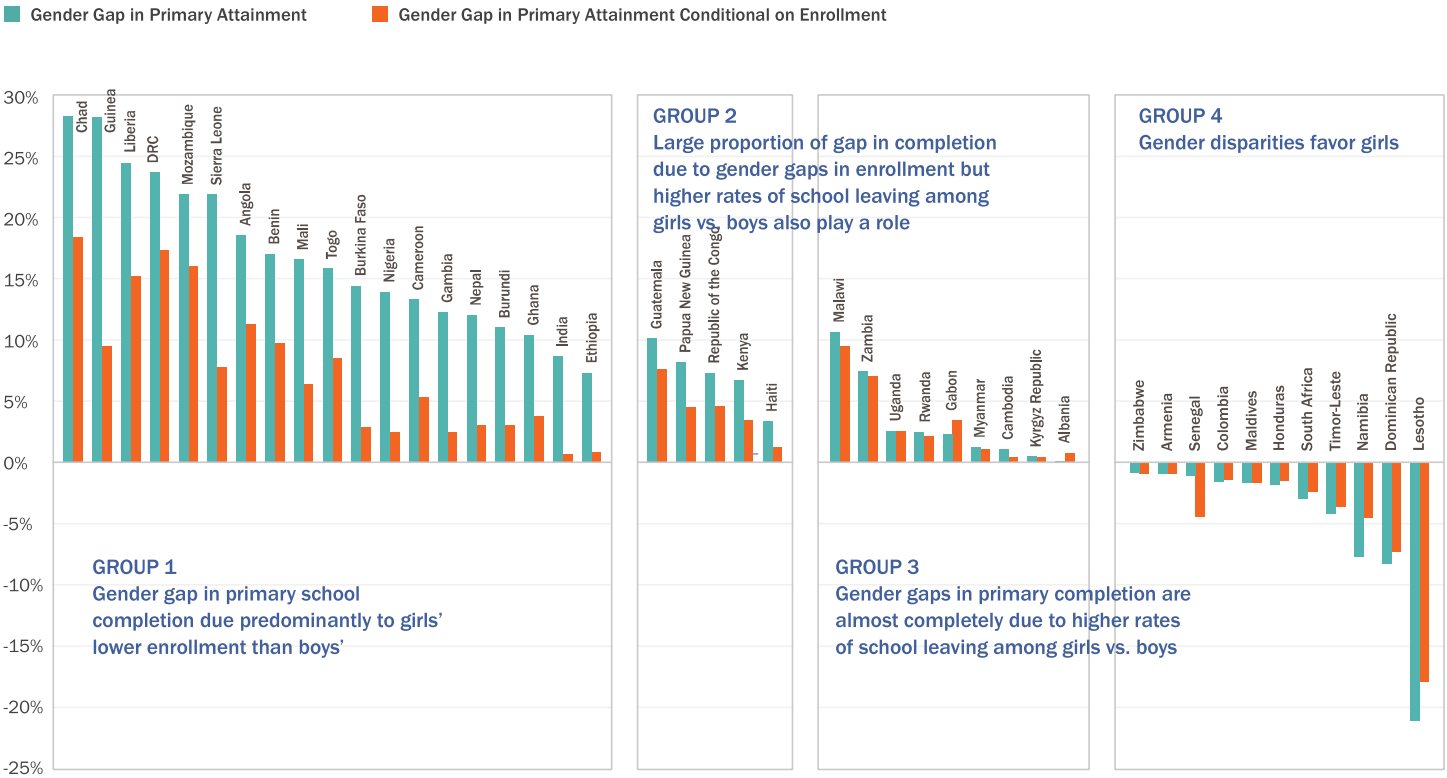
Understanding what underlies these patterns can help inform more effective policies and programs. First, why are there any primary school graduates who are illiterate? One common explanation has to do with poor school quality, so that even those children completing primary school may not be learning enough to achieve literacy (World Bank 2018). Or, it may be that literacy skills are held only tenuously upon graduation and are lost if students do not continue to secondary school or have opportunities to use their skills (Soler-Hampejsek et al. 2018).

Second, what could explain the gender gaps in literacy that we see in Group 1 countries? It is important to note that these results should be interpreted with caution, especially in countries with gender gaps in primary school completion. In such settings, only the highest performing girls or the most economically advantaged may be the ones who are able to complete primary school, whereas boys of all skill levels may have more of an opportunity to complete primary school. However, those patterns would tend to underestimate girls' disadvantages in learning. The patterns we see here may reflect gender biases in the classroom or school environment. But given the age group (20–24), these patterns may also reflect the loss of skills after leaving school, which may be more pronounced for girls than boys due to more limited opportunities to apply and build their skills outside of school (Psaki et al. 2019). Such learning loss might also explain why our findings (reflecting literacy levels among 20–24 year olds) differ from findings based on data collected from students enrolled in school.

3. Literate is defined as women and men who attended schooling higher than the secondary level or who can read a whole sentence or part of a sentence in their local language.

FIGURE 3 Gender gap in percent of population aged 20–24 completing primary school

Gender gaps in primary attainment are shown here among 20–24-year-olds in 44 countries. The height of the bar represents the percentage point difference in attainment between males and females. The teal bar shows the difference among men and women in primary attainment. The orange bar shows the difference among men and women in primary attainment, conditional on enrollment in primary school. These bars can be compared to aid in understanding how much of the national gender gap in primary school attainment is explained by the gap in primary school enrollment.



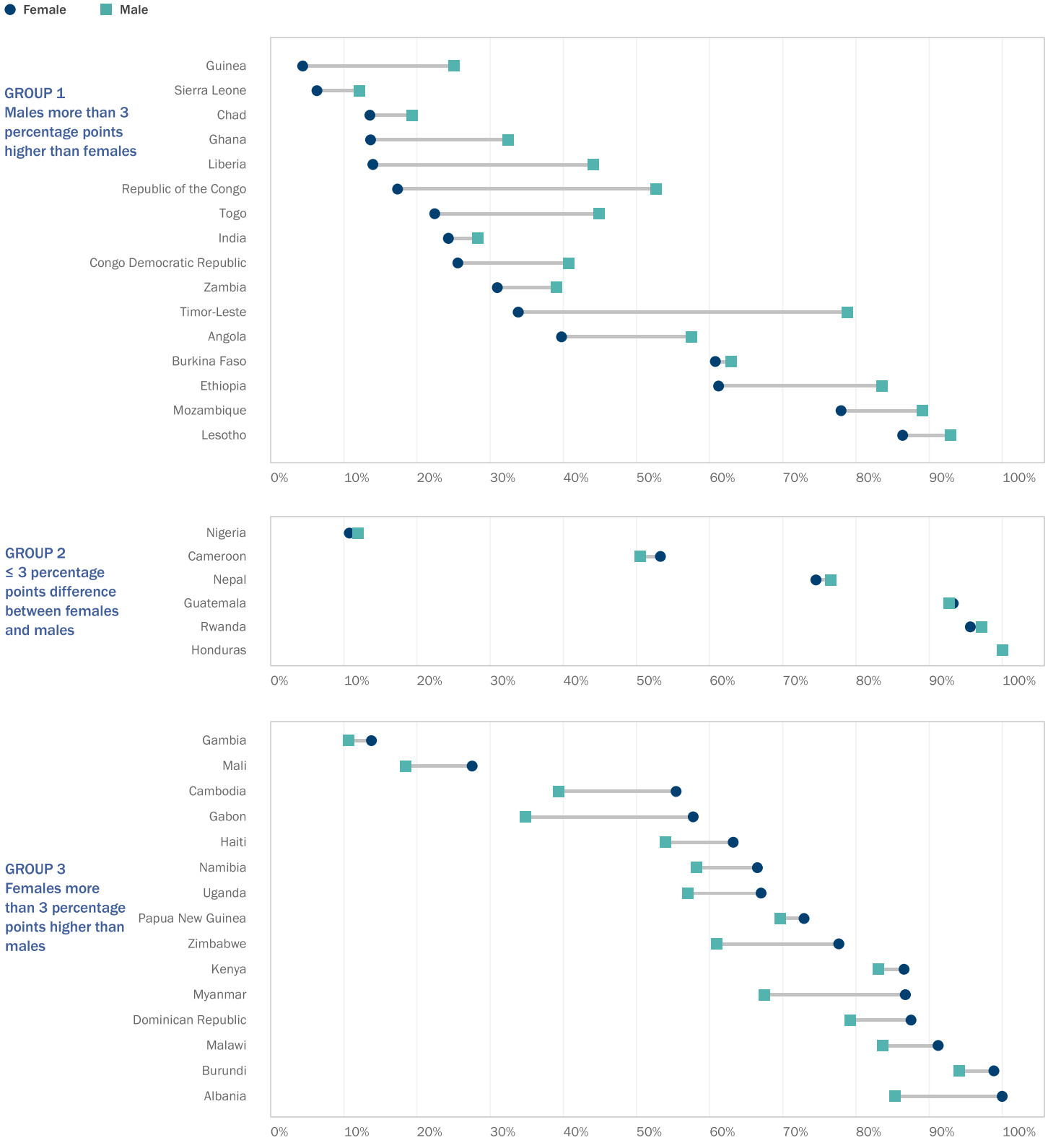
Third, what about countries where a higher proportion of girls are able to read than boys? While the gender gaps that favor girls are often smaller than those that favor boys, this inequality is a concern. These different patterns may reflect the difference between settings where girls and boys have more equal opportunity to apply their skills (in which case girls may perform better than boys), and those where girls are unable to apply skills after leaving school (in which case girls may perform worse than boys). Again, a better understanding of why such patterns exist can inform how to help all children learn.

Regardless, we know that learning loss over school breaks is a common issue among disadvantaged students (Quinn & Polikoff 2017). COVID-19-related school closings will undoubtedly set back students' learning based both on projections and initial reports from high-income countries (Azevedo 2020; Maldonado & De Witte 2020). Those patterns may also be gendered, depending on who is able to spend more time studying while schools are closed and who is able to access remote learning materials.

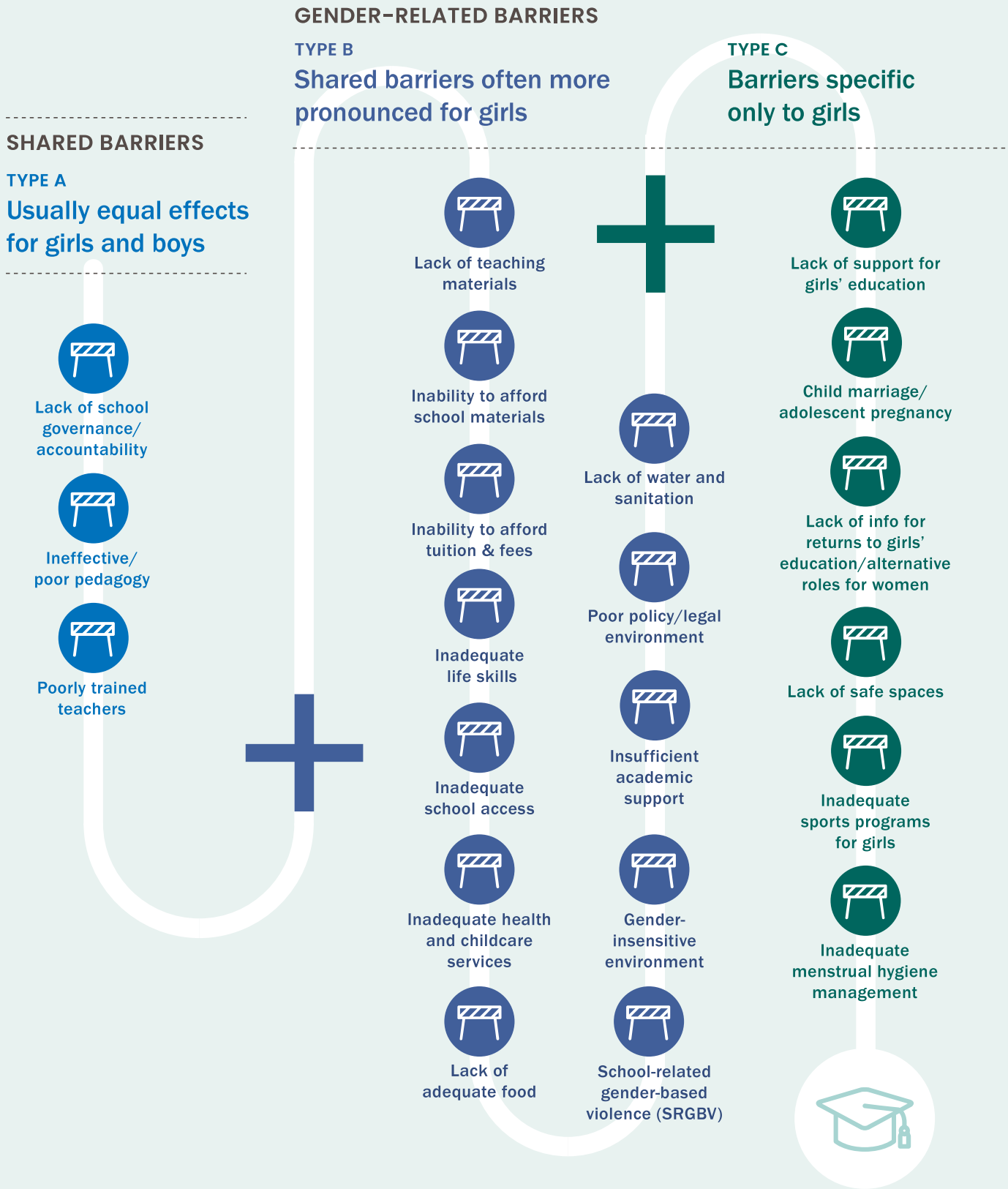
Interestingly, even at the country level, high levels of primary school completion do not necessarily mean high levels of learning. Mozambique (large gender gaps in attainment) and Ethiopia (relatively smaller gender gaps in attainment) have some of the lowest primary school completion rates (34% and 37%, respectively) of countries in our sample. Yet among girls who completed primary school, the proportion who are literate is higher in Mozambique (78%) and Ethiopia (62%) than, for example, India (24%) and Ghana (14%), which have much higher attainment (81% and 78% of girls complete primary, respectively). This may be because a primary school education is only available to the most advantaged young people in Mozambique and Ethiopia, whereas in India and Ghana, where primary school is more widely available, students who participate face more challenges. This may also reflect patterns of low participation but high quality, particularly if there is a tradeoff between quantity and quality of schooling. For example, class sizes may be smaller in countries with lower levels of enrollment and attainment.

FIGURE 4 Percent of population aged 20–24 who have completed primary school and are literate

Gender gaps in literacy are shown here among those who have completed primary school only. Literacy is defined as being able to read a whole sentence in the local language. Colombia, Kyrgyz Republic, and Armenia are missing from this dataset. Benin, Maldives, Senegal, and South Africa are excluded for small sample size.



Perceived barriers to education for girls



Why might girls be faring worse than boys in some settings?

The manifold factors that contribute to low educational attainment and learning in LMICs include everything from structural drivers such as poverty and child marriage, to low value placed on girls' education, to supply issues such as poorly trained teachers and inadequate school facilities. While the role of these different challenges varies from one setting to another, there is reason to believe that the challenges facing girls are multifaceted. It may be the intersection of these barriers that generates the worst outcomes for the most vulnerable girls.

With the important role of context in mind, we developed a framework that lays out the most commonly perceived gender-related barriers to education based on a review of policy and research documents. Effective sector-wide efforts to improve education for girls need to tackle three types of barriers at once:

1. Those that are shared somewhat equally by girls and boys (e.g. ineffective pedagogy).
2. Those that might be more pronounced for girls (e.g. inadequate school access, lack of water and sanitation).
3. Those that are specific to girls (e.g. lack of support for girls' education, lack of safe spaces).

Many gender-related barriers likely affect boys as well, such as school-related gender-based violence, and there may be barriers that are specific to boys, or more pronounced for boys in some settings.

Reorienting our thinking around barriers, and interventions to address those barriers, can also provide a framework that is more useful to policymakers and practitioners. If decision-makers can properly diagnose the barriers to schooling in each setting, they can then identify the most effective—and cost-effective—approaches to addressing those barriers.

The following set of data visualizations explores the potential role of some of these gender-related barriers to schooling across the 44 countries included in our sample.

Gender disparities by poverty

Poverty and gender intersect to undermine children's schooling in most countries to the disadvantage of girls (**FIGURE 5**). In about two-thirds (68%) of the countries we looked at, less than half of girls in the poorest quintile completed primary school, while this is true in less than half of countries (43%) for boys. In about a quarter of countries (27%) the gender gap among the poor favors boys by 20 percentage points or more.

For both girls and boys, the majority of young people in the wealthiest quintile complete primary school. And while they do not disappear, gender disparities—with males more likely to complete primary than females—are far less marked among the wealthy in most countries.

In almost every country included, the poor are less likely to complete primary school than the rich. On top of this consistent finding, we observe three main patterns:

Group 1: Countries where, regardless of wealth quintile, girls are less likely to complete primary school than boys (e.g. Benin, Ethiopia, and Mali).

Group 2: Countries where gender gaps that affect poor girls are virtually erased among the wealthy, such as in India, Kenya, and Nigeria.

Group 3: Countries where poor girls do better than poor boys, such as in South Africa and the Dominican Republic.

The intersection of gender and poverty calls for special attention to the poorest girls in Groups 1 and 2. We can see this also in learning outcomes (**FIGURE 6**). Again, the poorest girls have the lowest levels of literacy in 31 out of 44 countries. Gender gaps favoring boys are wider among the poor, although in countries such as Burkina Faso, Sierra Leone, and Benin, gender gaps in literacy are marked among the wealthy as well. Again, while these groups are selective, especially in settings where girls are at a disadvantage in enrollment and attainment, the persistence of these gaps within wealth groups is notable.

FIGURE 5 Percent of population aged 20–24 completing primary school, by wealth quintile

This figure shows the gender gap in primary school attainment stratified by the poorest and richest quintiles, as defined by the DHS wealth quintile variable. The poorest quintile is shown in an opaque barbell, where the blue circle represents the percent of the female population that completed primary school, and the teal square shows the same for men. The richest wealth quintile is shown in faded colors.

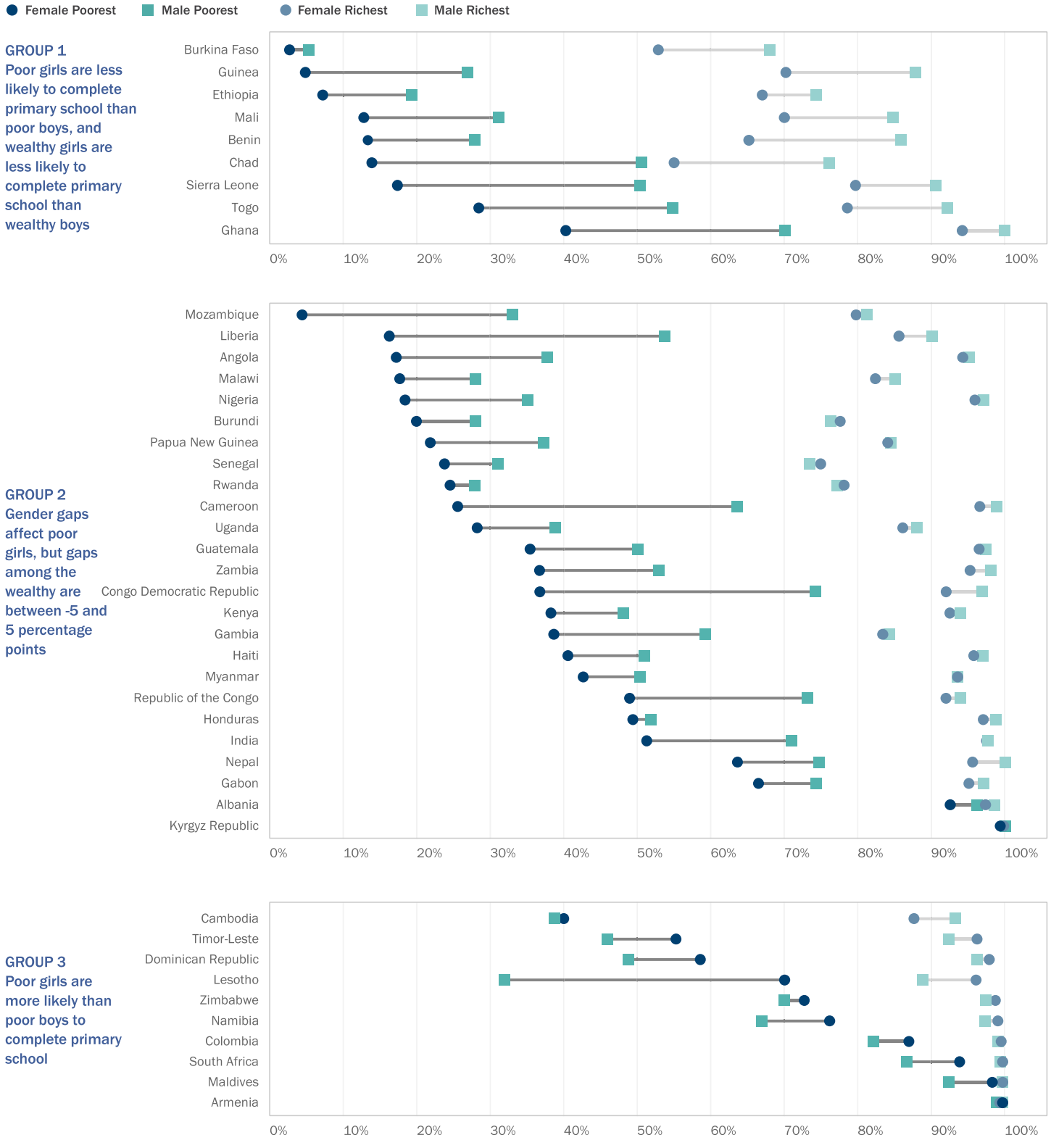
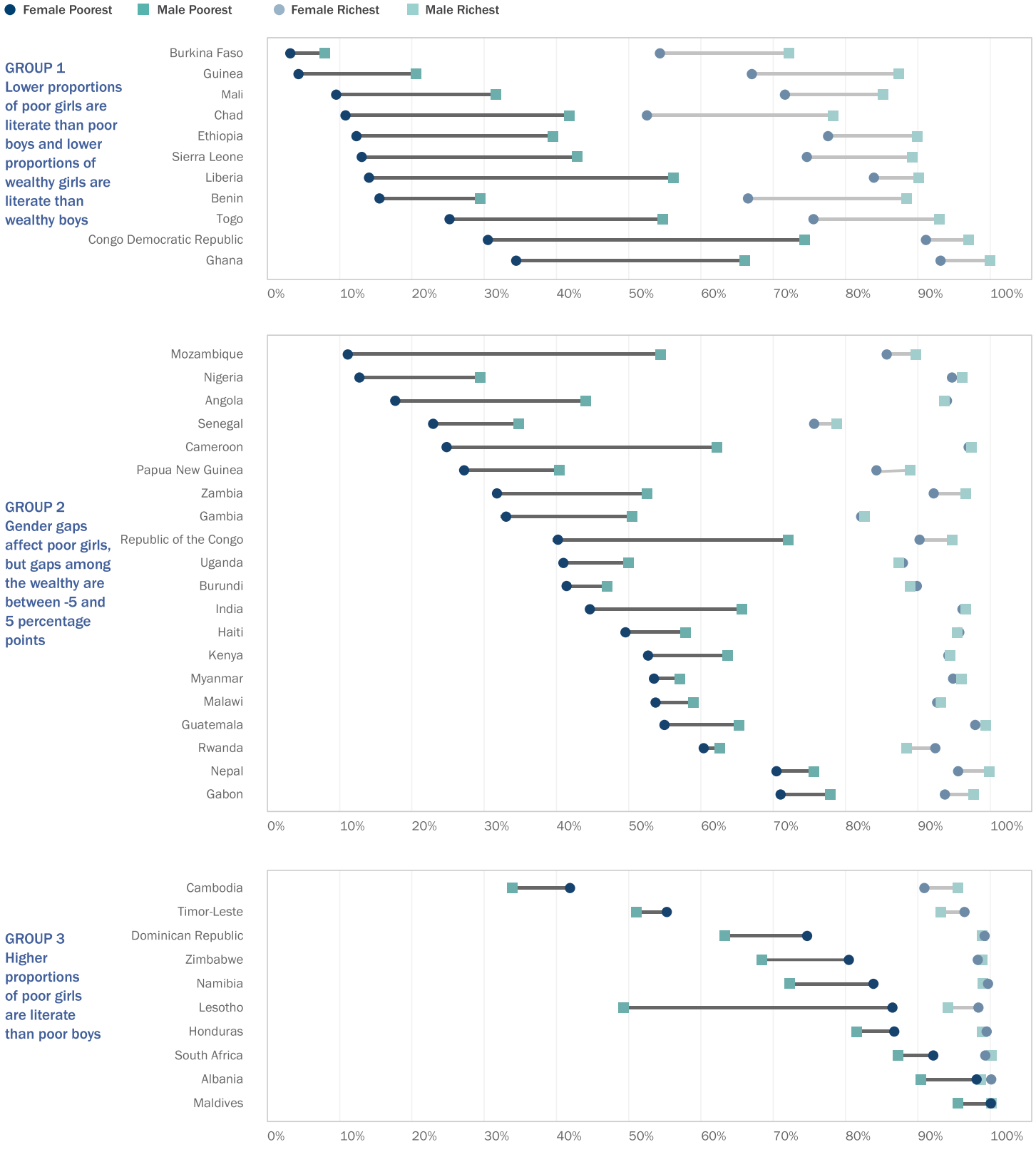


FIGURE 6 Percent of population aged 20–24 who are literate, by wealth quintile

Gender gaps in literacy are shown here among the poorest and richest quantiles as defined by the DHS wealth quintile variable. Literacy is defined as being able to read a whole sentence in the local language. Colombia, Kyrgyz Republic, and Armenia are missing from this dataset. The poorest quintile is shown in an opaque barbell, where the blue circle represents the percent of the female population who are literate, and the teal square shows the same for men. The richest wealth quintile is shown in faded colors.



Child marriage

Despite progress, child marriage (marriage before the age of 18) remains widespread in many countries. UNICEF estimates that in least developed countries, among 20 to 24-year-old women, 12 percent of girls were married before the age of 15, and 38 percent of girls were married before the age of 18 (UNICEF database updated Feb 2020). Prevalence of child marriage is highest in parts of West Africa, reaching 76 percent in Niger (ibid); in terms of burden, the largest number of girls affected by child marriage lives in South Asia (UNICEF 2018).

FIGURE 7 shows the proportion of young women aged 20–24 who were married before age 18. In 36% (16 out of 44) of countries, one-third of girls or more were married before age 18.

FIGURE 8 shows the close links between girls' age at marriage and educational attainment. In every country for which we had data, lower levels of educational attainment are associated with child marriage, with girls who complete secondary school less likely to marry by age 18 than girls who complete primary or have no education.

While the relationship between child marriage and schooling outcomes is complex, some quantitative studies suggest that child marriage may lead to lower educational attainment (Wodon et al. 2017) and lower literacy levels (Nguyen & Wodon 2014) for girls. In reality, the strong correlation between the timing of marriage and school dropout may reflect an intertwined decision-making process by families, driven in part by the lack of alternative pathways available to girls in their communities (Bajracharya, Psaki & Sadiq 2019; Psaki 2016). Regardless of the reason, the fact is that girls who are married as children complete less schooling (Wodon 2017; Rasmussen et al. 2019).

FIGURE 7 Proportion of young women aged 20–24 who were married before age 18

This figure shows the proportion of women aged 20–24 who married before age 18 in 44 countries.

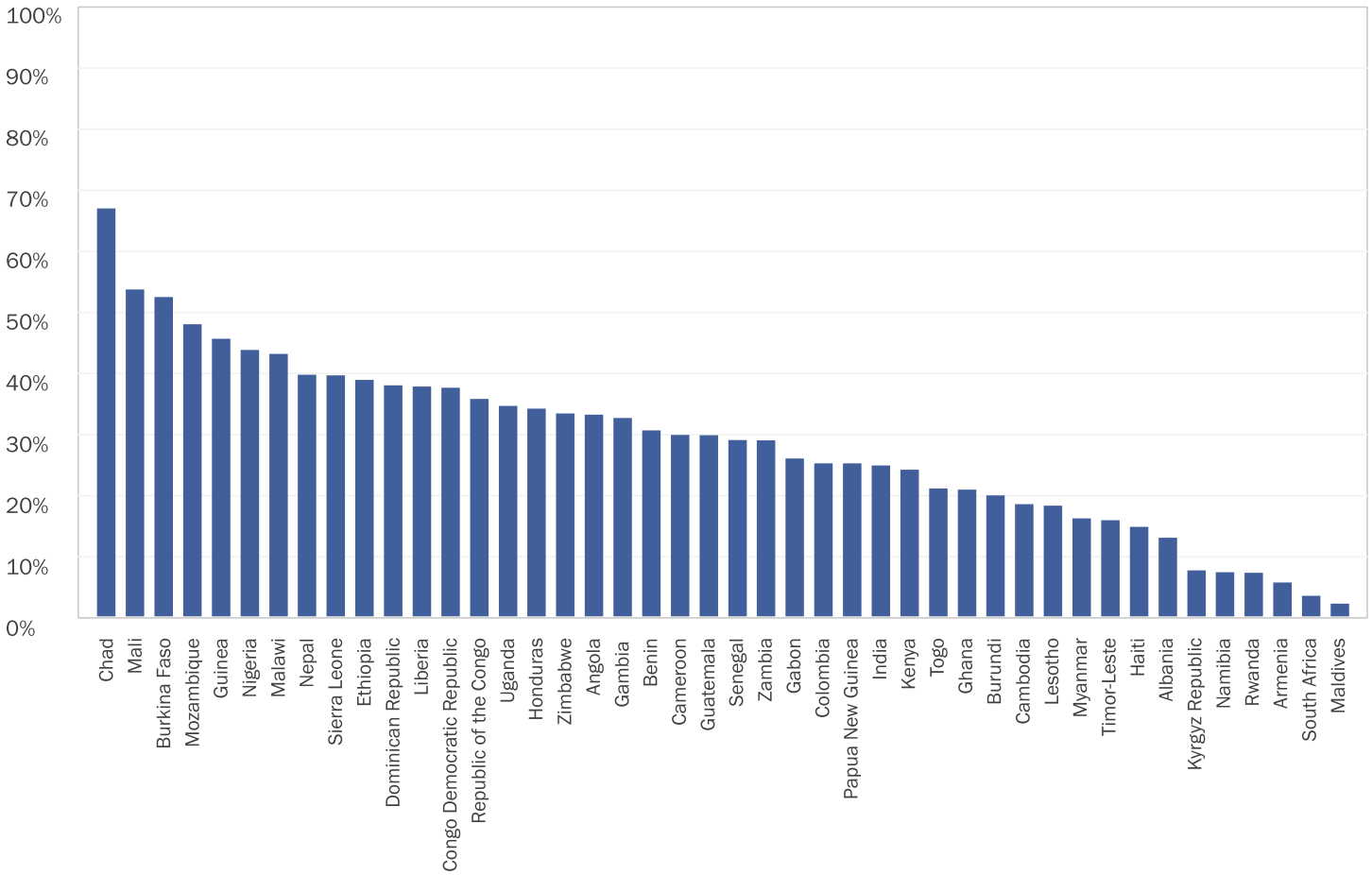
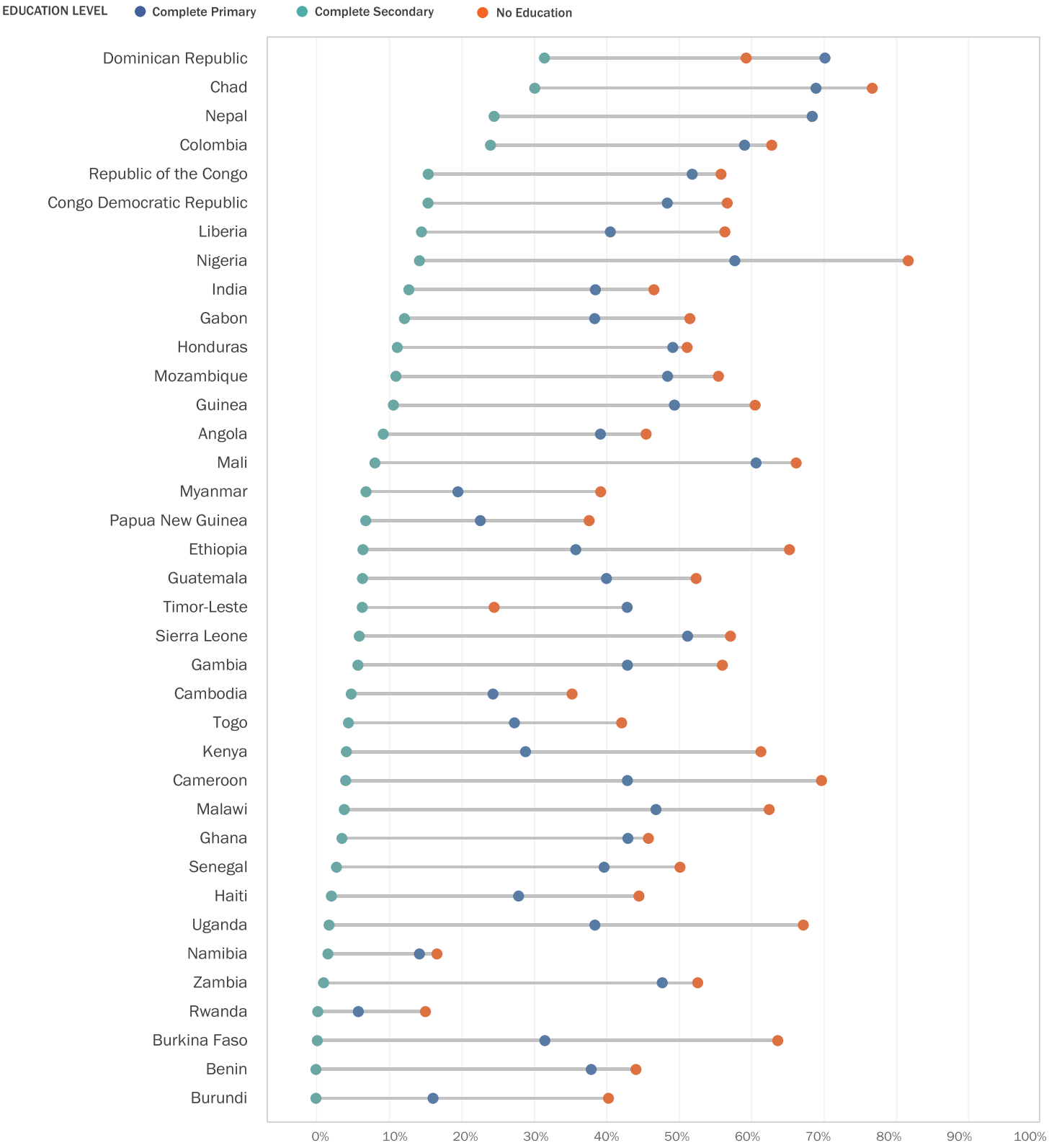


FIGURE 8 Percent of women aged 20–24 who were married by age 18, by educational attainment level

This figure shows the proportion of women aged 20–24 who married before age 18, stratified by education level. Education categories here are no education, primary school completion, and secondary school completion. Albania, Armenia, Kyrgyz Republic, Lesotho, Maldives, South Africa, and Zimbabwe are excluded from this analysis based on sample size.



Adolescent childbearing

Like child marriage, childbearing during adolescence may be both a cause and a consequence of leaving school. And, like child marriage, adolescent childbearing may be driven by gender norms, poverty, and poor academic performance (Nguyen & Wodon 2014; Bajracharya, Psaki & Sadiq 2019). Regardless, having a child before age 18 rarely allows for continued schooling.

The proportion of girls affected is shown in FIGURE 9. In most countries (55%), 20 percent or more of young women aged 20–24 had begun childbearing by age 18. Notably, in many countries the majority of women who gave birth before age 18 did so after they were married. That is, rather than being an unexpected event, most adolescent childbearing occurs in the context of marriage.

The close ties between marriage and childbearing in many settings has important program and policy implications. Is it pregnancy that precipitates marriage and dropout? Or child marriage that leads to dropout and pregnancy? Or are girls who leave school (for other reasons) more likely to marry or to get pregnant? Identifying which pattern prevails can inform more effective interventions.

FIGURE 10 shows the mean age of marriage and mean age of first birth among women aged 20–24, by country. In almost all countries shown, marriage precedes childbearing on average. However, in all settings the timing of these two life events is quite close. While we cannot definitively tease out these dynamics, it is clear that the sequence of these life events for girls is rapid, and the dynamics vary from one country to the next. We observe three patterns in these average ages of marriage and childbearing:

Group 1: Countries where marriage precedes childbearing by more than one year

Group 2: Countries where age at marriage and age at childbearing are virtually the same (average age at marriage is 6 to 12 months before average age of childbearing)

Group 3: Countries where pregnancy, if not childbearing itself, precedes marriage (marriage is less than 6 months before childbearing, or marriage is after childbearing, or never married)

Only one country has an average age of marriage that is older than average age of childbearing, and just 16% (7 out of 44) countries fall in Group 3. These groupings reiterate the fact that child marriage is the major (immediate) driver of adolescent childbearing in many settings.



FIGURE 9 Proportion of women aged 20–24 who gave birth before age 18, by marital status

This figure shows the proportion of young women aged 20-24 who gave birth before age 18 before they were married (teal), as well as the proportion of births before 18 that occurred in the context of marriage (blue).

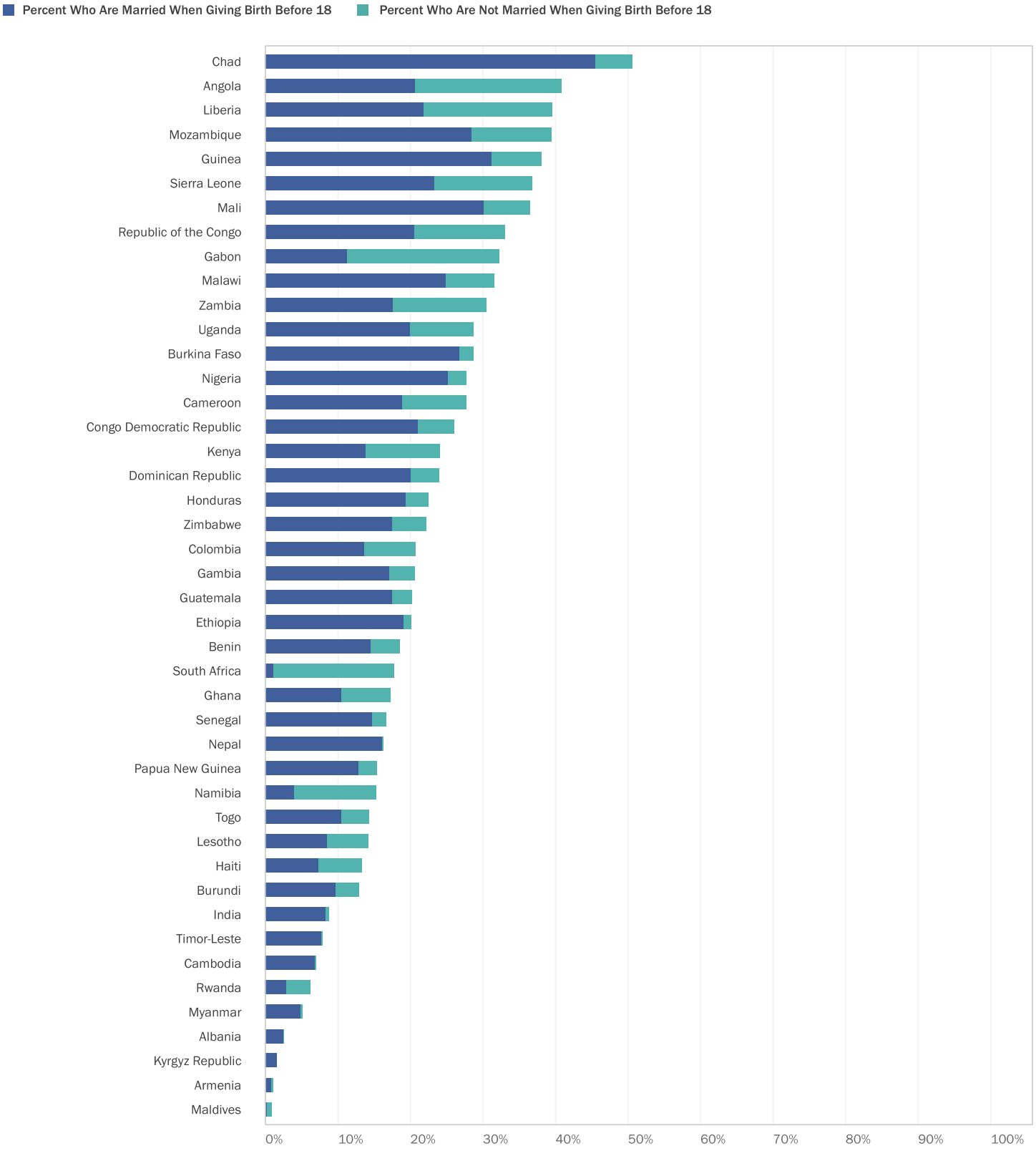


FIGURE 10 Mean age at first birth and first marriage, among young women who have experienced these events

This figure compares the average age at first birth and the average age at marriage among all women aged 20–24 in 44 countries.

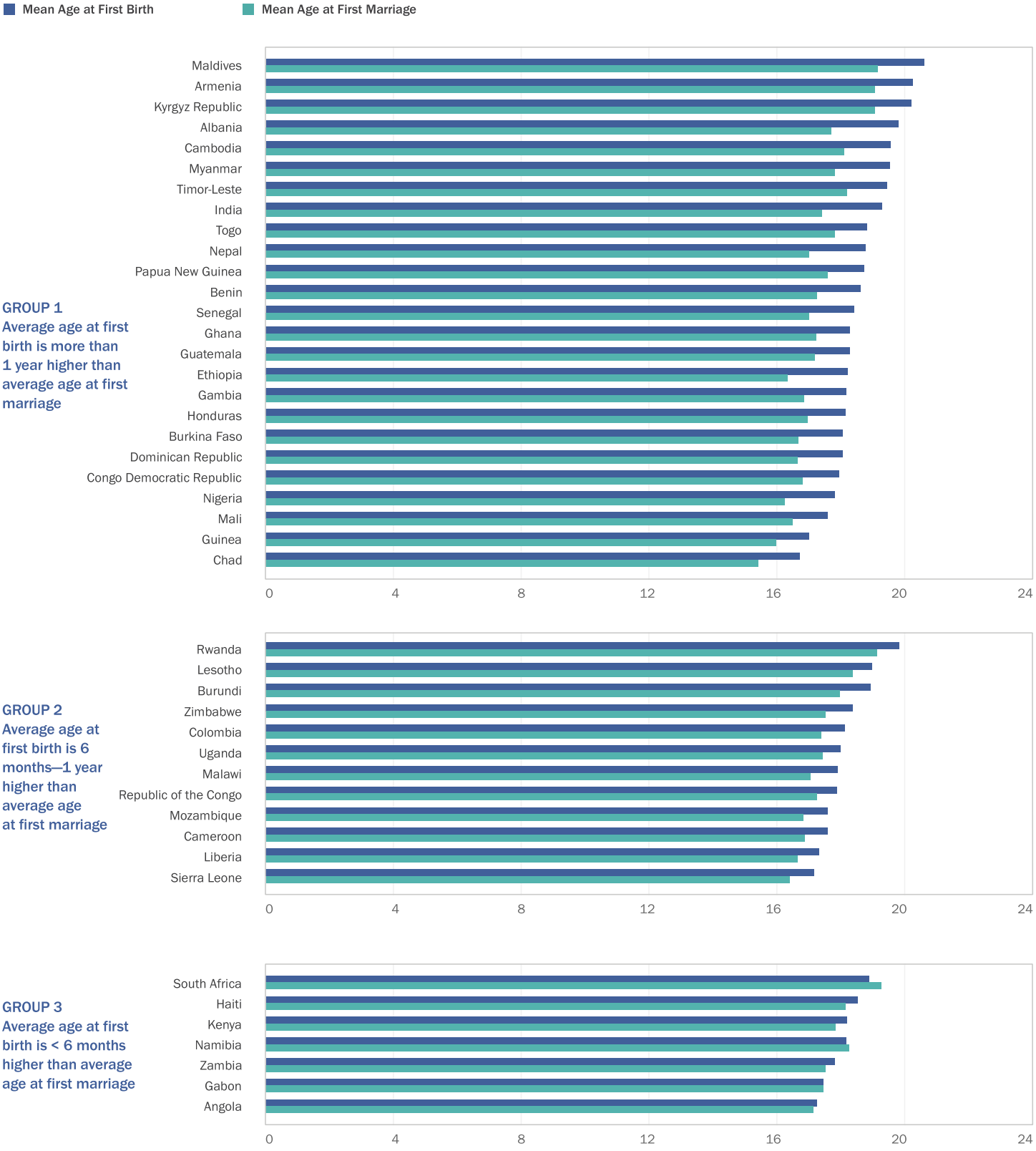
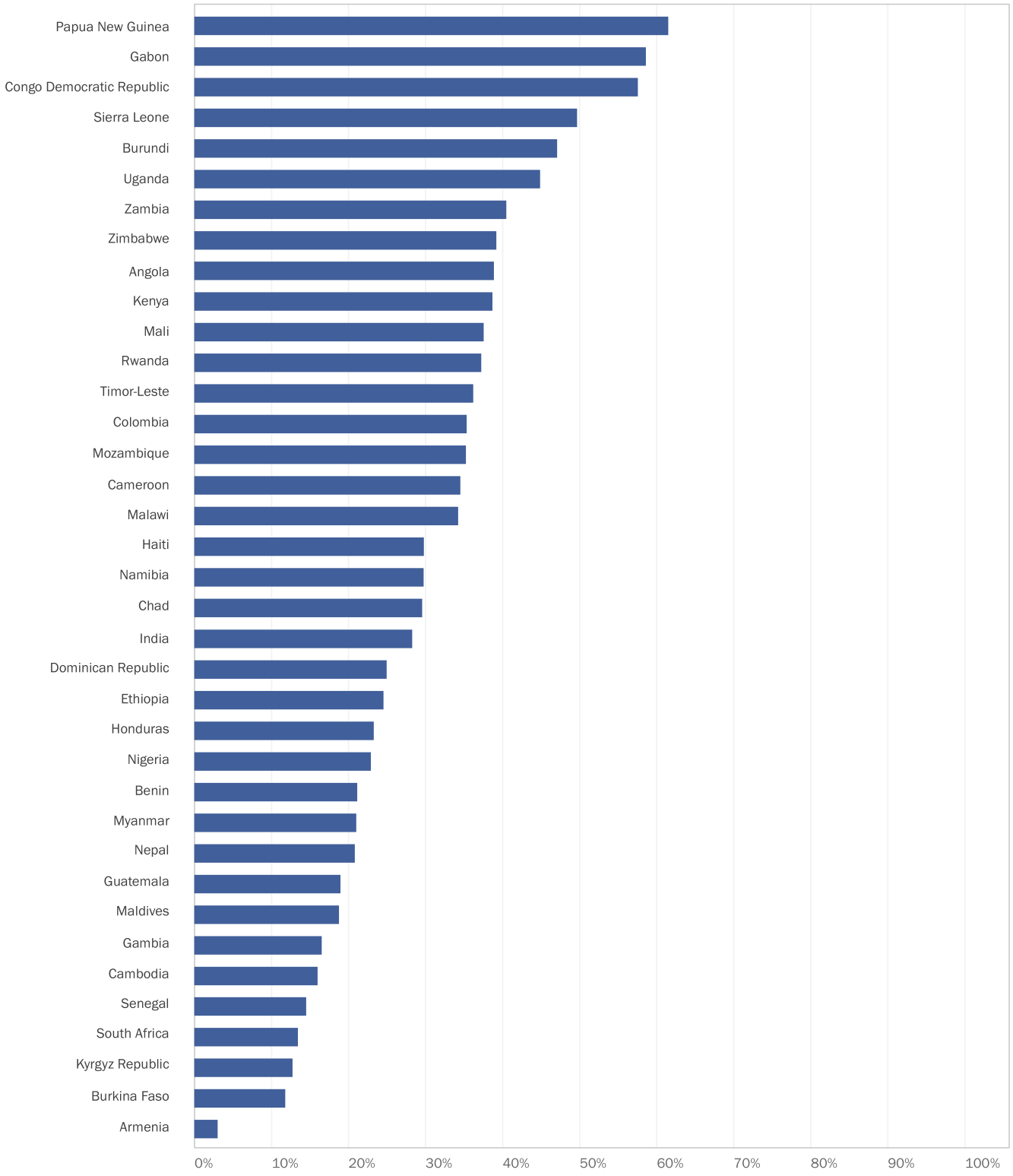


FIGURE 11 Percent of women aged 20–24 who have ever experienced physical and/or sexual violence

This figure shows the percent of women aged 20–24 who have ever experienced physical and/or sexual violence after aged 15. This analysis is missing Albania, Congo, Ghana, Guinea, Lesotho, Liberia, and Togo.



Gender-based violence

Another potential gender-related barrier to schooling is gender-based violence in schools, households, and communities.

FIGURE 11 shows the percent of women aged 20 to 24 who have ever experienced physical and/or sexual violence. In half (54%) of our sample of countries the prevalence is 30 percent or more and in 76% of countries, prevalence is over 20 percent.

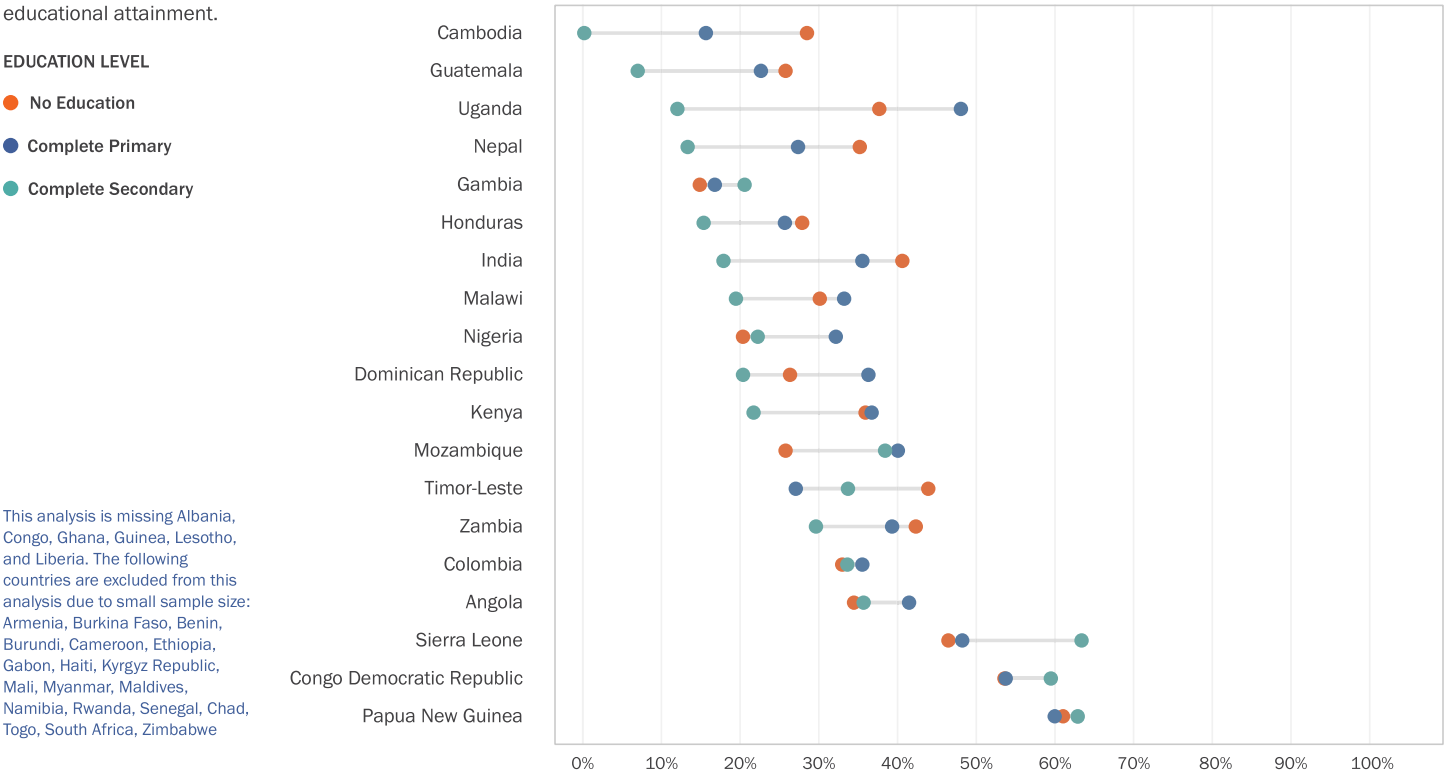
FIGURE 12 shows that, for women aged 20 to 24, those with more education are often, though not always, less likely to have experienced physical and/or sexual violence. In half the countries shown (10/19), women who completed secondary school are less likely than those with no education or primary completion to have experienced physical violence. For example, while 41% of women in India with no education and 36% of those who completed primary school have experienced violence, among women with secondary education 18% of females had ever experienced violence.

Guatemala shows a similar disparity, with secondary school graduates reporting 19 percentage points lower likelihood of having experienced violence than those with no education. In Uganda and Malawi, the differences are less marked (16 percentage points and 11 percentage points, respectively). Sierra Leone, however, shows the opposite pattern, with prevalence of violence higher among women who completed secondary school compared to those who completed primary or no education.

These patterns may reveal several realities. Education may have a protective effect against violence in some settings—for example, if more educated women are able to control financial resources. But these patterns also reflect community norms around the acceptability of gender-based violence. Communities that condone gender-based violence may be less supportive of girls' and women's education. Those communities may also be more likely to have schools that condone violence, creating an additional gender-related barrier to education for girls. In settings where higher education is linked with violence, having more education than one's husband may put women at risk of intimate partner violence. This snapshot in time does not allow us to unpack whether violence is causing girls and women to leave school, or education protects against violence. But it is clear that violence is pervasive across settings, and that in many countries it is linked with lower educational attainment.

FIGURE 12 Percent of women aged 20–24 who have ever experienced physical and/or sexual violence, by education level

This figure shows the percent of women aged 20–24 who have ever experienced sexual violence, and/or physical violence after age 15, stratified by educational attainment.



This analysis is missing Albania, Congo, Ghana, Guinea, Lesotho, and Liberia. The following countries are excluded from this analysis due to small sample size: Armenia, Burkina Faso, Benin, Burundi, Cameroon, Ethiopia, Gabon, Haiti, Kyrgyz Republic, Mali, Myanmar, Maldives, Namibia, Rwanda, Senegal, Chad, Togo, South Africa, Zimbabwe

COVID-19

COVID-19 has created new challenges for education systems while at the same time amplifying disparities that underlie existing barriers to education. Studies documenting the impact of COVID-19-related lockdowns have found decreased income, increased food insecurity and increased intimate partner violence (Hamadani et al. 2020). To examine the effects on education, we turn to recent data documenting the impact of COVID-19 and related mitigation efforts on adolescents in four sites in Kenya (Abuya et al. 2020). Population Council researchers in Kenya have interviewed nearly 4,000 adolescents from existing household samples in Nairobi (urban, informal settlements), Kilifi (eastern Kenya, coastal), Kisumu (western Kenya, urban), and Wajir (rural, conservative).

In the last term completed before COVID-19, schools had provided many young people with at least one meal a day at school (74% of adolescents in Nairobi, 58% in Kilifi, 68% in Kisumu, and 43% in Wajir). As a result of school shutdowns, the majority of adolescents in most samples reported skipping meals more often due to COVID-19 (**FIGURE 13**); levels are highest for 10 to 14 year olds living in informal settlements in Nairobi.

With the exception of Wajir, the vast majority of adolescents reported that they continued learning or remote schooling at home while schools were closed (**FIGURE 14**).

Adolescents reported more than one method of remote learning while schools were closed **(FIGURE 15)**. Very few adolescents used computers or tablets. There were no notable differences in mobile phone learning by gender in Nairobi or Kilifi, but in both Kisumu and Wajir, a higher percentage of older boys used mobile phones for school than older females.

Television and radio were more commonly reported in urban settings (31% in Nairobi and 19% in Kisumu), compared to more rural Kilifi (8%) and Wajir (15%). Wajir showed marked gender differences in use of TV and radio, with males far more likely to report using these media than females. In the other three sites these patterns held among younger adolescents only.

The most common remote learning reported across all four settings, and by males and females alike, was reading other (nonschool) books—reported by 57% of adolescents in Nairobi, 49% in Kilifi, 46% in Kisumu, and 89% in Wajir.

While these data reveal early warning signs of the effects of COVID-19-related shutdowns, the full effects may not be evident for months or even years to come. However, as a field we do not need to wait to see the full effects of this pandemic in order to take action.

FIGURE 13 Percent of Kenyan adolescents skipping meals due to COVID-19 food shortages, grouped by sex and locality

This graph shows the percent of males and females, aged 10–14 and 15–19, in Nairobi, Kalifi, Kisumu, and Wajir who reported skipping meals more often due to a lack of food during the COVID-19 pandemic.

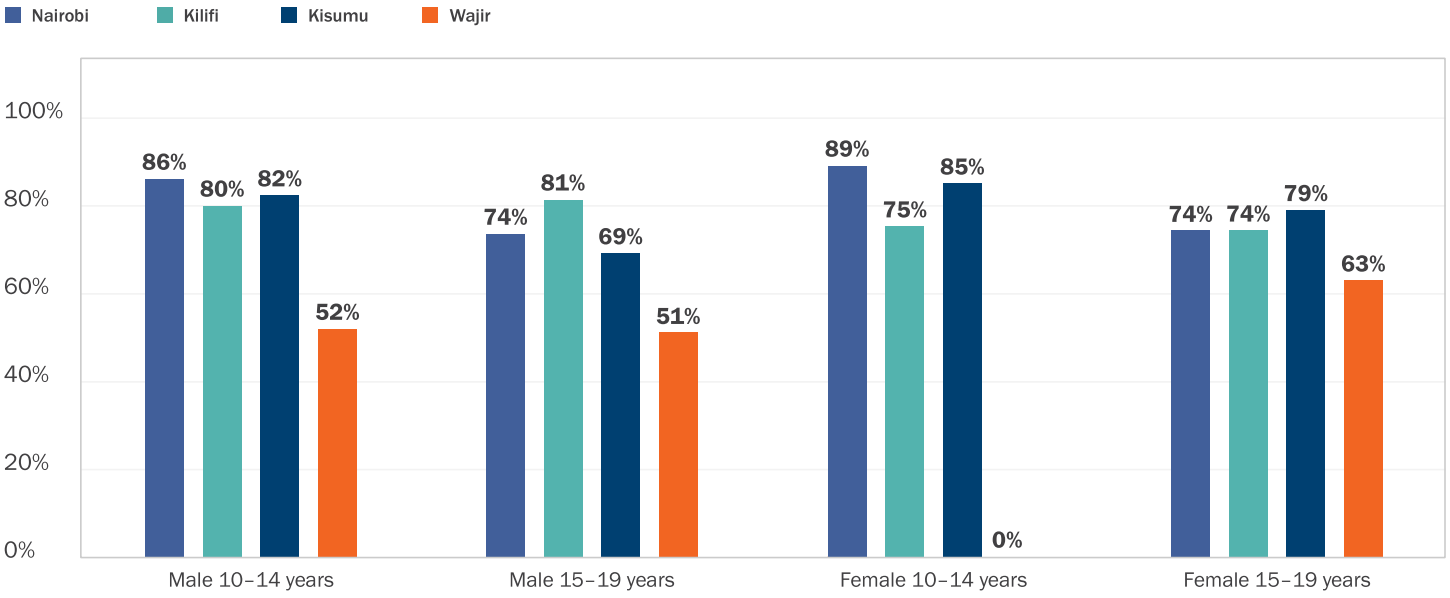


FIGURE 14 Percent of Kenyan adolescents doing schoolwork or learning from home while schools were closed, grouped by age, gender, and locality

This graph shows the percent of males and females, aged 10–14 and 15–19, in Nairobi, Kalifi, Kisumu, and Wajir who reported doing schoolwork or learning from home while schools were closed due to COVID-19.

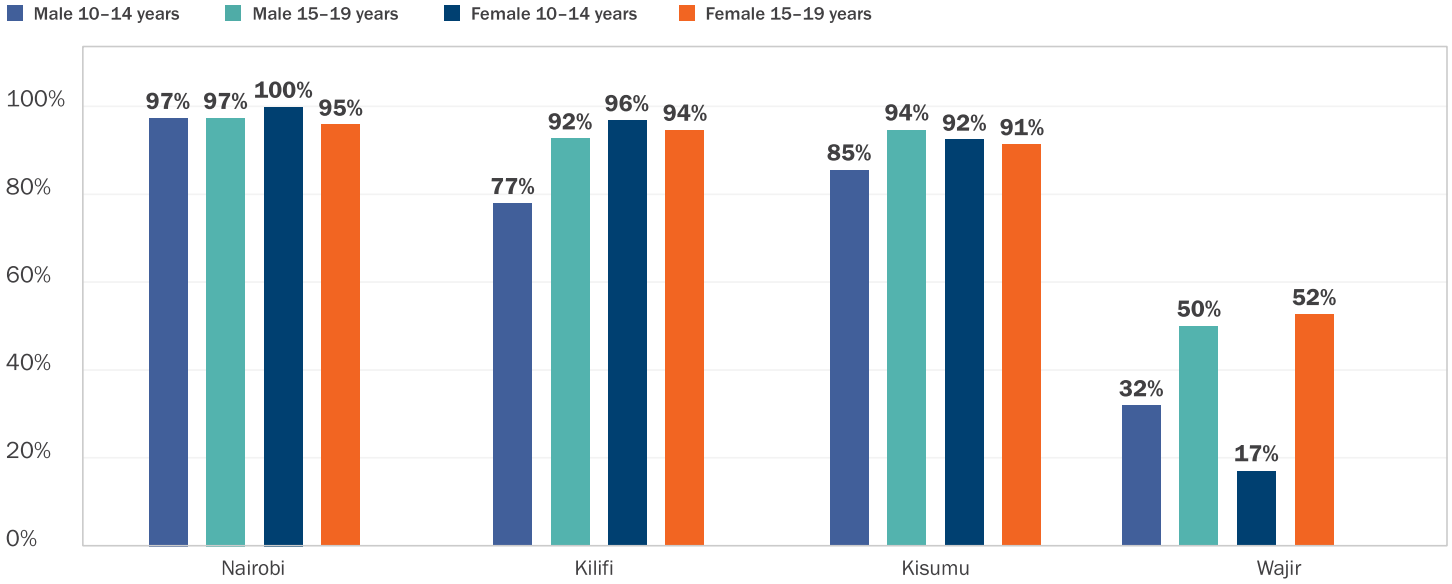
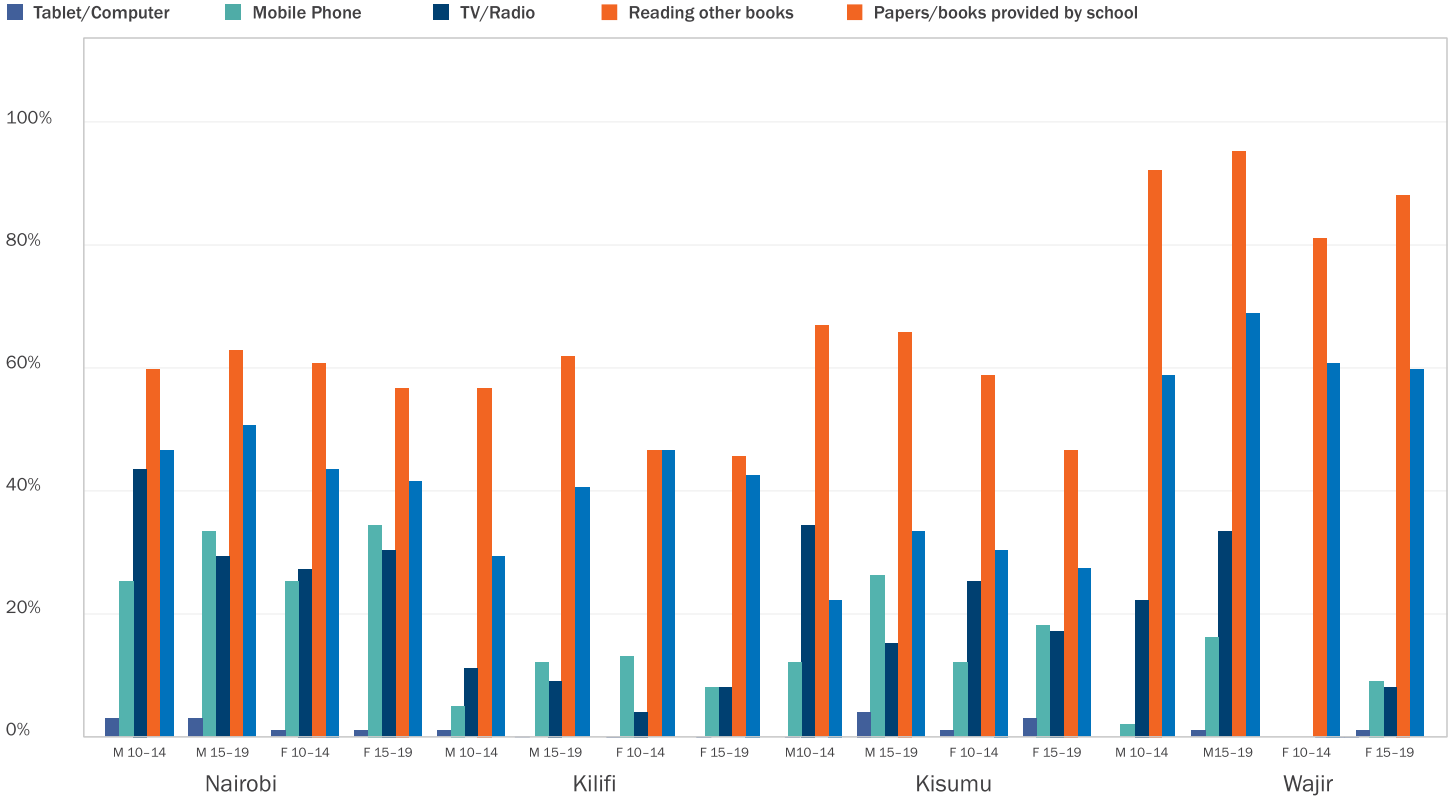


FIGURE 15 How are Kenyan adolescents learning remotely?

This graph shows the percent of males and females, aged 10–14 and 15–19, in Nairobi, Kalifi, Kisumu, and Wajir who reported using different resources and learning materials for remote learning during COVID-19-related school shutdowns.



Conclusion

Despite great progress in some education indicators over the past decade, we are still seeing unconscionably poor education statistics. Of urgent concern is the large proportion of young people who are not meeting minimum reading and math proficiency standards. Moreover, we see three types of barriers that contribute to the persistent gender gaps in education: those that are shared across all children and hinder both girls' and boys' achievement, those that are shared but often impact girls more, and those that girls alone shoulder. Without attention to all three types of barriers we will neither reach the SDGs, nor will we be able to adequately respond to new challenges, such as the COVID-19 pandemic.

SECTION 4

Practice



KEY TAKEAWAYS

1 Over half of the activities taking place in the global girls' education space are programs/interventions. The remaining 40% of activities are a combination of funding initiatives, research projects, advocacy campaigns, and networking/convening events.

2 The majority of programs in the girls' education space employ multiple components to achieve their intended outcomes. However, very few programs (12%) employ the exact same combination of program components.

3 Many programs (31%) focus on both improving learning and improving attainment or on improving attainment only (29%), but few (9%) focus on improving learning only.

4 Of all the programs in EGER, 23% are being implemented at the global level, while regional efforts are concentrated in sub-Saharan Africa and South Asia—with nearly 70% of activities taking place in one of these two regions.

5 While EGER set out to document girls' education programs, more than 75% of activities target girls (both in and out of school), and about 35% target boys (both in and out of school), as a primary target group.

How we define terms in EGER

CROSS-CUTTING TOPICS/GOALS
Noneducation topics that are often addressed as part of girls' education programs or initiatives. Common examples include gender-based violence or sexual and reproductive health.

GIRLS' EDUCATION ECOSYSTEM
The organizations and programs that work on girls' education defined broadly. Although all organizations and programs are not yet included in EGER, it is intended as a resource for the whole community.

MULTICOMPONENT PROGRAM
A program that combines two or more types of activities/components.

MULTILEVEL PROGRAM
A program that aims to affect at least two levels of the social system. Levels include individuals (e.g. girls), households, schools (e.g. teachers), communities (e.g. religious leaders), institutions (e.g. laws and policies).

ORGANIZATION
Any nongovernmental organization (NGO), international nongovernmental organization (INGO), bilateral/multilateral organization, civil society organization, research institution, government agency, private sector company, foundation, or community-based organization that supports or implements girls' education activities or research.

ORGANIZATION FUNCTION
The core type of activities an organization carries out in relation to girls' education work. Examples include fundraising, program implementation, research, capacity building, advocacy, etc.

PRIMARY TARGET GROUP
The people that a program is primarily designed to support. Programs may select more than one primary target group.

PROGRAM
An umbrella term for any girls' education activity carried out by an organization. Programs include projects/interventions, advocacy campaigns, funding initiatives, research projects, conferences, etc.

PROGRAM COMPONENT
The specific activity/ies within a program. Examples include literacy courses, conditional cash transfers, or providing textbooks to girls.

PROGRAM TYPE
Programs are grouped into the following categories:

- **Advocacy Campaign/Project:** Activities that aim to increase awareness, improve understanding and/or influence public discussion around topics in the girls' education space.
- **Convening/Conference/Network:** A meeting, conference, or network that brings people together to share information or discuss girls' education topics (does not need to be the entire focus of the event or network).
- **Funding Initiative/Portfolio**: A portfolio of investments or an area of grantmaking that provides financial assistance to activities focused on girls' education.
- **Project/Intervention:** Activities that aim to improve girls' education by building skills, reducing barriers, providing services, etc. For example, training teachers, safe space groups for girls, cash transfer programs, school construction, etc.
- **Research Project/Report/Study:** Quantitative and/or qualitative studies that aim to explore issues related to girls' education.

SECONDARY TARGET GROUP
People who are an intended target group of a program, but not the main focus of the program.

Mapping the global girls' education field

The organizations, programs, and initiatives that make up the global girls' education community are dynamic and diverse, making it difficult to get a clear picture of who is doing what, where, and how. Yet understanding the girls' education ecosystem is important. Funders, for example, may want to better understand where their investments are needed most. Practitioners may want to find partners to take on activities requiring expertise different than their own. Policymakers may be looking for partners to help roll out new initiatives. To close information gaps, and make it easier for program implementers, advocates, researchers, and funders to collaborate and respond effectively and efficiently to the growing challenges of our time, we are mapping current practice in global girls' education and making the data available and searchable for all through the EGER website.

Over the last two years, EGER has documented ongoing or recently completed work in the global girls' education field. At the time of writing this report (December 2020), EGER includes more than 280 global organizations and more than 530 ongoing or recently completed girls' education projects implemented by those organizations. EGER does not currently include the country-level government education systems these organizations and programs aim to support and often build on.

EGER allows organizations working globally and locally to spend less time figuring out who is doing what, and more time forging new partnerships, learning from one another, and delivering programs for young people. Drawing on the EGER database, in this section we share key insights on how the global girls' education field is approaching its work.

Organizations working in girls' education

Who is included so far?

EGER casts a wide net in terms of defining work that addresses girls' education in LMICs. We have included organizations and projects that work in one of three focus areas:

1. Girls' education
2. Gender and education, including structural barriers such as child marriage
3. General education programs for girls and boys (provided they have improvements in girls' education as a goal)

To map a community of this size and scope, we started by mapping organizations who work in more than one country and have an annual operating budget of USD 1 million or more. We will continue to expand on the database in the coming years.

What about national or local organizations?

From November 2018 to February 2019, EGER piloted efforts in Kenya and two states of India (Bihar and Uttar Pradesh) to map the work of local organizations. These mappings were intended to provide initial insight into the girls' education communities in each location, as well as to help develop an approach to mapping efforts at the country level. During this pilot, we vetted 87 organizations in Kenya and 109 organizations in India. Of these, we selected 30 from each country to learn more.

The data collection process at the national level is more labor intensive than the global level. Since not all organizations working at the national level have an online presence, data collectors leveraged their own networks to identify organizations. They then contacted these organizations via phone or e-mail to set up meetings to collect more information. Compared to the global mapping, this required more staff time and in-person meetings. However, these national or local initiatives form an essential part of the girls' education ecosystem.

As of 2021, EGER is expanding national-level mappings and integrating information on government initiatives. Connect with us at egeresource.org to be part of this next phase.

The Global Girls' Education Community Dashboard

The girls' education field is organic and continually evolving over time, and EGER aims to reflect those changes. Below we share some takeaways based on the current snapshot of included organizations and programs as of December 2020.

TOTAL NUMBER OF ORGANIZATIONS

288

TOP 5 ORGANIZATION FUNCTIONS

51% Program/Project Implementation

43% Capacity Building/ Technical Assistance

34% Funding

33% Awareness Raising/ Advocacy

29% Networking/ Convening

TOTAL NUMBER OF PROGRAMS

532

PROGRAM TYPE

65% Project/ Intervention

12% Funding Initiative/ Portfolio

12% Research Project/ Report/Study

9% Advocacy Campaign/ Project

2% Network/ Convening/ Conference

TOP APPROACHES USED

29% General awareness-raising/ community engagement

27% Gender, rights, and power education

22% Empowerment training

18% Sexual and reproductive health education

17% Social and emotional learning (SEL) skills building

40% **of activities are multilevel,** meaning they not only deliver services to girls and boys, but they also aim to reach other groups, including their families, teachers, and communities to address barriers to education.

TOP 5 PROGRAM GOALS

Education-related

- **35%** Improved academic skills (literacy and numeracy)
- **28%** Increased school completion (general)
- **25%** Increased years of schooling
- **22%** Improved social and emotional learning/skills and mindsets
- **17%** Increased school enrollment (general)

Cross-cutting goals

- **43%** More equitable gender attitudes and norms
- **39%** Increased agency and empowerment
- **28%** Changed social norms
- **27%** Increased employment/ job-related skills
- **21%** Reduced poverty/ increased household well-being

POPULATIONS MOST FREQUENTLY TARGETED

Target groups

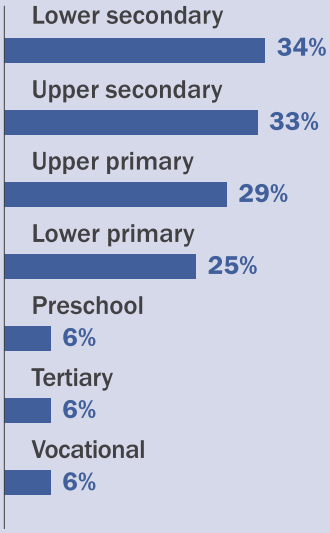
Girls (in & out of school)
Girls in school
Boys (in & out of school)
Boys in school
Teachers (female)

Subpopulations

Orphans & vulnerable children
Displaced/refugee children
People with disabilities
Adolescent mothers



School level



Enrollment status



- **45%** Both
- **20%** In school
- **4%** Out of school
- **2%** Not school aged

Who works in global girls' education?

Of the 288 organizations currently mapped in EGER, the majority identify as implementers (55%), followed by funders (44%), advocates (40%), networks (34%), researchers (30%), and policymakers (10%). More than two-thirds of organizations identify as more than one type and therefore focus on a variety of primary organization activities (FIGURE 16).

Girls' education programs

What do girls' education activities aim to achieve?

As shown in FIGURE 17, many programs aim to specifically improve academic skills (literacy and numeracy) (35%), increase school completion (general) (28%), or increase years of schooling (25%). Of the programs included, 29% focus on increasing enrollment and attainment but not learning, only 9% focus on improving learning but not enrollment/attainment, and 31% focus on both (FIGURE 17).



Of the 18 educational outcomes EGER tracks, improved critical thinking (3%) and increased numeracy (2%) were the least common outcomes of included activities.

In addition to education outcomes, many programs aim to improve additional goals that often overlap with traditional education outcomes. These goals include addressing harmful practices, such as child marriage, economic issues such as poverty, or health issues such as poor nutrition.

As shown in FIGURE 18, nearly half of the programs in EGER aim to promote more equitable gender attitudes and norms (43%), followed by increased agency and empowerment (39%) and changing social norms (28%). Of cross-cutting program goals, improved mental health (5%) and improved maternal, newborn, and/or child health (MNCH) (4%) were the least common.

FIGURE 16 What is your organization's primary function(s) in the girls' education space?

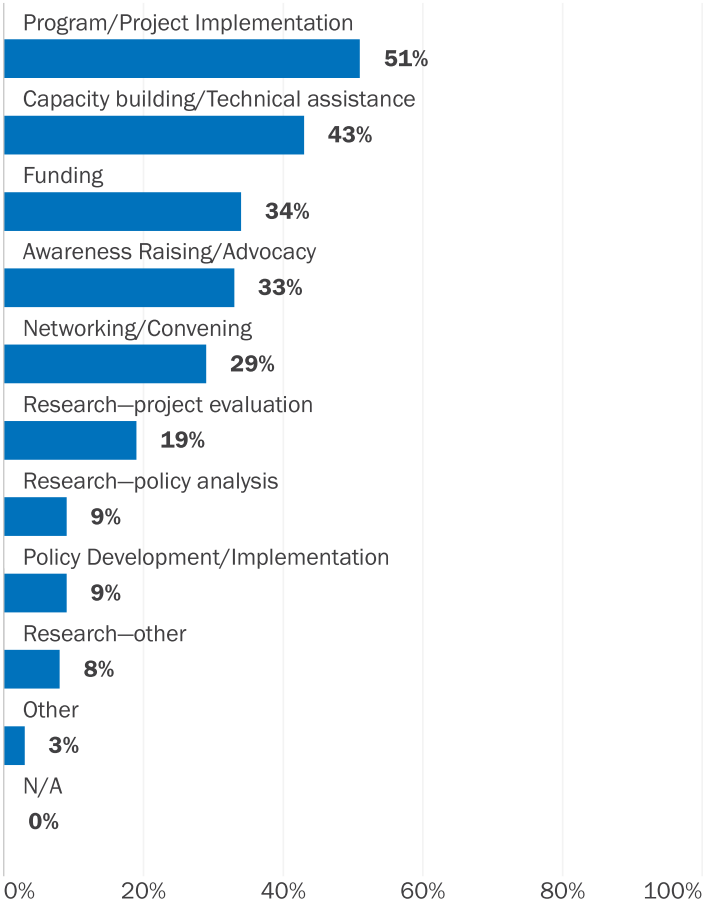


FIGURE 17 Key education-related program goals

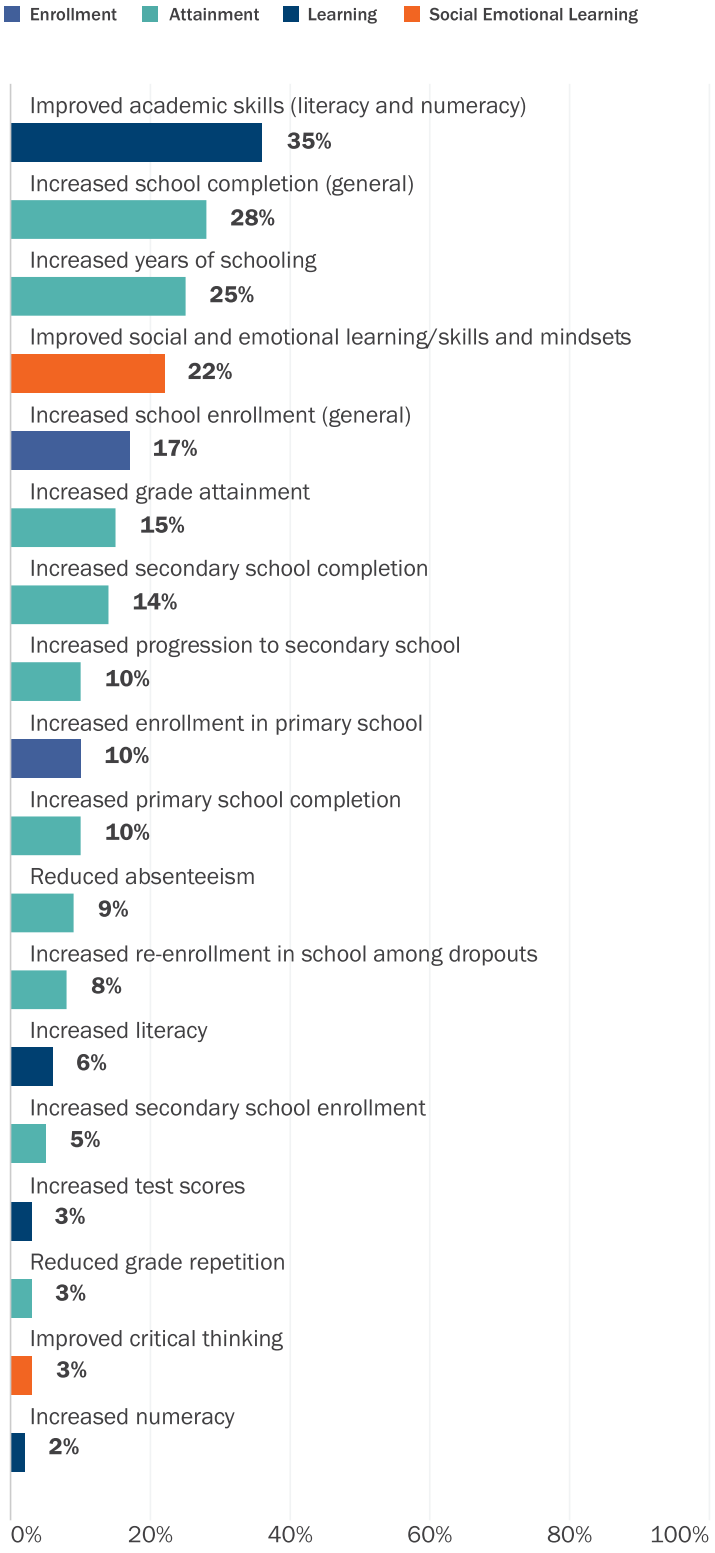
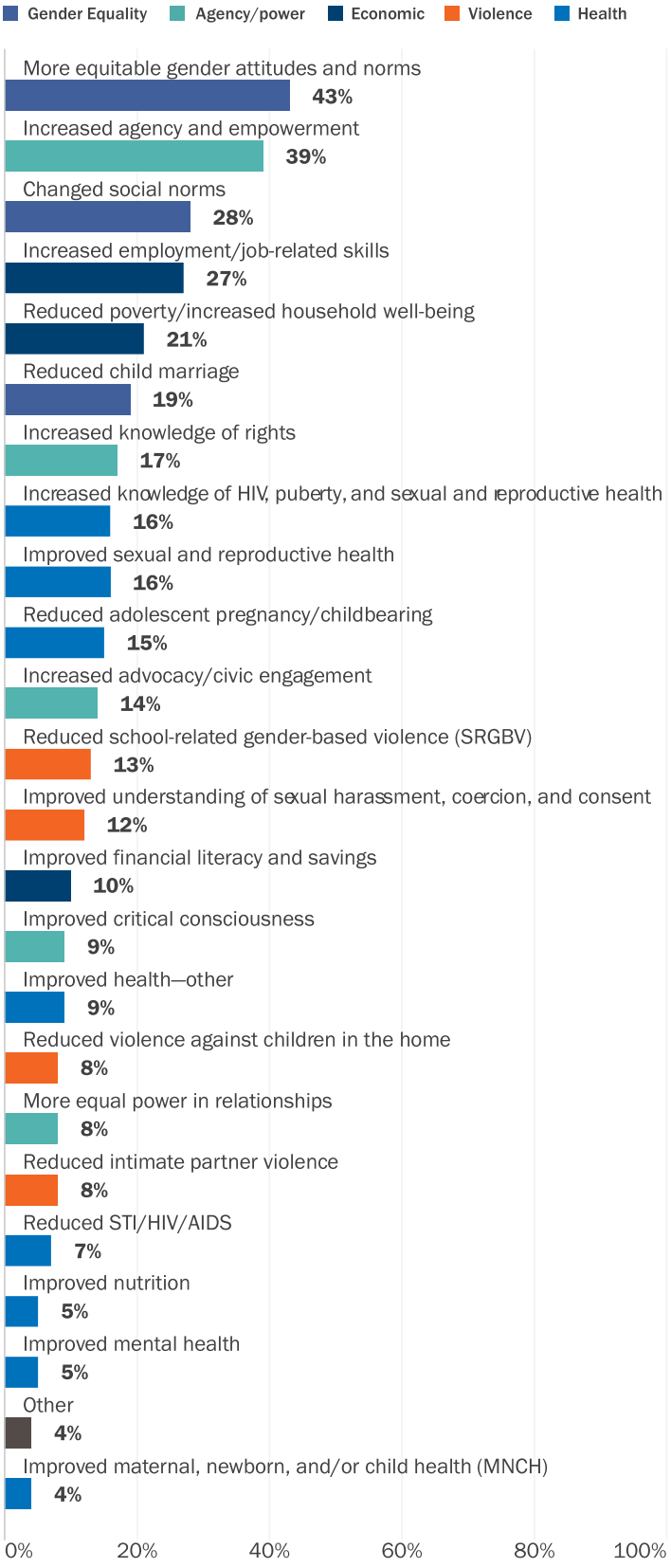
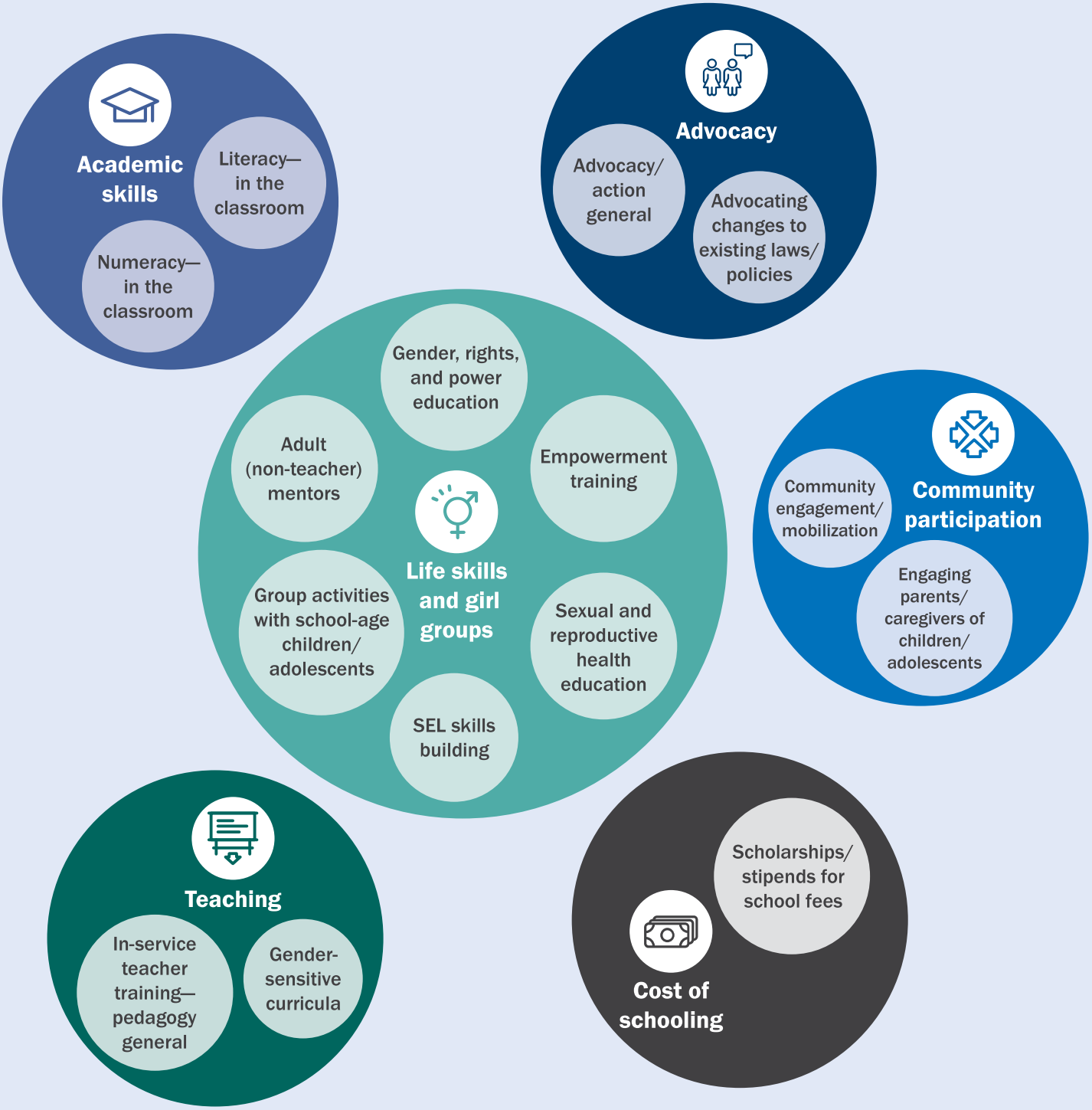


FIGURE 18 Key cross-cutting topic program goals



Top components used most frequently in girls' education programs



88%

OF PROGRAMS IN THE GIRLS' EDUCATION SPACE ARE COMPLETELY UNIQUE IN THEIR APPROACH. Out of the 532 programs mapped in EGER, only 12% used the exact same combination of program components

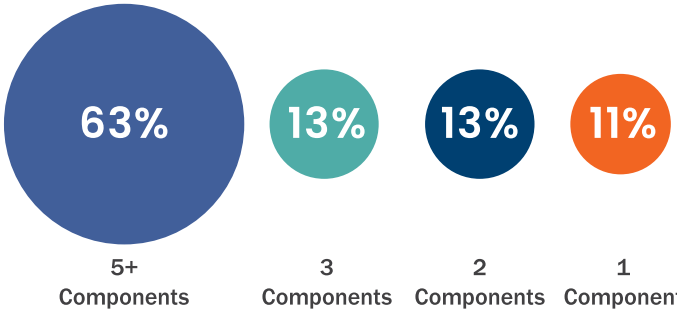
Single component vs. multicomponent activities

The majority of programs in the girls' education space use multiple components to achieve their intended outcomes (FIGURE 19). However, very few programs employ the exact same combination of program components.

Out of the 532 programs mapped in EGER, only 12% used the exact same combination of program components, most of which are single-component programs. Therefore, 88% of programs in the girls' education space are completely unique in their approach.

To illustrate this point, roughly 59% of the programs in EGER aim to increase educational attainment. Of these programs, about 13% are single-component programs, while the remainder are multicomponent programs. However, of these multicomponent programs, only 3% use the exact same combination of program components to increase literacy.

FIGURE 19 Percentage of Multi- vs. single-component programs



Most common and least common program components

Though the majority of programs in the girls' education space are unique, many use some of the same approaches to improve girls' education (see page 46). The figure on page 48 maps the most commonly used program components to address three of the most common education outcomes mapped in EGER's database.

Community engagement and mobilization, gender, rights, and power education, and literacy courses in the classroom are widely used to address different education goals. Community engagement and mobilization activities are included in 29% of programs mapped in EGER; gender, rights, and power education in 27% of programs; and literacy courses in the classroom in 16% of programs.

Across all programs (regardless of goals), the top five most frequently used program components are gender, rights, and power education (27%); empowerment training (22%); general awareness-raising/community engagement (29%); sexual and reproductive health education (18%); and social and emotional learning (SEL) skills building (17%). It is notable that, while the majority of these programs aim to achieve explicit education outcomes (i.e. enrollment, completion, attainment, and achievement), thus complementing standard government education efforts, they often do so by using program components related to addressing issues of agency and shifting norms around gender.

EGER also highlights potential gaps in programming. For example, we did not identify any programs that used health-based interventions, such as providing health vouchers, mobile clinics (testing, vaccines, etc.), or school-based clinics. Provision of textbooks or digital learning materials were only included in 2% of programs. The provision of digital or other learning materials that can be used remotely may have increased in light of the COVID-19 pandemic; EGER is mapping COVID-19-related girls' education programs and will be updated continuously.

Top five most frequently used program components to achieve top educational outcomes

Increase enrollment/attainment 60% of programs listed as a goal

- **COMMUNITY ENGAGEMENT AND MOBILIZATION** (31% programs)
- **GENDER, RIGHTS, AND POWER EDUCATION** (31% programs)
- **EMPOWERMENT TRAINING** (22% programs)
- **LITERACY COURSES—IN THE CLASSROOM** (20% programs)
- **SEXUAL AND REPRODUCTIVE HEALTH EDUCATION (INCLUDING PUBERTY EDUCATION)** (20% programs)

Improve (academic) learning 40% of programs listed as a goal

- **LITERACY COURSES—IN THE CLASSROOM** (33% of programs)
- **COMMUNITY ENGAGEMENT AND MOBILIZATION** (31% of programs)
- **NUMERACY COURSES—IN THE CLASSROOM** (26% of programs)
- **GENDER, RIGHTS, AND POWER EDUCATION** (25% of programs)
- **IN-SERVICE TEACHER TRAINING—GENERAL PEDAGOGY** (24% of programs)

Improve socio-emotional learning 23% of programs listed as a goal

- **GENDER, RIGHTS, AND POWER EDUCATION** (49% of programs)
- **SOCIAL AND EMOTIONAL LEARNING (SEL) SKILLS BUILDING** (45% of programs)
- **COMMUNITY ENGAGEMENT AND MOBILIZATION** (40% of programs)
- **SEXUAL AND REPRODUCTIVE HEALTH EDUCATION (INCLUDING PUBERTY EDUCATION)** (39% of programs)
- **EMPOWERMENT TRAINING** (35% of programs)

Proportion of programs addressing perceived barriers to education among programs that have **attainment & enrollment as a program goal**

SHARED BARRIERS

TYPE A

Usually equal effects for girls and boys

- 21% Poorly trained teachers (67)
- 7% Lack of school governance/ accountability (22)
- 3% Ineffective/ poor pedagogy (8)

GENDER-RELATED BARRIERS

TYPE B

Shared barriers often more pronounced for girls

- 51% Inadequate life skills (162)
- 29% Insufficient academic support (92)
- 28% Inadequate school access (90)
- 23% Inability to afford tuition & fees (72)
- 22% Lack of teaching materials (71)
- 21% Gender-insensitive environment (68)
- 20% School-related gender-based violence (SRGBV) (64)
- 6% Lack of water and sanitation (18)
- 8% Lack of adequate food (24)
- 11% Inadequate health and childcare services (36)
- 13% Inability to afford school materials (42)
- 19% Poor policy/ legal environment (60)

TYPE C

Barriers specific only to girls

- 46% Lack of support for girls' education
- 28% Lack of safe spaces (91)
- 12% Lack of info for returns to girls' education/alternative roles for women (39)
- 8% Inadequate menstrual hygiene management (27)
- 5% Child marriage/ adolescent pregnancy (16)
- 2% Inadequate sports programs for girls (5)

NOTE: Reflects 320 programs aiming to improve girls' enrollment or attainment

Proportion of programs addressing perceived barriers to education among programs that have **learning as a program goal**

SHARED BARRIERS

TYPE A

Usually equal effects for girls and boys

- 27% Poorly trained teachers (58)
- 8% Lack of school governance/ accountability (17)
- 3% Ineffective/ poor pedagogy (7)

GENDER-RELATED BARRIERS

TYPE B

Shared barriers often more pronounced for girls

- 50% Insufficient academic support (107)
- 47% Inadequate life skills (100)
- 31% Inadequate school access (67)
- 31% Lack of teaching materials (67)
- 24% Gender-insensitive environment (51)
- 19% Inability to afford tuition & fees (41)
- 15% Inability to afford school materials (33)

TYPE C

Barriers specific only to girls

- 5% Lack of water and sanitation (11)
- 8% Lack of adequate food (17)
- 8% Inadequate health and childcare services (18)
- 11% Poor policy/ legal environment (23)
- 14% School-related gender-based violence (SRGBV) (29)
- 41% Lack of support for girls' education (88)
- 24% Lack of safe spaces (55)
- 13% Lack of info for returns to girls' education/alternative roles for women (28)
- 7% Inadequate menstrual hygiene management (14)
- 2% Inadequate sports programs for girls (4)
- 1% Child marriage/ adolescent pregnancy (3)



NOTE: Reflects 213 programs that aim to improve learning.

Program components used to address barriers to education

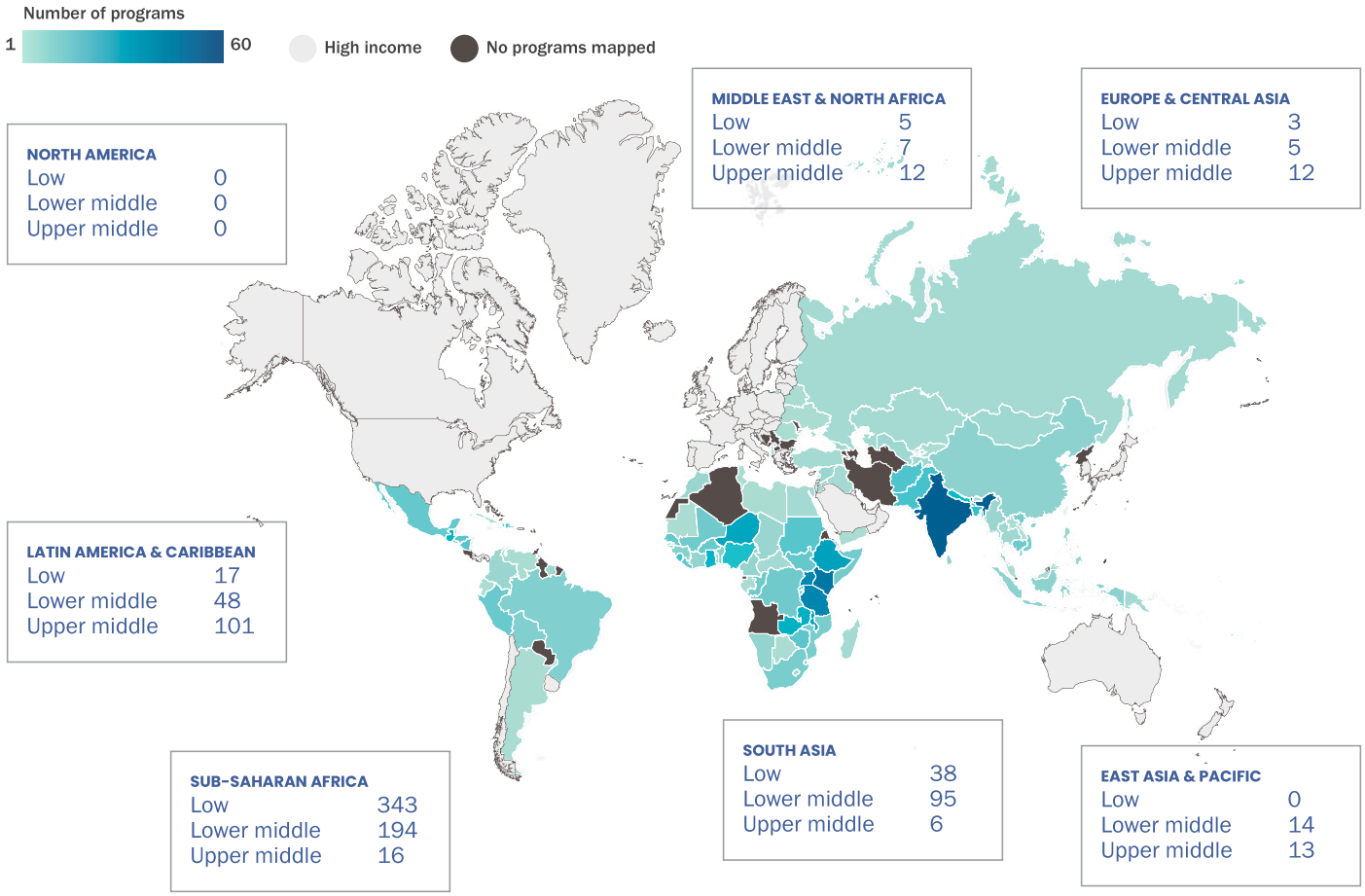
With the majority of programs aiming to address a combination of education and noneducation outcomes, it makes sense that many programs employ multicomponent approaches to address barriers to education. Which barriers are most frequently addressed in practice? To answer this question, we mapped the 130 program components tracked in EGER to the main barrier each component addresses. We used findings from recent program evaluations (see Section 5) to inform these connections.

Using the framework introduced in Section 3, the visuals (on pages 49, 50) show the share of programs that address each barrier to education, among those that list school enrollment or attainment as a goal (page 49) or those that list learning as a goal (page 50). A program was counted as addressing a barrier if it implemented at least one program component designed to address that barrier. For example, if a program implemented empowerment trainings along with literacy courses in the classroom, the program is counted as addressing two barriers: *Inadequate life skills and Insufficient academic support*.

Programs that aimed to improve enrollment and attainment most frequently addressed two barriers: inadequate life skills (51%) and lack of support for girls' education (46%). The barriers least addressed by these same programs were inadequate sports programs for girls (2%) and ineffective/poor pedagogy (3%).

When analyzing the barriers most frequently addressed by programs that aim to improve learning, we see some overlap with programs aiming to improve enrollment/attainment. Of the programs that list improving learning as a goal, around half address insufficient academic support (50%) and inadequate life skills (47%) in their programming. Barriers least frequently addressed by these programs are child marriage/adolescent pregnancy (1%) and ineffective/poor pedagogy (3%).

FIGURE 20 Countries with the most girls' education activities



Target Groups

Beyond program goals and approaches, it is important to understand who these programs are designed to reach. This allows us to ask whether we are reaching the most vulnerable girls, and whether we are addressing barriers at the right levels.

Where is current girls' education work happening?

Girls' education activities are being implemented by international and national nongovernmental organizations in many low- and middle-income countries. However, this work is not evenly distributed, nor is it necessarily concentrated in areas of highest need (see Section 2).

Of all the programs in EGER, 23% have a global scope. As Figure 20 illustrates, efforts are concentrated in sub-Saharan Africa and South Asia, with nearly 70% of activities taking place in these two regions. Countries with the most currently active programs are India and Kenya.

Looking at regional patterns (**FIGURE 21**), we can see that the most common goals for girls' education activities across regions are increasing educational enrollment/attainment and improving (academic) learning, followed by improving socio-emotional learning.

Addressing child marriage and school-related gender-based violence were less common goals among EGER-mapped projects across the board, with school feeding even more uncommon. The latter perhaps reflects the fact that school meals are typically the purview of government education systems.

Who do girls' education programs aim to reach?

Of all programs mapped in EGER, 40% are multilevel programs, meaning they not only deliver services to girls and boys, but they also aim to reach other groups, including their families, teachers, and communities to address barriers to education (**FIGURE 22**). Of the 83% of programs that reach girls as a primary target group, 44% are multilevel programs. Of these, 56% specifically aim to promote more equitable gender attitudes and norms in addition to improving girls' learning outcomes.

Within these larger population categories, nearly 34% of programs target subpopulations considered to be particularly marginalized. Orphans and vulnerable children, displaced/refugee children, and people with disabilities are some of the most frequently targeted subpopulations in the girls' education space. The subpopulations that are not as heavily targeted are LGBTQ+ youth, homeless/street children, migrants from other countries, and nomadic groups.

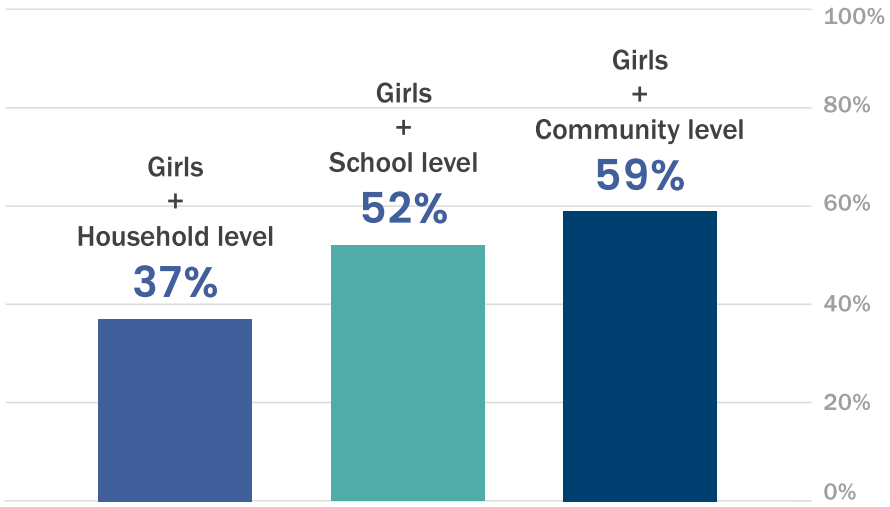
Of these programs, the majority work at the primary and secondary school levels (lower primary: 25%, upper primary: 29%, lower secondary: 34%, upper secondary: 33%), while tertiary, vocational, and preschool levels each make up roughly 6% of the total programs. Nearly half of all programs target a combination of in-school and out-of-school children. However, programs that explicitly target out-of-school children and adolescents only comprise a small minority (3%).

FIGURE 21 Common goals of girls' education programs by region

Region	Share of total programs	% programs focusing on enrollment/attainment	% programs focusing on learning	% programs focusing on SEL skills	% programs addressing violence	% programs addressing child marriage	% programs addressing feeding
East Asia & Pacific	8% (44)	59%	36%	30%	18%	11%	5%
Europe & Central Asia	5% (24)	67%	58%	20%	8%	4%	0%
Latin America & Caribbean	12% (63)	57%	43%	22%	22%	17%	3%
Middle East & North Africa	5% (27)	52%	41%	37%	18%	14%	3%
South Asia	20% (109)	56%	40%	28%	13%	25%	1%
Sub-Saharan Africa	49% (260)	59%	42%	27%	15%	18%	3%

FIGURE 22
Percent of multilevel programs, by level

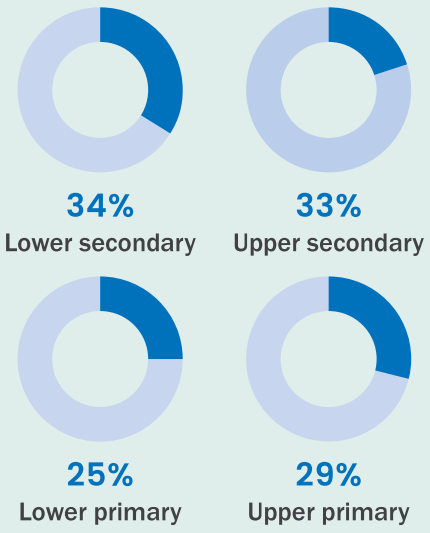
TOTAL MULTILEVEL PROGRAMS: 217



Who do girls' education programs aim to reach?

Nearly half of all programs target a combination of in-school and out-of-school children (49%). However, programs that explicitly target out of school children and adolescents only comprise 3% of programs.

Proportion of total programs by targeted school-level



40% are multilevel programs, meaning they not only deliver services to girls and boys, but they also aim to reach other groups

The most common secondary target groups

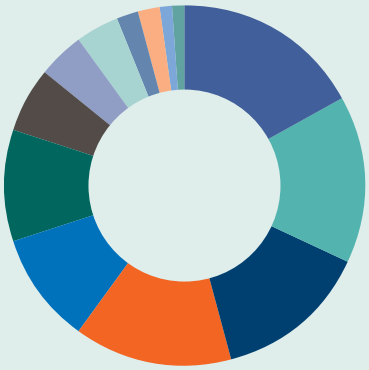
Teachers	44%
Mothers	32%
Fathers	30%
Other community members	35%

34% of programs target subpopulations considered to be particularly marginalized

Most targeted subpopulation
Orphans and vulnerable children

Least targeted subpopulation
LGBTQ+ youth

What other characteristics describe the main program population?



Orphans and vulnerable children	17%
Other	15%
People with disabilities	14%
Displaced/refugee–External *(from other countries)*	14%
Adolescent mothers	10%
Displaced/refugee–Internal *(from other areas of the same country)*	10%
Indigenous	6%
Internal migrants *(from other areas of the same country)*	4%
People living with HIV/AIDS	4%
Nomadic groups	2%
Migrants from other countries	2%
Homeless/street children	1%
LGBTQ+ youth	1%

Conclusion

The girls' education field is dynamic and complex. It is composed of a diverse group of organizations implementing a multitude of activities to improve education for girls. While many programs target similar goals, populations, and barriers to education, many do so with their own unique approach. However, there are areas of practice where gaps exist. By understanding who is doing what and where, the girls' education community can close these gaps and coordinate efforts to ensure all girls receive a quality education.

SECTION 5

Evidence



KEY TAKEAWAYS

1

Effective or promising approaches to improve girls' enrollment or educational attainment include:

- **For girls facing economic barriers to education:** Elimination of school fees, provision of cash transfers or school materials, and school feeding or take-home rations.
- **For girls facing inadequate school access:** School construction, opening community schools, and potentially improving transportation to school.
- **For schools with poor facilities:** Provision of sex-specific toilets.

2

Effective or promising approaches to improve learning include:

- **In schools with poor pedagogy/untrained teachers:** Supporting teachers through ongoing training or coaching, and approaches to improve pedagogy (evidence based on improvements for girls and boys combined).
- **For girls who need help academically:** Efforts to provide remedial academic support.
- **For those facing economic barriers:** Provision of merit-based scholarships may improve learning outcomes for girls and boys combined.

3

Important gaps in evidence remain, including:

- Lack of evidence of the effects on girls specifically of efforts to improve pedagogy;
- Inconclusive evidence on the role of safe spaces or life skills education in improving enrollment or attainment for girls.
- Inconclusive evidence on the role of efforts to address gender-inequitable school environments or increase community support for girls' education.
- Inconclusive evidence on the use of menstrual hygiene management programs to improve enrollment or attainment for girls.
- Few or no studies examining the effects of programs addressing school-related gender-based violence, child marriage, adolescent childbearing, or lack of health services on education outcomes for girls.

Now more than ever, it is essential to ensure that investments in girls' education are targeted toward the most effective policies and programs. In this section we provide an overview of the state of knowledge on what has worked to improve education outcomes in general, and for girls in particular. We highlight the most important unanswered questions for researchers, policymakers, program implementers, and donors. Of course, what works in one setting might not work in another. And what worked a year ago might not work today. But we can build on what we know to find solutions.

As described in Section 2, in order to improve education for girls the education sector needs to do three things at once:

1. Address general barriers that are shared somewhat equally by girls and boys (e.g. ineffective pedagogy),
2. Address barriers shared by girls and boys that might be more pronounced for girls (e.g. inadequate school access, lack of water and sanitation), and
3. Address barriers that are specific to girls (e.g. lack of support for girls' education, lack of safe spaces).

Reorienting our thinking around barriers, rather than individual interventions, can provide a framework that's more useful to policymakers and practitioners. Even if evidence is not available from every setting, if decision-makers can properly diagnose the barriers to schooling in their setting, they can then identify the most effective approaches to addressing those barriers. A clear understanding of the most important barriers in each setting can also inform the most cost-effective responses.

What can we learn from "general education" evaluations about what works?

A number of reviews, some systematic, have assessed the evidence on the effectiveness of interventions designed to improve education outcomes in low- and middle-income countries. Most take a "general education" approach and do not focus explicitly on gender, in part due to a lack of evidence on which programs work better for girls versus boys. However, these "general education" reviews offer important insights into what might work for girls as well as boys.

We conducted a rapid review of reviews published since 2010 (see References) on what works to improve education outcomes in low- and middle-income countries. We identified the approaches that were most commonly cited as *effective* or *promising* (or similar rankings used by authors) at improving education outcomes. These results were often broken down by what works to improve school enrollment or attainment, and what works to improve learning. Results from most of these reviews were reported for girls and boys combined. Many of these reviews cite some of the same studies, so the results likely reflect, in part, the types of approaches that have been studied most often. To the extent that these reviews draw on the same studies, which is not always the case (Evans & Popova 2015), this rapid assessment may be biased in favor of those studies.

Based on this rapid review of reviews, the visual (on page 57) shows the most commonly recommended approaches to improving school enrollment and attainment or improving learning. As noted, what works in one context might not work in others. Therefore, we link these results back to the barriers to schooling shown in Section 3 to show which barriers the most frequently cited "effective" interventions tend to address. This gives us some idea that these barriers are important, although other barriers may matter as well and just be understudied and/or insufficiently addressed by current policies and programs.

Two approaches were noted most frequently by included reviews: conditional cash transfers for improving enrollment or attainment, and improved pedagogy for learning.

What can we learn from "general education" evaluations about what works?

Solid colors
Evidence-based approaches exist to address this barrier

Grayed out
More evidence is needed on the most effective approaches to address this barrier

SHARED BARRIERS

Lack of school governance/ accountability
To improve learning
- Improved school governance/ accountability
- Teacher contracts/performance incentives

Ineffective/poor pedagogy
To improve learning
- Improve pedagogy, especially: computer/instructional technology to aid pedagogy; structured pedagogy/scripted lesson plans; competency grouping/matching teaching to student levels

Poorly trained teachers
To improve learning
- Ongoing teacher training or coaching

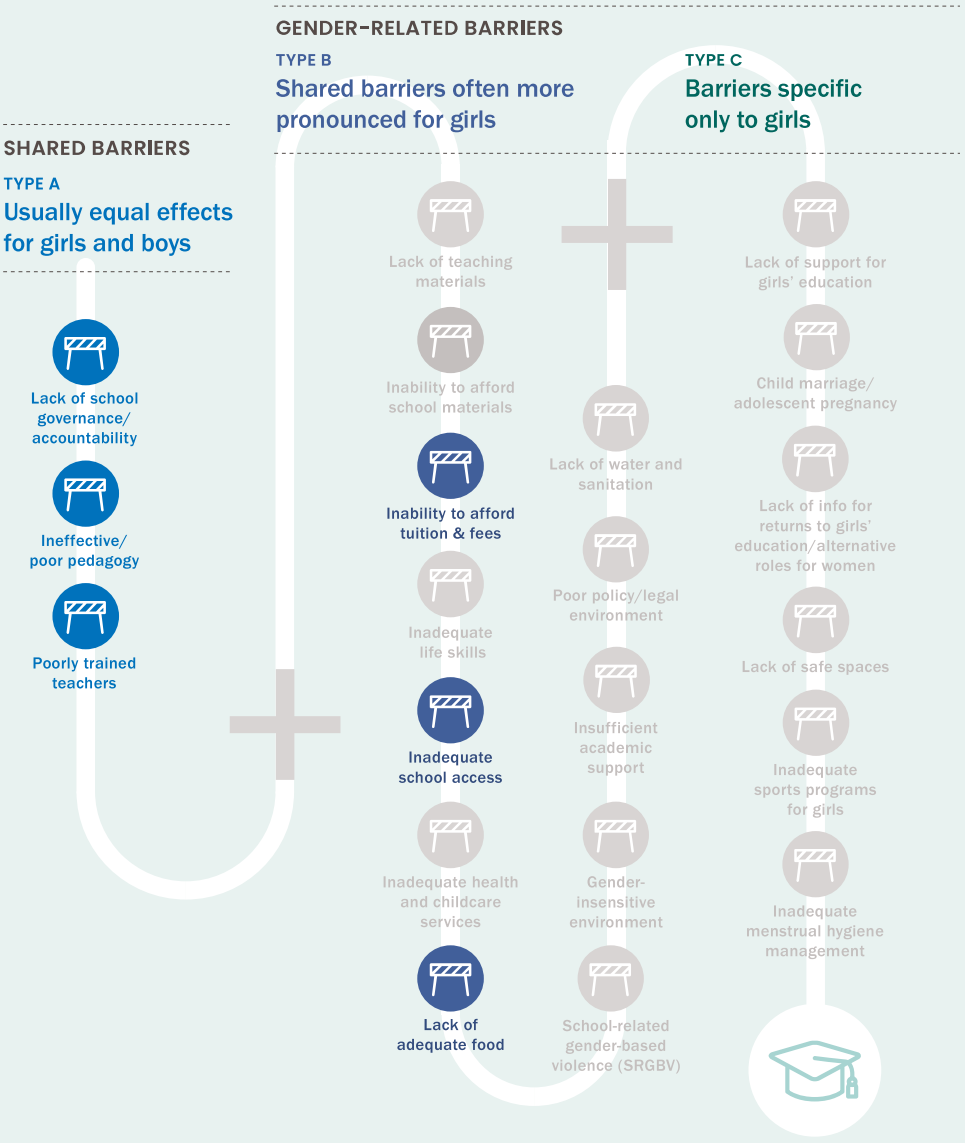
GENDER-RELATED BARRIERS

Inability to afford tuition & fees
To improve enrollment/attainment
- Conditional cash transfers
- Low-cost private schools

To improve learning
- Merit-based scholarships

Inadequate school access
To improve enrollment/attainment
- School infrastructure/ construction

Lack of adequate food
To improve enrollment/attainment or learning
- School feeding



NOTE: The approaches listed are those that were noted as effective or promising in three or more of the included reviews.

These results show that inability to afford tuition and fees, lack of school governance and accountability, ineffective pedagogy, inadequate school access, poorly trained teachers, and lack of adequate food are important barriers to education for both girls and boys in many settings, and effective interventions exist to address those barriers. This information does not tell us, however, whether these are the most important barriers. We also don't know whether interventions that have worked in some settings will work as well in other settings facing similar barriers to education. Moreover, for many common interventions, insufficient evidence exists to say whether they work or not.

And finally, knowing whether interventions have been effective in some settings is only a starting point. In a review of six recent reviews, Evans & Popova (2015) point out that broad intervention categories (e.g. pedagogical interventions, computer interventions) are not necessarily wholly effective or ineffective, as the details of the specific interventions matter a great deal. For example, previous reviews that examined characteristics of effective interventions found:

- **Improved pedagogy:** Interventions that use adaptive instruction and teacher coaching techniques may be particularly effective (Conn 2017). These fall into two categories: 1) computer-assisted learning programs that adapt to the student's learning level, or 2) teacher-led methods that emphasize formative assessments and individualized instruction. Importantly, computer-assisted learning programs are most likely to be effective when (Evans & Popova 2015):
  - Instruction is tailored to each student's level of knowledge;
  - Technology is distributed along with training;
  - Computers complement rather than substitute for useful instruction time or home study; and
  - Technology is tied to the curriculum or integrated into instruction by teachers.
- **Teacher training:** Providing teachers with general guidance does not seem to be effective, but training that provides detailed guidance on what and how teachers should teach has proven to be effective, especially for low-performing students. Many of the successful instructional interventions included in these reviews were paired with teacher training in how to use that method in the classroom. One-time in-service teacher trainings at a central location are not highly effective, whereas pedagogical interventions involving long-term teacher mentoring or in-school teacher coaching are generally more effective (Evans & Popova 2015).
- **Conditional cash transfers:** Conditional cash transfers are more effective than unconditional cash transfers at increasing school enrollment, especially when explicit conditions are monitored and enforced (Baird et al. 2013). Another review found that conditional cash transfers are most effective for secondary versus primary enrollment, with more generous transfer amounts, with less frequent transfers, and in areas with better education infrastructure (Saavedra & Garcia 2012).

What about cost?

Most evaluations do not include information about the cost of interventions. But a recent study examined the cost effectiveness of 150 interventions based on their improvements to learning-adjusted years of school (LAYS) (Angrist et al. 2020). The LAYS metric combines years of schooling with the quality of schooling into a single measure so that interventions that focus on each outcome can be compared directly.

The authors point out that many interventions that are highly effective at increasing participation in schooling (e.g. school construction) are expensive and have limited effects on learning. On the other hand, policies that improve the quality of schooling, such as targeting instruction to a child's learning level or improving pedagogy through structured lesson plans, can produce large changes in LAYS. More evidence is needed on the cost and cost-effectiveness of different interventions designed to improve education outcomes for girls.

What can we learn from girls' education evaluations about what works?

While we have a strong and growing sense of the most effective approaches to improving enrollment, attainment, and learning for girls and boys combined, we know much less about what works best for girls specifically. In some cases, a program or policy might appear to work well for a larger group (e.g. all students), but closer examination reveals that it really works best for certain group members (e.g. students from the wealthiest households, or boys), and not for others (e.g. students from poorer households, girls). This is important information, especially when those groups might face different barriers to education.

A recent review sought to identify the programs that are most effective at improving girls' access to school and learning by comparing interventions targeting girls only with general "nontargeted" interventions (i.e. those including both boys and girls). The authors conclude that girl-targeted interventions offer no advantage over general interventions

in terms of the benefits to girls in both access to school and learning. They also point out that many more general interventions have been tested, so the menu of options to choose from is broader than the options for girl-targeted interventions (Evans & Yuan 2019). But, as the authors acknowledge, this analysis only tells part of the story.

General interventions may be more effective at addressing shared barriers to education that affect girls and boys equally, such as poor pedagogy, whereas girl-targeted interventions may be more effective at addressing barriers that are more pronounced for girls (e.g. access to school), or barriers that are unique to girls (e.g. adolescent childbearing). In thinking about sector-wide strategies, the best approaches—for both girls and boys—might be those that address all three types of barriers.

But how can programs and policies most effectively address those extra challenges faced by girls in many settings? To begin answering this question, we conducted a systematic review of the evidence on what has worked to address *gender-related barriers* to education for girls. To our knowledge, this is the first systematic review to be conducted on this topic. We note that this is a review of quantitative, often randomized studies. While such studies provide a good indicator of whether an intervention was able to achieve desired outcomes, they also leave many important unanswered questions.

Systematic reviews methods

Search Strategy: We searched databases and bibliographies for papers reporting on the effects of interventions addressing gender-related barriers to education for girls. We also asked authors of included studies and other researchers to suggest studies we might have missed.

Inclusion Criteria: We included experimental or quasi-experimental studies conducted in low- and middle-income countries since 2000 that examined the effects of interventions addressing gender-related barriers to schooling on education outcomes for girls.

Data collection and analysis: We screened articles for relevance, extracted data, and assessed the strength of the evidence for each included study based on established criteria, including how directly the study measured each type of intervention, the size and direction of intervention effects, and how consistent the findings were across studies. Based on this information, we summarized our findings into the following groups:

- **Effective***:* Multiple studies (4+) directly measured the intervention approach and found consistently that this approach improves education outcomes for girls.
- **Promising**: A few studies (2+) directly measured the intervention approach and found that this approach appears to improve education outcomes for girls, although there might be variation in findings.
- **Unknown**: No rigorous studies to address the barrier have been conducted.
- **More Research Needed**: Existing evidence either comes from multicomponent studies that are unable to isolate the effects of this intervention, or from direct studies with widely varying results. That is, findings are indirect or inconclusive.

None of the interventions reviewed were found to be ineffective.

What is a systematic review?

Often, different evaluations of similar programs will find seemingly contradictory results. This could be due to differences in the program design or implementation, in context or participants, in analyses, or in many other factors. Reviews often summarize findings across many evaluations to come up with an idea of how well the program works on average. Systematic reviews do this in a structured way, to minimize the chances of missing relevant evidence, and they also assess the quality of available evidence in order to highlight the findings that are most likely to be accurate.

Where and when has research been done?

OUR SEARCH IDENTIFIED nearly

26,000 papers

which we narrowed down to

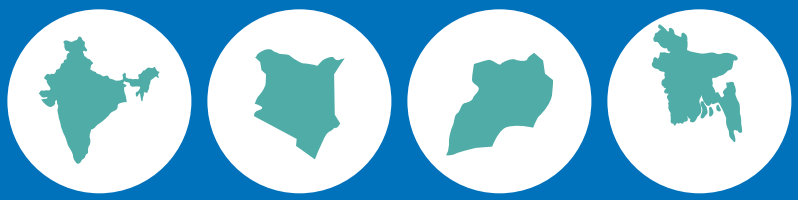
88 papers

REPORTING ON

82 studies

that evaluated interventions designed to address gender-related barriers to education for girls.

The most common countries where evaluations were conducted



India	Kenya	Uganda	Bangladesh
(14)	(9)	(7)	(6)

China	Ethiopia	Zambia	Zimbabwe	Ghana	Pakistan
(4)	(4)	(4)	(4)	(3)	(3)

Although we sought to include studies from

2000–present

we saw a big uptick in evaluations conducted since 2010.

We found at least one study for all barriers except school-related gender-based violence. For two barriers (inadequate sports programs for girls and inadequate health and childcare services) we found only one study, and for two others (child marriage and adolescent pregnancy and inadequate menstrual hygiene management) we found fewer than five studies.

The barriers for which we found the most evidence were:

- **15** Inadequate life skills
- **21** Inability to afford tuition & fees
- **23** Inadequate school access

However, even when we found many studies on a particular barrier, they often were not designed in a way that allowed us to parse out the effects of specific intervention components, as described on page 62.

The number of studies identified for each gender-related barrier

SHARED BARRIERS

TYPE A
Usually equal effects for girls and boys

- 0 STUDIES — Lack of school governance/ accountability
- 0 STUDIES — Ineffective/ poor pedagogy
- 0 STUDIES — Poorly trained teachers

GENDER-RELATED BARRIERS

TYPE B
Shared barriers often more pronounced for girls

- 23 STUDIES — Inadequate school access
- 21 STUDIES — Inability to afford tuition & fees
- 15 STUDIES — Inadequate life skills
- 14 STUDIES — Inability to afford school materials
- 13 STUDIES — Insufficient academic support
- 12 STUDIES — Poor policy/legal environment
- 10 STUDIES — Lack of adequate food
- 0 STUDIES — School-related gender-based violence (SRGBV)
- 1 STUDY — Inadequate health and childcare services
- 5 STUDIES — Lack of teaching materials
- 7 STUDIES — Lack of water and sanitation
- 9 STUDIES — Gender-insensitive environment

TYPE C
Barriers specific only to girls

- 13 STUDIES — Lack of info for returns to girls' education/alternative roles for women
- 10 STUDIES — Lack of safe spaces
- 9 STUDIES — Lack of support for girls' education
- 4 STUDIES — Child marriage/ adolescent pregnancy
- 4 STUDIES — Inadequate menstrual hygiene management
- 1 STUDY — Inadequate sports programs for girls

Which interventions are effective and promising in some settings? And where do questions remain?

We briefly summarize our findings below, sharing a rating of whether interventions that address each barrier are effective or promising based on our synthesis of results. We also identify remaining questions that emerge from existing evidence, often reflecting challenges in identifying the true effects of each intervention component. The more detailed findings are available through the Campbell Collaboration.

The challenge of multicomponent programs and policies

Multicomponent interventions are programs or policies that include more than one distinct activity. About half of the interventions included in our review were multicomponent. The benefit of multicomponent programs is that girls may be experiencing multiple barriers to education, requiring a multifaceted solution. A well-designed multicomponent program might have reinforcing pieces, like teacher training in improved pedagogy and distribution of technology that is linked to the curriculum. However, multicomponent programs are also often more expensive and more complicated to implement effectively, and they might not always be more effective than simpler interventions.

Multicomponent programs can also pose challenges in terms of understanding which interventions work best. In many cases we found that multicomponent interventions were effective at improving some aspects of education for girls (access and/or learning), but we were unable to determine which component was most important. Consider two programs:

> **Program A has a single component focused on providing scholarships to girls to enroll in secondary school.**

> **Program B has several components, providing scholarships in addition to organizing community events to discuss the importance of educating girls, and after-school tutoring for girls.**

If **Program A** works, we can be fairly certain that the scholarships were effective at improving secondary school attendance. If **Program B** works, however, it is difficult to know whether the scholarships were effective, one of the other components was effective, or whether some combination of these activities works best.

In interpreting the results from our review, it is important to keep in mind that due to the substantial number of multicomponent programs, even among those in the Promising and Effective categories, we cannot always determine the extent to which the individual components that addressed each barrier contributed to intervention effects.

Examples of multicomponent interventions

- *The Burkinabe Response to Improve Girls' Chances to Succeed (BRIGHT)* school construction program included construction of girl-friendly primary schools, school meals, incentives for children to attend school, school kits and textbooks for students, adult literacy program for mothers, and mobilized community support for girls' schooling, and found significant effects on current enrollment, attainment, and composite academic skills (Kazianga et al. 2012; Kazianga et al. 2019).
- Several multicomponent government initiatives have been undertaken in India, including the *District Primary Education Programme (DPEP)* introduced in the mid-1990s, the *Sarva Shiksha Abhiyan (SSA)* launched in 2000, and the *Mid-day Meal Program (MDM)* universalized in 2001. The reforms were wide-ranging, including investments in school infrastructure, textbook development, teacher professional development, early childhood education, provision of meals in school, and strengthening community involvement (Datta Gupta, Dubey & Simonsen 2018).

Effective interventions
exist to address the following barriers

Taken together, the results suggest that addressing two financial barriers (lack of adequate food, inability to afford tuition and fees), and one quality barrier (insufficient academic support) are effective ways to improve education outcomes for girls. Substantial research has been done on the effects of interventions designed to address these three barriers to schooling for girls, although important gaps in knowledge remain.

Insufficient academic support

Examples of Interventions
- Remedial tutoring in core skills
- Integrating technology with the curriculum

Studies Included: 13

Key Remaining Questions
More research is needed to understand the effects of providing sufficient academic support on enrollment and retention, as well as tailoring academic support interventions to girls.

Outcome(s)
Programs focusing on training or remedial support showed consistent effects on learning. Results for school enrollment/ attainment are mixed.

Lack of adequate food

Examples of Interventions
- Free school lunches
- Take-home rations

Studies Included: 10

Key Remaining Questions
Interventions providing food through take-home rations or school feeding are effective in certain circumstances. More research is needed to understand the conditions in which they are most likely to improve outcomes for girls.

Outcome(s)
Stronger evidence for enrollment/attainment effects than learning effects.

Inability to afford tuition and fees*

Examples of Interventions
- Tuition/fee waivers paid to schools
- Policies eliminating school fees

Studies Included: 21

Key Remaining Questions
Eliminating tuition and fees appears to be effective at increasing enrollment. However, much of the evidence is focused on interventions at the primary school level, and often combined with other program components.

Outcome(s)
Strongest evidence is for the effects of these interventions on enrollment and attainment rather than learning.

* Financial transfers directly to the household were excluded from our review given substantial existing evidence for their effectiveness (see, for example, Baird et al. 2013).

Promising interventions exist to address the following barriers

Although substantial research has been done on interventions designed to address these three barriers, it is often within the context of multicomponent interventions, making it more difficult to know whether these components are driving program effects. More work is needed to understand whether and how these interventions can most effectively improve education outcomes for girls.

Inability to afford school materials

Examples of Interventions
- Provision of textbooks
- Provision of uniforms

Studies included: 14

Key Remaining Questions
Multicomponent interventions including provision of school materials are often effective. However, more research is needed on whether/when providing school materials on their own is likely to be effective.

Outcome(s)
Strongest evidence is on enrollment and attainment effects.

Lack of water and sanitation

Examples of Interventions
- Provide sources of clean water at school
- Construct/improve school toilets

Studies included: 7

Key Remaining Questions
Initial evidence on the provision of toilets is promising, although more studies are needed. Existing evaluations often examine interventions with multiple different components.

Outcome(s)
Strongest evidence from existing studies is on enrollment and attainment effects.

Inadequate school access

Examples of Interventions
- School construction
- Community schools
- School transport

Studies included: 23

Key Remaining Questions
Interventions expanding access to school are often part of wide-ranging government reforms. While access to school appears to be an important barrier for girls, questions remain about whether more cost-effective approaches (e.g. distributing bicycles) might work just as well as school construction.

Outcome(s)
Strongest evidence for enrollment, attainment, and completion (both primary and secondary).

More research is needed on how to address the following barriers

More research is needed to understand whether interventions addressing the remaining gender-related barriers to education for girls are effective. In some cases (e.g. school-related gender-based violence, inadequate health and childcare services), this reflects a lack of evaluations examining the effects of these interventions on education outcomes. In other cases (lack of information on returns to schooling, inadequate life skills), this gap in evidence reflects the fact that, despite numerous studies, results were mixed, and/or studies evaluated multicomponent interventions, making it difficult to demonstrate the direct effects of approaches addressing these barriers.

Lack of support for girls' education

Examples of Interventions
- Community information campaigns on the benefits of girls' schooling
- Parent meetings to discuss importance of girls' schooling

Studies Included: 9

Key Findings
Many existing studies were multicomponent, but those providing more direct evidence do not support the idea that these efforts alone improve education outcomes for girls.

Child marriage and adolescent pregnancy

Examples of Interventions
- Financial incentives to delay marriage
- Information about the legal age at marriage

Studies Included: 4

Key Findings
All included studies focused on addressing child marriage rather than adolescent pregnancy, often in the context of a multicomponent program.

Lack of information on returns to education/alternative roles for women

Examples of Interventions
- Information on employment opportunities for women
- Assist educated women in obtaining paid employment

Studies Included: 13

Key Findings
Despite many studies evaluating the effects of interventions addressing this barrier, results were mixed, and few studies focused explicitly on this barrier.

School-related gender-based violence

Intervention Examples
- Codes of conduct and safety policies in schools
- Train school personnel on violence prevention and reporting

Studies Included: 0

Key Findings
We did not identify any studies evaluating the effects of school violence prevention interventions on education outcomes for girls.

More research is needed
on how to address the following barriers (continued)

Lack of safe spaces and social connections

Examples of Interventions
- After-school girls' groups led by female mentors
- Mentor-led girls' groups for out-of-school girls

Studies Included: 10

Key Findings
Results are mixed, but existing evidence indicates that safe/protected spaces alone may be insufficient to improve outcomes for girls without additional skills training or economic components.

Inadequate sports programs for girls

Examples of Interventions
- Ensure girls get equal access to sports facilities
- Provide sports equipment for girls at school

Studies Included: 1

Key Findings
We found only one study that included a component addressing inadequate sports programs for girls, and it was part of a larger multicomponent intervention.

Inadequate health and childcare services

Examples of Interventions
- On-site health-care services in schools
- On-site childcare in schools

Studies Included: 1

Key Findings
We found only one study that included a component addressing inadequate health and childcare services, and it was part of a larger multicomponent intervention.

Inadequate life skills

Examples of Interventions
- Improve girls' sexual and reproductive health knowledge
- Build agency and negotiation skills

Studies Included: 15

Key Findings
Despite many studies examining programs aiming to build girls' life skills, the approach varied considerably, life skills education was often combined with other project components, and the effects on education outcomes were mixed.

Inadequate menstrual hygiene management

Examples of Interventions
- Provide free or subsidized sanitary products
- Educate girls and others about menstrual hygiene management

Studies Included: 4

Key Findings
Few studies have evaluated MHM interventions, some have concerns about study design, and the results are mixed.

Poor policy/legal environment

Examples of Interventions
- New government policies aimed at expanding access to education for girls*
- Raising awareness of existing policies

Studies Included: 12

Key Findings
This evidence largely reflects government policies focused, in part, on expanding access to school through school construction. Limited evidence exists on the effects of other types of policies (e.g. return to school for pregnant girls).

Lack of teaching materials and supplies

Examples of Interventions
- Curricula that guide teachers on how to teach
- Learning materials such as books and textbooks

Studies Included: 5

Key Findings
Few studies have been done on this topic, and most evaluate the distribution of teaching materials/ supplies in the context of a multicomponent intervention. No rigorous studies have tested gender-equitable textbooks.

Gender-insensitive school environment

Examples of Interventions
- Foster more gender-equitable classrooms
- Recruit/train female teachers

Studies Included: 9

Key Findings
Addressing gender-insensitive school environments may inherently be a multicomponent effort. Existing evaluations have studied a wide variety of approaches, and often examine multicomponent interventions. More research is needed on which approaches are most effective.

* Excludes policies focused solely on eliminating school fees.

What works to narrow gender gaps?

In addition to the question of whether programs and policies effectively improve education outcomes for girls, we are also interested in understanding whether they narrow or close gender gaps in settings where girls are at a disadvantage. Interventions that narrow or close gender gaps are presumably doing so by effectively addressing gender-related barriers to schooling. For most barriers we found too few studies to provide insight into whether the interventions reduced gender gaps. However, to the extent that evidence exists, it appears more likely that effective interventions might narrow gender gaps in enrollment and attainment, rather than learning. This may be because gender gaps in learning do not exist in the study settings, or they exist but the interventions do not narrow those gaps.

What has worked to improve education for girls?

Turning back to the original question, we are interested in understanding which programs and policies are most effective at improving education outcomes for girls. Key to that picture is understanding which barriers—gender-related or not—are most important in blocking girls' success in education in a given setting. The figures below summarize the findings from the "general education" literature and the findings from our recent review of the girls' education literature, to generate a comprehensive picture of promising interventions for girls.

Note: Results for boys and girls combined come from our rapid review of previous reviews. Results for girls specifically are from our systematic review of interventions addressing gender-related barriers to schooling. The exception is results on CCTs for girls, which are based on Baird et al. 2013.

What works to **improve school enrollment and/or educational attainment** for girls in some contexts?

Girls and boys combined

Works for girls specifically



INABILITY TO AFFORD SCHOOL MATERIALS

- Provision of school materials, such as textbooks and uniforms



LACK OF ADEQUATE FOOD

- School feeding
- Take-home rations



INABILITY TO AFFORD TUITION AND FEES

- Conditional cash transfers
- Low-cost private schools
- Policies eliminating school fees or fees/ stipends paid directly to schools



LACK OF WATER AND SANITATION

- Provision of toilets, especially sex-specific toilets



INADEQUATE SCHOOL ACCESS

- School infrastructure/construction
- Community schools and/or transportation

What works to **improve learning** for girls in some contexts?

Girls and boys combined

Works for girls specifically



LACK OF SCHOOL GOVERNANCE/ ACCOUNTABILITY

- Improved school governance/ accountability
- Teacher contracts/performance incentives



POORLY TRAINED TEACHERS

- Ongoing teacher training or coaching



INEFFECTIVE/POOR PEDAGOGY

- Computer/instructional technology to aid pedagogy
- Structured pedagogy/scripted lesson plans
- Competency grouping/Matching teaching to student levels



INSUFFICIENT ACADEMIC SUPPORT

- Providing academic support to girls, such as remedial tutoring in core skills, study clubs for girls

Taken together, existing evidence highlights effective or promising interventions to address several groups of key barriers to girls' school enrollment and educational attainment.

- First, evidence supports the importance of economic barriers to school, including the inability to afford school materials, inability to afford tuition and fees, and lack of adequate food. For groups facing economic barriers, effective and promising interventions have been shown to improve enrollment and/or attainment for girls, including the elimination of school fees, provision of cash transfers or school materials, and school feeding or take-home rations.
- Second, evidence highlights the role of inadequate access to school for girls in some settings. Promising interventions to address this barrier include school construction, opening community schools, and potentially improving transportation to school. In terms of accessible school facilities, promising evidence supports the need for proper water and sanitation, especially sex-specific toilets.
- Third, evidence highlights the need for effective pedagogical approaches, and providing sufficient academic support to girls. Depending on the school environment and level of teacher training, effective efforts include using technology to aid pedagogy, scripted lesson plans, and grouping students based on their skill level.

Our findings also reveal some important gaps in evidence on effective approaches to improving school enrollment and attainment for girls. Most notably:

- Approaches to cultivating a gender-equitable school environment vary, including hiring more female teachers and fostering more gender-equitable classrooms. More research is needed to identify the specific approaches or combination of approaches that are most effective at addressing this barrier.
- Despite many studies on the topic, existing evidence is inconclusive regarding the role of efforts that aim to increase community support for girls' education or share information about the returns to schooling for girls. These initiatives often form one part of broader efforts.
- Similarly, despite many studies, evidence is inconclusive on the role of safe spaces or life skills education in improving enrollment or attainment for girls. With regard to life skills education, this may reflect, in part, lack of consistent content and program design from one intervention to the next, leading to a wide range of results of these programs.
- While few rigorous studies have been conducted, we find little evidence that menstrual hygiene management programs improve enrollment or attainment for girls in school.
- We find few or no studies on the effects of programs addressing school-related gender-based violence, child marriage, adolescent childbearing, or lack of health services on education outcomes for girls.

Notably, most of the approaches that have been shown to be effective at improving enrollment and/or educational attainment for boys and girls combined have also been tested for girls specifically. This may reflect the fact that gender disparities in enrollment and attainment have been an area of focus for the education field for decades, potentially leading to better measurement, more innovation, and more evaluations that disaggregate results by sex.

The evidence for policies and programs designed to improve learning largely lacks a gender lens. More is known about how to improve learning for girls and boys combined than for girls in particular. This might reflect assumptions—or realities—about gender disparities in learning outcomes or processes. But this may also be an area ripe for expansion in the girls' education program and research space.

Taken together, evidence reveals some effective and promising approaches to improving learning:

- Supporting teachers through ongoing training or coaching, and approaches to improve pedagogy are effective at improving learning for girls and boys combined; evidence suggests that providing remedial academic support or tutoring, including through the use of technology to support pedagogy, may be effective for girls specifically.
- Evidence also indicates that improving school governance and accountability, and provision of merit-based scholarships may improve learning outcomes for girls and boys combined.

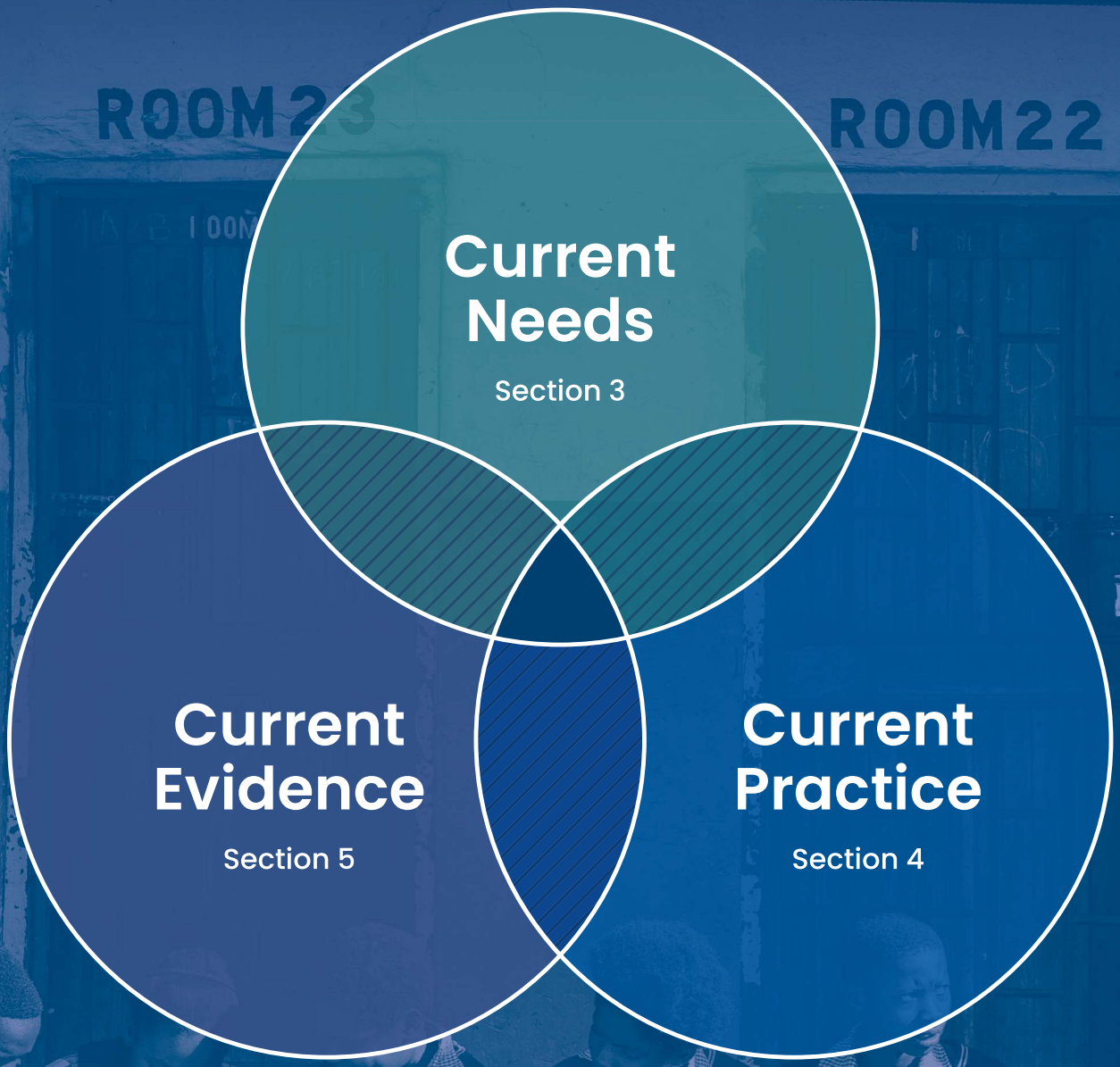
Even though efforts to improve pedagogy were—perhaps unsurprisingly—consistently cited as one of the most effective approaches to improving learning for girls and boys combined, we found little evidence of these approaches being tested for girls specifically in our review. Interventions providing additional academic support to girls often focused more on creating time or space for tutoring, rather than supporting teachers to improve their pedagogical practices.

Note: The evidence for interventions that improve education outcomes for girls and boys combined comes from our rapid review of recent general education reviews. The evidence for interventions that improve education for girls specifically comes from our recent systematic review.

Section 6: Aligning Needs, Evidence, and Practice



In the last three sections we have summarized insights on three key areas in global girls' education:



The opportunity to examine issues across these three areas provides insights into where the global girls' education community is on track, and where adjustments in our approach—for practitioners, policymakers, researchers, advocates, and/or donors—could catalyze progress for the field in a moment when strategic thinking about investments is more needed than ever.

In this section, we examine areas of alignment or disconnect through a series of questions:

Are programs and other activities focusing on the areas where needs are greatest? And do they address the greatest needs in those settings?

While education needs are high in many countries, there is substantial variation across and within countries, particularly regarding which needs may be most urgent to address. With such variation, it is important to ask whether girls' education programs are addressing the most pressing needs in a given setting, and whether areas of high need are receiving enough investment.

Are researchers building evidence on the most common approaches? And are programs and other activities using evidence-based approaches?

Understanding the ways in which current practice in global girls' education and current evidence of what works are aligned can help us to improve the relevance of research, by shifting the focus to evaluating commonly used interventions that lack evidence of effectiveness. Understanding the connections can also help us to improve practice, by giving policymakers and practitioners clear information about which approaches have been shown to work, for whom, and in which contexts.

Does evidence exist on how to address the most pressing needs? Has that evidence been generated/adapted in the settings where needs are greatest?

Improving girls' education outcomes not only requires aligning practice with evidence, but also requires ensuring that relevant evidence exists of effective approaches to address the most pressing needs. In deciding how to invest limited resources, policymakers and donors are asking not only what has worked, but also, what has worked in similar settings to address the most pressing needs with limited resources?

Examples of alignment and disconnects in global girls' education

We explore the alignment—or disconnects—between needs, evidence, and practice around five themes:

- improving enrollment and attainment for girls
- improving learning for girls
- addressing gender-related barriers to education for girls
- strategic program and policy design
- responding to COVID-19

We largely use a global focus to provide broad examples, and relevant recommendations for the global community. A similar exercise could inform regional or country-specific efforts, or efforts on specific topics, and we continue to update the data to undertake that exercise through www.egeresource.org.

Improving enrollment and attainment for girls

DISCONNECT—Almost half of evaluations of programs in our systematic review of gender-related barriers to education were conducted in four countries: India, Kenya, Bangladesh, and Uganda. We found few evaluations from countries with the lowest levels of enrollment/attainment for girls, with the exception of Burkina Faso (2), Ethiopia (4), Malawi (2), Sierra Leone (1), and Liberia (1).

ALIGNMENT—High proportions of girls never complete primary school, and 60% of programs list increasing enrollment and attainment as a goal. These programs also appear to be focused in some of the countries with the largest gender gaps in enrollment and attainment.

DISCONNECT—However, in some countries with steep drops between primary and secondary completion, such as Kenya and Uganda, few programs currently in the EGER database specifically address progression to secondary school or secondary school attainment.



DISCONNECT—Few programs aiming to improve girls school enrollment and attainment addressed some of the barriers that emerged most strongly from our review of evidence: school access (28%), inability to afford tuition and fees (23%) or school materials (13%), lack of food (8%), lack of water and sanitation (6%).

Improving learning for girls

DISCONNECT—Learning levels for girls remain extremely low, and we observe gender gaps in learning, even among those completing primary school. Although less evidence exists on how to improve learning for girls, strong evidence exists from the general education literature on the importance of improved pedagogy (e.g. structured pedagogy, competency grouping) to improve learning for girls and boys combined. We also found that providing academic support was promising. Evidence on addressing gender-related barriers to learning for girls is incomplete.

DISCONNECT—Current girls' education programs are much more likely to aim to improve enrollment/attainment than learning (60% vs. 40%, with substantial overlap). Although gender gaps in enrollment and attainment remain in many settings, low learning levels are also a serious challenge for girls, including in countries with gender parity in enrollment.



DISCONNECT—In over a third (41%) of 37 countries, less than half of female primary school graduates can read, but only 1 in 3 programs list improving academic skills as a goal.

DISCONNECT—At the same time, very few programs include the approaches with the strongest evidence base, including those addressing poor pedagogy. For example, very few programs include competency grouping (1%), remedial education (2%), or teacher incentives (1%).

UNCLEAR—62% of girls' education programs that are designed to improve learning include at least one potentially evidence-based approach (e.g. teacher training), but there may be wide variation in the design and implementation of similar interventions.

Addressing gender-related barriers to education

DISCONNECT—An examination of gender-related barriers finds high levels of need—i.e. substantial prevalence of child marriage, links between childbearing and low educational attainment, and high levels of violence experienced by girls and young women. Many gender-related barriers to education may be less well understood, such as gender-inequitable school environments. We do not know whether and which interventions to address these issues are effective in increasing attainment or improving learning outcomes.

ALIGNMENT—Reflecting the gender disparities in education globally, many programs have integrated activities aiming to address gender norms either directly or indirectly. For example, gender, rights, and power education is one of the most commonly reported components of current activities in the global girls' education space, and nearly half of programs aiming to improve enrollment/attainment or learning include life skills education.

DISCONNECT—For example, in some settings women who complete more education are less likely to experience violence. We found no evaluations that tested the effects of SRGBV prevention interventions on girls' education outcomes.



DISCONNECT—Both child marriage and early childbearing play a role in school dropout, and often occur closely together. Yet only one in five programs (22%) focus on one or both of these barriers, and most programs in the countries with the highest levels of child marriage do not address this issue.

DISCONNECT—Both child marriage and adolescent childbearing are strongly linked with lower educational attainment. We found important gaps in the evidence on the education effects of programs addressing these risks either directly or indirectly.

DISCONNECT—High proportions of girls and women experience interpersonal violence. Only one in five programs list violence reduction as a goal, and these efforts are not concentrated in the countries with the highest levels of reported violence.

DISCONNECT—Some of the most commonly used approaches in girls' education programs (gender, rights, and power education, life skills education, community engagement/mobilization) have not been shown to improve education outcomes for girls, based on existing evidence.

DISCONNECT—Poor children have the worst education outcomes and the largest gender gaps. It is not surprising, therefore, that interventions that address the cost of schooling have been shown to increase enrollment and narrow gender gaps in enrollment and attainment. But only 20% of girls' education programs aim to address financial barriers to school.

Strategic program and policy design

DISCONNECT—Although it's clear that gender differences in enrollment and attainment exist, current evidence largely provides incomplete information about which approaches to addressing gender-related barriers to education are most effective, and which approaches should be prioritized in contexts with limited resources.

ALIGNMENT—A review of current needs in global girls' education underlines both the persistence of gender gaps in enrollment, attainment, and learning in many countries, and the multiple potential gender-related barriers to education for girls. Mirroring this complexity, nearly 90% of programs mapped include multiple components.



UNCLEAR—Similar to the variety of programs and other activities found in current practice, about half of interventions designed to address gender-related barriers identified through our review report on multicomponent programs. This recognition of the complexity of common efforts is an important area of alignment between practice and research, however whether multicomponent programs are more effective is, so far, unknown.

DISCONNECT—In practice very few multicomponent programs employ the exact same combination of components, and clear replicable models are not well defined. Out of the 532 programs mapped in EGER, 88% are completely unique in their approach, meaning no other program uses the same combination of components. Even when programs share components, the approaches are often vastly different. This lack of shared approaches and definitions hampers efforts to develop clear best practices, prioritize program components, or learn from/adapt efforts across similar contexts.

Responding to COVID-19

UNCLEAR—Evidence for the effects of better pedagogy on improved learning is strong, but how does pedagogy translate when schools are closed and "teaching" is remote?

UNCLEAR—If skill loss during school closure leads to an even wider diversity in skill levels when schools reopen, how can teachers apply the evidence on competency grouping to address these teaching/learning challenges?

UNCLEAR—School shutdowns have meant many children were dependent on remote learning. Do common approaches (e.g. TV broadcasts) reach all children equally?

UNCLEAR—How will growing economic distress due to COVID-19-related shutdowns amplify inequalities in access? Can existing approaches to address economic barriers to school be used to minimize dropout?

UNCLEAR—If, as in past shocks, COVID-19 leads to increases in adolescent childbearing and child marriage, what can we do to help get girls back in school, or to build their skills outside of school?



UNCLEAR—School feeding programs have been shown to be effective at increasing attainment and improving learning, even pre-COVID-19. With increased household food insecurity as a result of COVID-19, can school feeding programs help girls get back to school?

What's next?

The world has made great progress in girls' education. But even before COVID-19, much more work was needed to make sure all young people, especially girls, were in school and learning. The pandemic is layering new pressure on top of existing challenges. As we face these challenges, aligning policies and programs with the greatest needs and the most effective solutions is more important than ever.

The goal of the 2021 Girls' Education Roadmap Report is to share those insights and continue a conversation about how to better align the greatest needs with the strongest evidence and the best practices. By providing specific examples of areas where needs, current practice, and evidence are not well aligned, this Roadmap Report aims to help the global girls' education field direct limited resources toward the best investments. Identifying those gaps is the first step, working to fill them together will require ongoing collaboration across the field.

A summary of the key insights from this report is available in **Section 1**, or as a separate document through the EGER site. We invite you to connect with the EGER team to share or update information about your work, receive updates on EGER results, or share other feedback. Go to **www.egeresource.org/join-us/.**

Appendices

Appendix 1: How were organizations and programs identified?

We identified and vetted many more organizations than met our inclusion criteria. In total, we have vetted 550 organizations to date, and included 250 (45%), and we have vetted 900 programs, and included 550 (61%). We adopted the following vetting process:

Step 1: Identify possible organizations through online databases or websites, or word of mouth. We use publicly available information to determine whether each organization meets the inclusion criteria. If so, we create a draft organization profile.

Step 2: We identify any relevant programs linked with each organization and create draft program profiles.

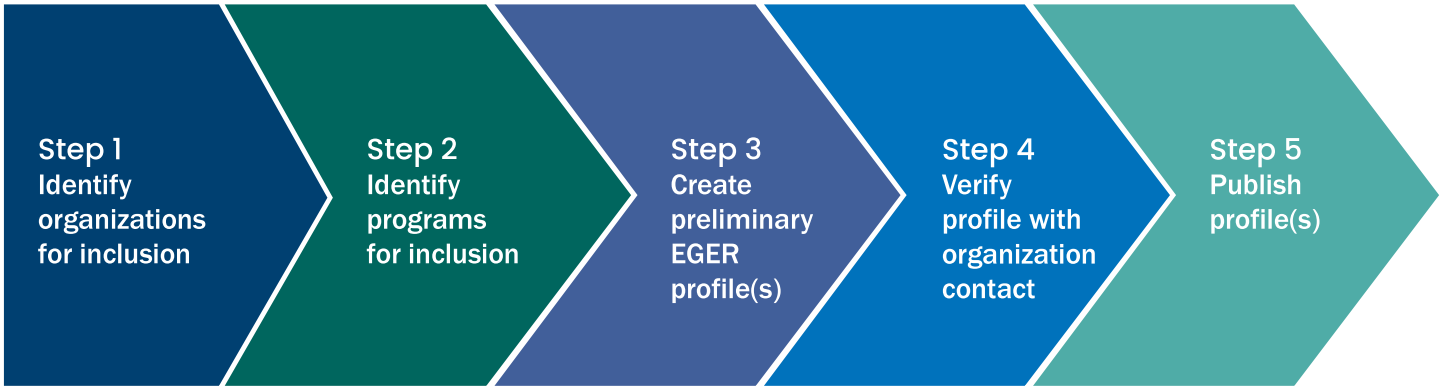
Step 3: We contact the included organization to review the draft organization profiles and to suggest other programs they'd like to include in EGER.

Step 4: We publish the profile. If we do not receive responses from organizations in response to our profile review request after 3 contact attempts, we publish the unverified profile on EGER and label it as such, so users are aware of the profile's status. If the program has been verified, we include a green check mark on the site.

Step 5: Users can log into EGER to request program and organization profile edits and updates at any time. Users may also submit new profiles to EGER through this same system.

For a full list of included organizations go to egeresource.org, click on "Profiles" and then "Organizations."

EGER identification process



Appendix 2: General Education Studies Included in Rapid Review

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*Indicates topic-specific studies that we cite, but do not include in our assessment of most frequently cited effective or promising approaches.

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23 February 2021