



ACHIEVING GENDER EQUALITY IN EDUCATION: EXAMINING PROGRESS AND CONSTRAINTS

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OVERVIEW

Education is a human right for all children, yet many marginalized groups are disproportionately excluded from pursuing an education. Enrollment outcomes have increased for both girls and boys in recent decades, but learning remains a critical issue. Girls' enrollment, attendance, and dropout rates are especially challenging in low-income countries and countries facing fragility, conflict, and violence (FCV). The sizable gender gap in female labor force participation after education also indicates that education and learning do not translate into labor market returns for women in the same way as they do for men.

Schools play an important role in the fight for gender equality. Schools empower all students, serving as incubators where students can learn about their own potential and rights in the world around them. The education girls receive at schools plays a huge role in shaping their future. United Nations Sustainable Development Goal 4 commits to ensuring every child in the world receives a free, quality education. With the push to get every single girl in school, the potential for impact in creating gender equality through education is huge.

The World Bank is the largest external financier of education worldwide. This note examines trends in girls' education and spotlights interventions that support girls' education. Key takeaways include the following:

- It is simply not enough to get girls into school. Efforts must ensure they stay in school, learn well, and are able to translate their schooling into future gains.
- Programs that focus on getting girls into school through scholarships, cash transfers, and stipends improve girls' enrollment outcomes.
- Interventions that address additional challenges that girls face while in school, such as improving conditions for menstrual health and hygiene and reducing gender-based violence (GBV), make girls feel safe and included in schools.
- Teaching and learning-focused programs for girls, such as combating stereotypical gender norms in pedagogy, textbooks, and curriculum, help reduce gender-bias in schools and empower them to reach their full potential.
- It is important to strengthen the role of schools for adolescent girls' empowerment and for shifting mindsets and norms by engaging girls and boys on issues pertaining to gender equality including on GBV, Sexual and Reproductive Health and Rights (SRHR), and women's economic participation.

- There are wide regional disparities in enrollment and participation in technical and vocational education and skills training programs for young women, and in labor market participation.
- Boys also face a myriad of challenges in their education, especially academic underachievement and dropout at the secondary education level which is related to a higher likelihood of entering the labor market early.
- Women transitioning out of school and into labor markets face barriers related to cultural norms, values, safety, childcare, and gender roles. These keep women from fully realizing labor market gains and societies from achieving meaningful gender equality.



OCTOBER 2023



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This thematic policy note is part of [a series](#) that provides an analytical foundation for the World Bank Gender Strategy (2024–30). This series seeks to give a broad overview of the latest research and findings on gender equality outcomes and summarizes key thematic issues, evidence on promising solutions, operational good practices, and key areas for future engagement on promoting gender equality and empowerment. The findings, interpretations, and conclusions expressed in this work are entirely those of the author(s). They do not necessarily reflect the views of the World Bank or its Board of Directors.

This paper was written by Raja Bentaouet Kattan, Myra Murad Khan and Melissa Merchant. The team thanks Halsey Rogers, Venkatesh Sundararaman, Laura McDonald, Tihtina Zenebe Gebre, and Laura Gregory for their peer-review comments. We thank Jaime Saavedra for overall direction and review. We also thank Shobhana Sosale, Laura Rawlings, Sundas Liaqat, Diana Jimena Arango, and Ariana Maria Del Mar Grossi for support and thoughtful suggestions.





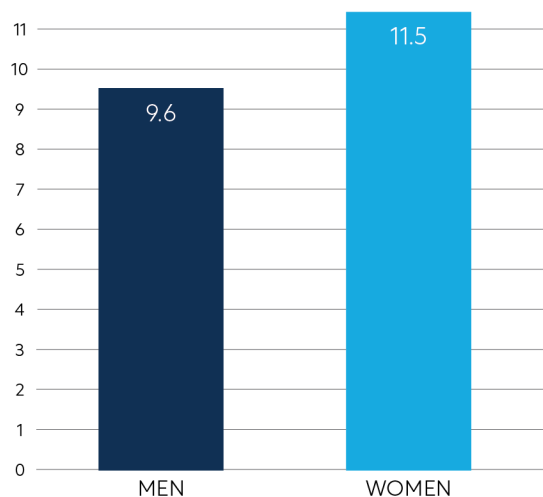
It is a human right for all girls and young women to receive a quality education, and a strategic global priority for the World Bank is to ensure this right is fulfilled. Achieving gender equality is central to the World Bank's twin goals of ending extreme poverty and boosting shared prosperity. The World Bank ensures that all of its education projects are gender-sensitive, and works to support countries to overcome barriers that are preventing girls and boys from equally benefiting from countries' investments in education.

The World Bank is the largest external financier of education globally, and the largest investor in girls' education. Bank programming on girls' education goes beyond getting girls into school. It is also about ensuring that girls are able to learn and feel safe while in school, have the opportunity to complete all levels of education, acquire knowledge and skills to enter the labor market, gain socio-emotional and life skills necessary to navigate

and adapt to a changing world, have voice and agency to make informed decisions about their own lives, and fully contribute to their communities and the world.

Girls' education is estimated to have large impacts on their own individual outcomes, as well as larger impacts on their communities and countries. A landmark World Bank paper published in 1992 indicated that investments in girls' education could give the highest return on investment in many countries, given the social impacts of girls' education (Summers 1992). Research has continued to document the high returns that girls' education provides, with one additional year of schooling increasing women's returns to education by 12 percent (Patrinos 2019). A recent report by Plan International also showed a \$2.80 return in investment for every \$1 invested in girls' education (Plan International 2020). Returns on education for women tend to be higher than for men. An additional year of school increases men's returns to education by 10 percent (see Figure 1).¹ This trend is seen in all economies and countries, even in lower income countries.²

FIGURE 1. PRIVATE RETURNS TO EDUCATION FOR WOMEN, GLOBAL ESTIMATES



Source: Kattan et. al 2021

¹ Private returns to education for women are measured by the wage increase each additional year of schooling. More details on the full calculation in Montenegro and Patrinos, 2014 and a summary in Kattan et. al, 2021.

² The gap in low-income countries is 9.2 vs. 8.4 for women and men, respectively (Patrinos and Psacharopoulos, 2020).

Data show that more education for women also has a range of impacts on other health, social, and economic outcomes.

For example, more educational attainment for women is linked to improved health outcomes both for them and for their children, as data from several studies show.³ Educated women tend to be more informed about nutrition and health care, have fewer children, and marry at a later age, and their children are usually healthier, should they choose to become mothers. There is an inverse correlation between the number of years of schooling women receive and the number of children they have.⁴ Additional schooling for women is associated with a 16 percent reduction in number of children, and a 26 percent reduction in child mortality (Kaffenberger and Pritchett 2021). These results also show a greater impact when the difference between schooling and learning is examined. When literacy and schooling are studied as a combined measure, child mortality drops even further, than if just examining the impact of a mother’s schooling (Kaffenberger and Pritchett 2021). UNESCO estimates that if all girls completed primary education, child marriage would drop by 14 percent and if all completed secondary education, it would drop by 64 percent (Psaki 2014).

While these impacts on girls and women are individual, there are wider impacts on their households, communities, and countries, which in turn can promote poverty reduction, economic growth, and productivity. A 2018 World Bank study estimated that limited educational opportunities for girls, and barriers to completing 12 years of education, cost countries between \$15 trillion and \$30 trillion in lost lifetime productivity and earnings (Wodon et. al. 2018).

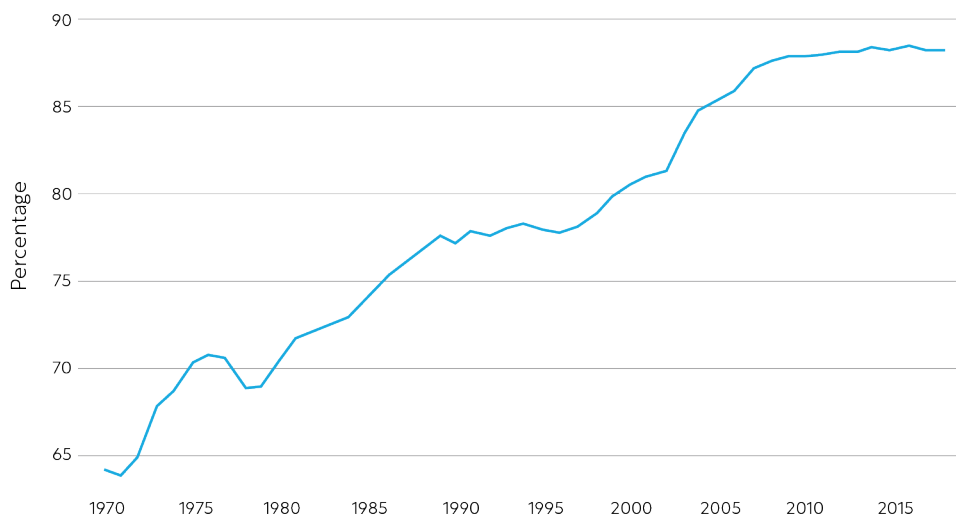
Education for girls is a cornerstone to reducing poverty and improving global development outcomes.

In recent decades, there has been steady and significant improvement in education outcomes, for girls and young women globally. More girls are now in school than ever before. Girls are now learning at similar levels, if not higher, than boys. Trends in key outcome areas include the following.

1. Enrollment and Completion Outcomes

Gender parity has largely been reached with more girls now enrolled in school than ever before, especially at the primary level. The net primary school enrollment rate for girls is 88 percent and 91 percent for boys (see Figure 2).⁵

FIGURE 2. INCREASE IN PRIMARY SCHOOL ENROLLMENT FOR GIRLS



Source: World Bank Open Data (Database), World Bank. <https://data.worldbank.org/indicator/SE.PRM.NENR.FE>

³ Data from multiple studies, including more recent ones such as Nepal (Brauner-Otto et al. 2019), Uganda (Nankinga et al. 2019), Indonesia (Kunto & Bras 2018) all find similar impacts that education improves a myriad of outcomes for women in their own health and nutrition outcomes, as well as their families.

⁴ Our World in Data. <https://ourworldindata.org/grapher/womens-educational-attainment-vs-fertility>

⁵ Most recent data available globally is from UNESCO UIS from 2018 at World Bank Open Data (Database), World Bank: <https://data.worldbank.org/indicator/SE.PRM.ENRR.FE> and <https://data.worldbank.org/indicator/SE.PRM.NENR.MA>



Primary school completion rates are also largely at parity between boys and girls (90 percent for boys, 89 percent for girls). These averages, however, hide huge gaps in many countries. The largest gaps that disadvantage girls are in low-income countries and countries in fragile, conflict, and violent (FCV) settings, such as Chad (with 38 percent boys completing primary and only 29 percent girls), Afghanistan (67 percent boys completing and 40 percent girls), Mali (52 percent boys and 44 percent girls), and Guinea (52 percent boys and 39 percent girls).⁶

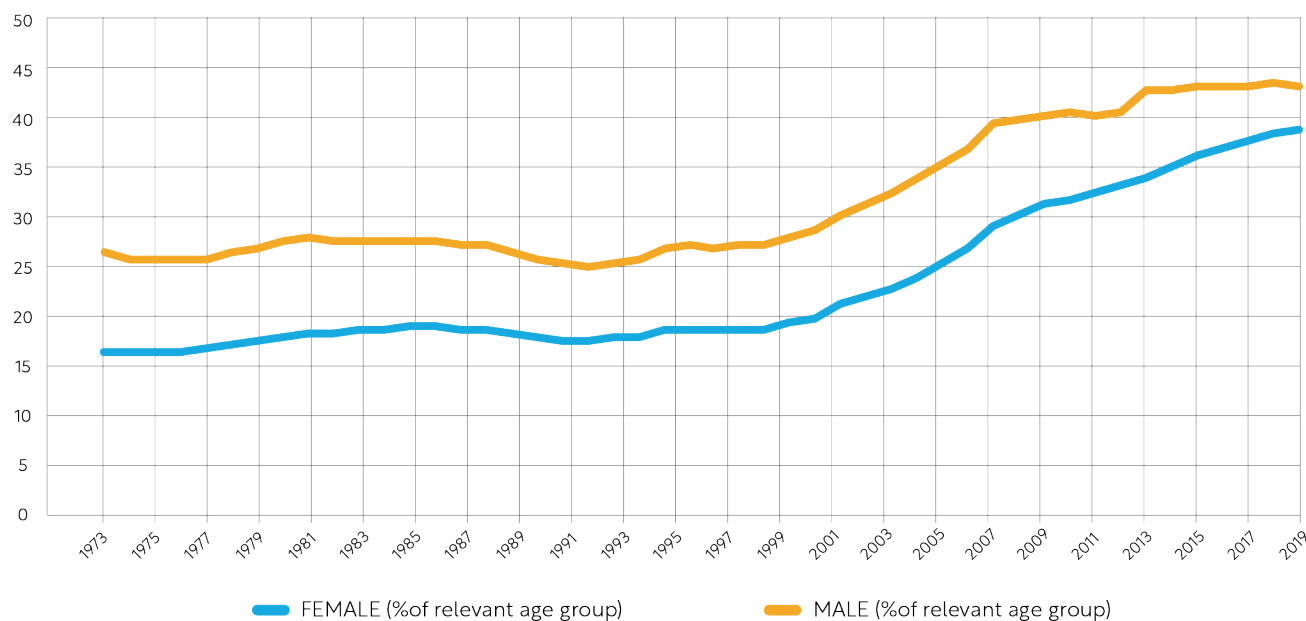
The transition rates from primary education to lower secondary education are similar for boys and girls globally (66 percent enrollment rate at the secondary school level for both boys and girls),⁷ but the gap widens in lower-income countries. Lower secondary school completion rates for boys and girls are much lower in lower-income countries overall, and there are even sharper gender differences (see Figure 3). In these countries, 36 percent of girls and 44 percent of boys complete secondary education.⁸

⁶ UNESCO Indicators (Database). https://www.education-inequalities.org/indicators/comp_prim_v2, most data is from DHS 2018 surveys

⁷ World Bank Open Data (Database), World Bank. Boys: <https://data.worldbank.org/indicator/SE.SEC.NENR.MA>, and girls: <https://data.worldbank.org/indicator/SE.SEC.ENRR.FE>

⁸ Ibid. Girls: <https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.FE.ZS> and Boys: <https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.MA.ZS>

FIGURE 3. LOWER SECONDARY SCHOOL COMPLETION RATE IN LOW-INCOME COUNTRIES



Source: Authors calculations using World Bank Open Data (Database), World Bank.
<https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.FE.ZS> (female)
<https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.MA.ZS> (male)

In many low and middle- income countries, proportions of girls in school decrease through higher levels of education. In Pakistan, for example, the out-of-school rate⁹ for girls at the primary education level is 0.24, meaning roughly 76 out of 100 girls at the primary school age are in school. At the lower secondary education level, the out of school rate increases to 0.41, meaning that roughly 59 out of 100 lower-secondary school age girls are in school. At the upper secondary level of education, the out of school rate jumps to 0.65, meaning only 35 out of every 100 girls at the upper secondary level of education are in school. These trends are commonly observed in many other countries, and are often more pronounced for female students.

Although enrollment rates have increased, the figures mask the enormity of the number of children out of school. According to the most recent UNESCO estimates from

statistical modeling, there are 244 million children out of school at the primary and secondary education levels, with the problem concentrated in certain regions (Antoninis and Montoya 2022). UNESCO data also shows that 119 million girls are estimated to be out of school worldwide, and the majority of these are concentrated in two regions: Sub-Saharan Africa and Central and South Asia.¹⁰

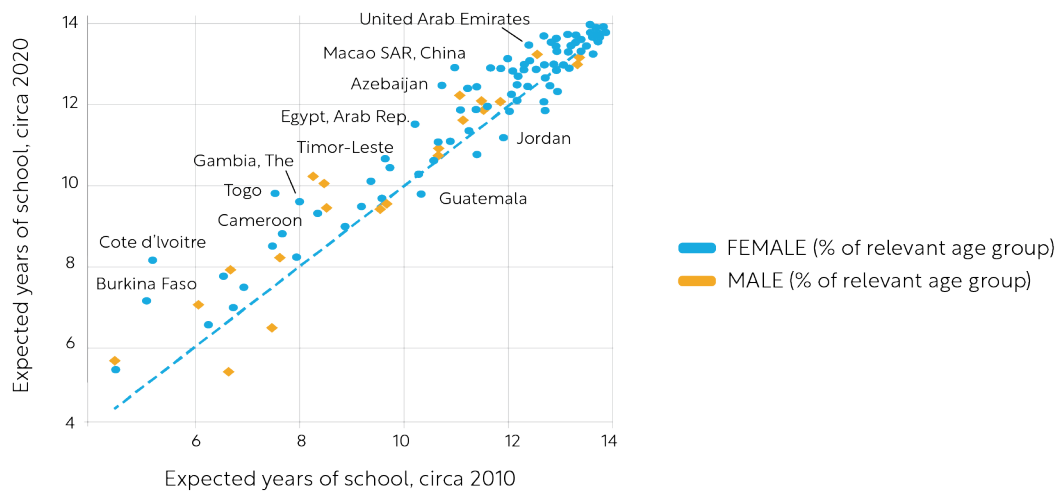
2. Years of Schooling

The average number of completed years of schooling has increased for both boys and girls over the past few decades. A study by the World Bank’s Human Capital Project shows that most countries examined had higher expected years of schooling in 2020 than 2010 (see Figure 4) (World Bank 2020).

⁹ Out of school rate is defined as the “proportion of children and young people in the official age range for the given level of education who are not enrolled in pre-primary, primary, secondary or higher levels of education.” (See UIS and GEM 2022)

¹⁰ UNESCO Visualizing Indicators of Education for the World (Database). <https://www.education-estimates.org/>

FIGURE 4. CHANGES IN EXPECTED YEARS OF SCHOOL



Source: World Bank 2020

Note: The figure plots expected years of school circa 2020 HCI (on the vertical axis) against expected years of school, circa 2010 (on the horizontal axis) for 119 economies for which enrollment data are available for both 2010 and 2020. The dashed line is a 45-degree line; points above (below) represent an increase (decrease) in expected years of school between 2010 and 2020. Yellow diamonds in the panels indicate economies for which data are available for both 2010 and 2020, but that are not part of the sample used for the analysis of changes over time because they are missing 2010 comparator data for the HCI components.

Another comprehensive analysis of schooling trends in 126 countries showed that in 1960, adult women across the world had an average of 2.6 years of education, and by 2010, that number had nearly tripled to 7.7 years of education (Evans et. al 2019). The study also notes that in every region of the world, women are still more likely to have no schooling than men.

3. Learning Outcomes

Schooling is not always focused on quality learning, and learning levels are still low in many countries. The World Bank’s Learning Poverty indicator measures the share of children who are not able to read and understand a simple text by age 10 (World Bank 2022b). Globally, as a result of the pandemic, learning poverty levels are estimated to have risen as high as 70 percent in low and middle-income countries (World Bank 2022a). In other words, 70 percent of children aged 10 in low- and middle-income countries may not be able to read or understand a simple text. Even prior to the pandemic, this number was already as high as 57 percent, reflecting a global learning crisis.

While girls have, on average, lower learning poverty rates by 4 percentage points compared to boys, the rates still remain very high for both groups. The average rate of learning poverty in low and middle-income countries is 55 percent for girls and 59 percent for boys. This shows that girls, like boys, are not being given a chance to learn the skills they need for life. Moreover, in the lowest-income countries, there is virtually no gap. Learning poverty rates are as high as 93 percent for both boys and girls (World Bank et. al. 2021).

The Program for International Student Assessment (PISA), conducted mainly in high and middle-income countries, shows similar trends. Learning levels are far below what children and youth need and below curricular standards, but girls do somewhat better than boys. In the 2018 PISA, for example, girls outperformed boys in reading by almost 30 points (or about one year’s worth of learning).¹¹ The results from PISA for Development, however, show a less pronounced gap than in OECD countries, with the largest gap in Cambodia (17 score points) (Ward 2018).

¹¹ PISA uses estimates from students currently enrolled in school only, unlike other estimates mentioned on learning, such as learning poverty, which also includes out-of-school children. There could be potential for selection bias where girls that are in school perform better, as they have overcome several barriers already to enter school. However, PISA results are usually calculated from statistics in OECD countries, not low or lower-middle-income countries. (OECD 2020)



The case is different in mathematics and science, where the gaps are smaller. In the PISA math assessment, boys outperformed girls, only by 5 points, and in science, girls outperformed boys by 2 points (OECD 2020). The PISA for Development also showed a gender gap in favor of boys in mathematics in most countries, and as high as 20 score points in Ecuador and Honduras. In the TIMSS 2019 assessment, fourth grade boys had higher average achievement than girls in close to half of the 58 participating countries, however, the difference was statistically significant in only 27 of these countries.¹²

4. Higher Education and TVET

Higher education trends by gender vary significantly by region. In East Asia and the Pacific and Europe and Central Asia regions, the gender parity index for gross tertiary enrollment favors women. In East Asia and the Pacific, there are 1.14 women for each man enrolled, and in Europe and Central Asia, 1.13. However, in Sub-Saharan Africa, the ratio is 0.78,¹³ and in low-income countries, it is 0.76—meaning that far fewer women are benefiting from tertiary education. The lowest ratios are in Chad and Afghanistan, where gender ratios at the tertiary level are just 0.29 and 0.39, respectively.

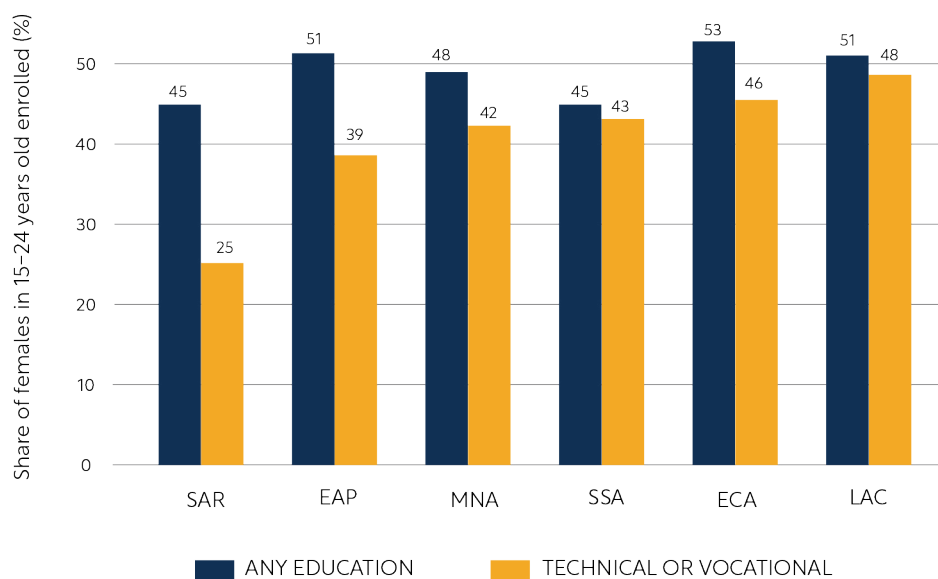
The issue is not just access to tertiary education overall, but also representation in specific fields of study that lead to higher-earning opportunities. Female students represent only 35 percent of all students enrolled in science, technology, engineering and mathematics (STEM)-related fields of study at the higher education level globally (UNESCO 2017). A recent study by UNESCO that examined women's fields of study in 776 universities globally finds a humanities bias, with women more likely to enroll in humanities degrees than in STEM subjects (UNESCO 2022). Evidence also shows that women enrolled in STEM courses are more likely to switch out of their fields, and that the dropout rate in STEM-related tertiary education programs is higher for women than men (Delaney and Devereux 2021).

There are large gender disparities for enrollment in technical and vocational education and training (TVET) programs. A recent World Bank report on TVET systems highlights that out of 104 low and middle-income countries for which there is data, 87 percent had a higher share of men enrolled than women (Levin et. al. 2023). This trend varies by region. Figure 5 shows that young women are less likely to enroll in TVET education, as opposed to other forms of education. The disparity is most pronounced in South Asia.

¹² In 27 countries, the gaps were closed, and in four countries, girls scored higher. (Mullis et. al. 2020).

¹³ Gender parity index for gross enrollment ratio in tertiary education is the ratio of women to men enrolled at tertiary level in public and private schools. World Bank Open Data (Database), World Bank. <https://data.worldbank.org/indicator/SE.ENR.TERT.FM.ZS>

FIGURE 5. SHARE OF FEMALE STUDENTS AGES 15–24 ENROLLED IN TVET EDUCATION AND ANY EDUCATION PROGRAMS



Source: Levin et. al. 2023

For TVET programs, gender disparities in enrollment are also more pronounced in certain fields of study. The report highlights that Nigeria had a 4 to 1 overall male-female enrollment ratio in technical colleges, with particularly wide gender gaps in architecture, information and communications technology (ICT), accommodation or food services, and mechanics (World Bank 2015b). In Bangladesh, women made up 86 percent of the student body for formal short-term training courses in sewing but less than 10 percent in specializations like electricity, welding, and auto mechanics (World Bank 2015a). This is likely due to a combination of several socio-cultural factors, including perceptions that can stem from a young age about girls' learning ability in certain subjects. These can persist through higher levels of education, even in many highly developed countries of the world, where there are perceptions about which career paths are available to and suitable for women.

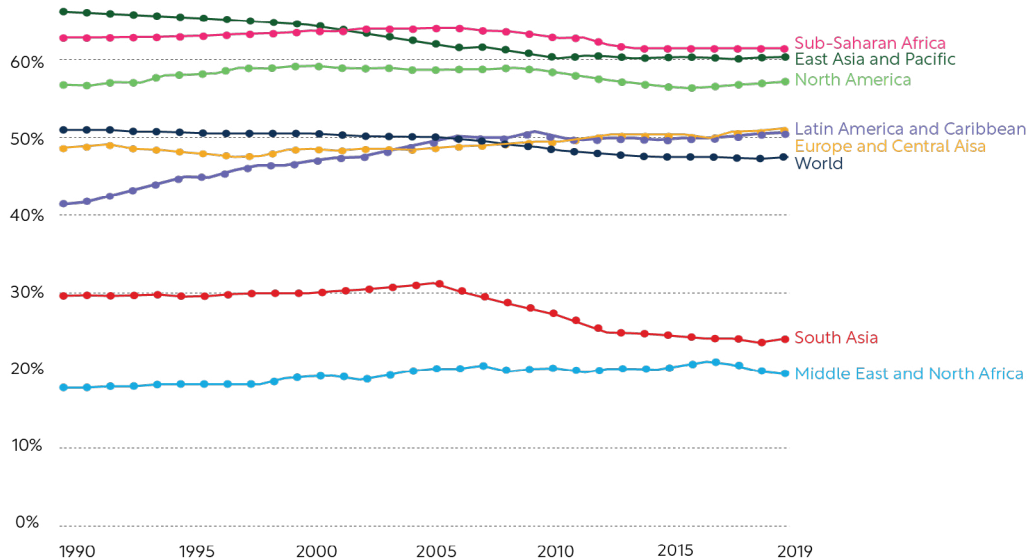
5. Labor Market Outcomes

While more schooling and learning should lead to better labor markets outcomes, in reality, there are large gender gaps in the labor market. The female labor force participation rate is only 53 percent. Moreover, this rate has dropped a few percentage points since 2000, pointing to a reversal of previous progress.¹⁴ The rate for men is at 80 percent.¹⁵ This large gap is even worse in regions with already significant education challenges. South Asia has one of the lowest female labor force participation rates at 25 percent, and it has continued to trend negatively in the last 20 years. The rate in Middle East and North Africa is 21 percent (see Figure 6).

¹⁴ World Bank Open Data (Database), World Bank. <https://data.worldbank.org/indicator/SL.TLFACTI.FE.ZS>, using 2019 ILO data

¹⁵ World Bank Open Data (Database), World Bank. <https://data.worldbank.org/indicator/SL.TLFACTI.MA.ZS>

FIGURE 6. FEMALE LABOR FORCE PARTICIPATION RATES



Source: Our World in Data <https://ourworldindata.org/female-labor-force-participation-key-facts>

Note: All figures correspond to 'modeled ILO estimates' (see source for details)

There is still a myriad of barriers that girls, young women, and adult women face in society, contributing to the trend of low female labor force participation. These barriers—many heightened by the COVID-19 pandemic—hamper their empowerment, independence, ambition, and ability to participate in the transition from school into the labor market and to fully participate in many aspects of public life (see Box 1).

BOX 1. THE IMPACT OF COVID-19 ON EDUCATION OUTCOMES

The COVID-19 pandemic and related school closures have significantly impacted both boys and girls. Emerging evidence of COVID-19-driven learning losses across countries has not consistently shown large gender gaps. However, children from poorer and less educated households suffered greater learning losses, and in some settings, data show that girls lost more learning than boys. In addition, pressures on households may have increased the risk of early marriage and school dropout for adolescent girls. Some findings in the early evidence include the following:

- Bigger learning losses for girls were found in studies in South Africa, Pakistan, and Mexico, while no differential impact was found in Ethiopia. A study of a small private school sample in Pakistan showed bigger losses for boys (World Bank et. al. 2021). A World Bank study examining seven countries showed that gender gaps in educational attainment and learning loss during school closures were small and not statistically significant (De Paz Nieves et. al. 2021).
- Higher rates of dropout were found for grade 10 and 12 girls in Uganda, and for adolescent girls in Kenya (Kwauk et. al. 2021; Zulaika et. al. 2022). In Ghana, 60 percent of dropouts were girls. In Pakistan, however, a World Bank study finds that adolescent boys dropped out more than girls (World Bank 2022d).
- In a recent report by the World Bank Human Development team on the human capital cost of the COVID-19 pandemic, change in enrollment rates was observed in countries with available data (Ethiopia and Pakistan), but no consistent patterns of dropout based on gender (Schady et. al. 2023).



Barriers to Girls' Education

The constraints to schooling and learning that girls and young women face include cost and distance barriers, low quality of education, lack of safety, and hindering norms and perceptions. Some constraints affect boys and girls alike, and others affect one gender more than the other. For example, studies in some countries show that parents with limited resources traditionally prefer to send boys to school over girls. Even when governments institute policies and laws for free schooling, costs to education remain. Evidence shows that boys from poor families are more likely to succeed in the education and labor markets than girls as they are more likely to be sent to school when resources are sparse (Sperling et. al. 2016, chapter 4).

These barriers interact with one another to make it harder for girls to enter and stay in school. The World Bank classifies the barriers to girls' education in the following four areas (see Figure 7).

- 1. Barriers to enrolling girls in schools, including cost and distance.** Households may lack resources to pay for schooling and associated costs (textbooks, uniforms, school supplies, transport) and parents living in poverty may choose to send boys to school instead of girls. Sometimes, both schools and transport to school can be unsafe for girls, especially if

they travel long distances to schools. This is more common in more rural and poor settings, where there may be more primary schools closer by, but fewer secondary schools.¹⁶ Additionally, there may be information asymmetry about returns to education for girls. Families may hold incorrect assumptions that returns to education are lower for girls, which may limit girls' education. Harmful social norms and preconceptions about girls and women also directly affect their schooling, often limiting their participation in education.

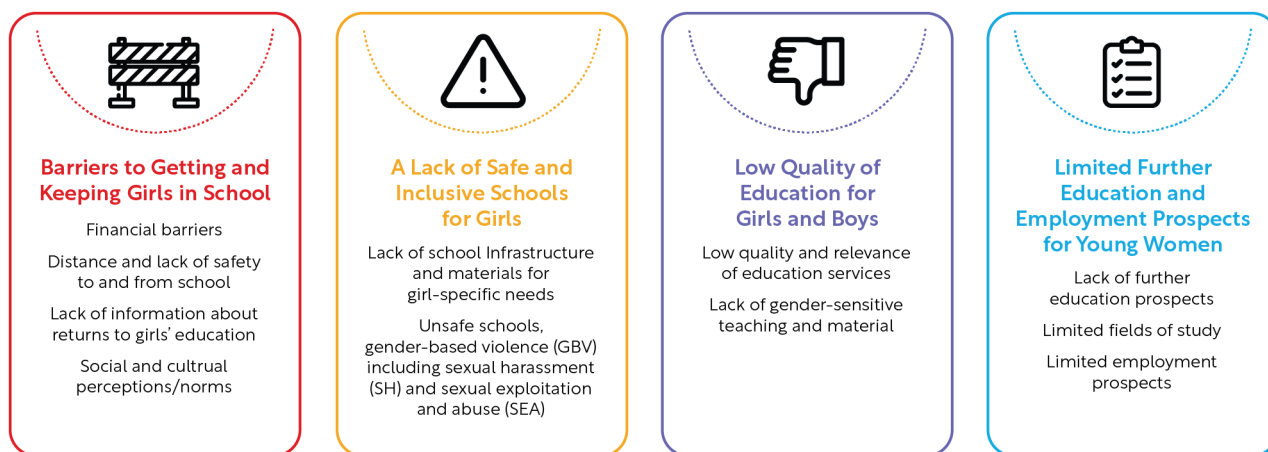
- 2. A lack of safe and inclusive schools for girls.** In many countries, women and girls face gender-based violence (GBV), often in and around school (UNESCO 2016). Corporal punishment is still legal and common in many settings around the world (Wodon et. al. 2022). School safety is often a key factor in parents' decisions to send their girls to school. Parents may perceive schools (and even the journey to school) as unsafe. A study of parents in Malawi found that there were negative perceptions about schools as an unsafe environment for several reasons (Grant 2012). Despite their desire to send their children to school, their perception of these risks reduced their motivation to encourage their daughters to stay in school. Many schools around the world are still not equipped with basic water, sanitation and health (WASH) facilities, which is an obstacle for adolescent girls and their menstrual hygiene management (Sivakami et. al. 2019). Girls miss school due to their periods (Lusk-Stover et. al. 2016).

¹⁶ For example, in the province of Sindh in Pakistan, 90 percent of educational institutions are primary schools, 10 percent are secondary schools, and 1 percent are tertiary education institutes. This mean traveling farther distances as the levels of education get higher. More information at: <http://www.sindheducation.gov.pk/pages.jsp?page=StatisticsProfile2016-2017>

3. Low quality of education. Low schooling quality can also drive dropout and low school completion rates for girls.¹⁷ Many studies show that parent perceptions of schooling quality are important in their decision to send their children to school.¹⁸ There is also a lack of gender-sensitive teaching methods and materials, although this is changing. Textbooks, other school materials, and even pedagogical practices that have gender biases can impede girls' educational success, as they impact girls' self-perception, empowerment, and ambition (UNESCO 2020a).

4. Limited opportunities for girls after education. Labor market trends after completing schooling do not favor women, who still enter the labor market with less formal work and lower pay. Some do not enter the labor market at all. Culture, norms, stereotypes, and biases across classrooms, the home, and workplace also influence gender gaps in STEM fields, which pay the highest.¹⁹ Additional support is needed in the transition from education to the labor market for many young women.

FIGURE 7. BARRIERS TO GIRLS' EDUCATION



Source: World Bank 2023b

Challenges that girls and young women face are compounded in FCV contexts. Concerns about safety and significant increases in GBV in these settings act as additional barriers to girls' schooling. At the secondary school level, girls are 2.5 times more likely to be out of school than boys in these settings (UNICEF 2017).

In 2019, approximately 20 percent of primary school-age girls in crisis-affected countries were out of school, compared to 16 percent of primary school-age boys and

3 percent of girls in non-crisis countries. This worsens as girls age, with 52 percent of adolescent girls of upper secondary school age in crisis-affected countries out of school, compared with 46 percent of boys and 29 percent of girls living in non-crisis contexts (UNICEF 2021). Out of the 40 countries with the lowest primary completion rate, 60 percent are in fragile and conflict-affected situations (FCV) (see Figure 8).²⁰

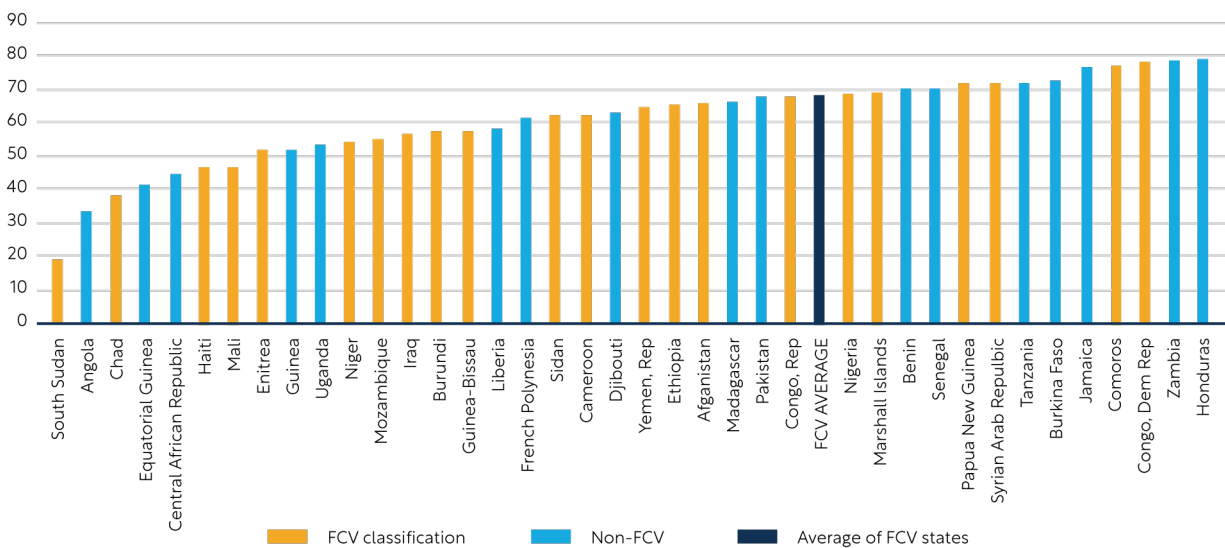
¹⁷ A RISE paper found that for girls, a one standard deviation higher math score at age 8 is associated with a 49 percent reduction in the odds of dropping out by age 12 (Kaffenberger et al. 2021).

¹⁸ For example, from Tanzania (Zuilkowski et al. 2018), Pakistan (Carneiro et al. 2022), and Nepal (Joshi 2014)

¹⁹ Masterson, 2021 summarizes World Economic Forum data on which careers pay the highest

²⁰ World Bank FY23 FCV Classification is available at: <https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations>

FIGURE 8. PRIMARY SCHOOL COMPLETION RATE IN FCV COUNTRIES



Source: World Bank Open Data (Database), World Bank.

<https://data.worldbank.org/indicator/SE.PRM.CMPT.FE.ZS?end=2021&start=1970&view=chart>, authors own calculations.

Note: This graph only shows the lowest 40 primary completion rate countries.

The effects of climate change also adversely impact education outcomes and risk worsening inequalities that girls and young women already face. Fostering gender equity and equality is smart economics and can help countries tackle some of the toughest issues, including climate change and the green transition (Brixi et. al. 2023). From a demand perspective, green jobs will play an important role in green transition to reduce and limit energy and raw materials consumptions, greenhouse gas (GHG) emissions, and waste and pollution, protect and restore ecosystems, and enable adaptation to climate change. Girls and women can play pivotal roles in addressing climate change in different domains, including in their households, communities and in the labor market, both formal and informal. These contributions can be accelerated by ensuring women have access to education and career opportunities in science, technology,

engineering, and mathematics (STEM) fields. Society, family and peers, schools, and learners would have direct influence and motivation for changing norms to encourage girls and women to select STEM education and careers.

By 2025, climate change could prevent an estimated 12.5 million girls from completing their education (Malala Fund 2021). Engaging girls and young women is also key to sustainable climate action. Girls' and young women's education and empowerment, in conjunction with interventions like family planning, reproductive and sexual health and reduced child marriage, can aid the transition to low-carbon economies, help improve resource use, and assist in lowering environmental damage and land fragmentation, as well as increase resilience of economies (World Bank 2022c).

BOX 2. AN EMERGING CHALLENGE: BOYS' EDUCATION

A growing body of evidence highlights educational underachievement among boys and men.²¹ Boys face a unique set of challenges that prevent them from accessing their full potential through education. In outcomes of learning, school enrollment, and school completion, boys fare worse than girls in many countries (Saavedra et. al. 2022).

In many countries fewer young men than young women complete their secondary and higher education degrees, even though there is gender parity in both enrollment and completion at the primary education level. A recent report published by the World Bank that examines boys and men's educational underachievement suggests that the problem is rare among the lowest-income countries and more common among middle and high-income countries (Welmond and Gregory 2021). A similar pattern is seen in secondary school completion rates and tertiary enrollment and completion rates. Three main factors drive boys' educational underachievement.

- 1. Labor market incentives draw boys and men away from educational institutions.** As boys approach secondary school age, there are fewer barriers for them to enter the labor market, and more incentives to do so to earn a wage. Boys who are already struggling in classrooms may join the labor market earlier. The opportunity cost also becomes greater.
- 2. Social norms reinforce negative stereotypes about the importance of education for young men.** For example, boys can face pressure to take on the role of household provider and earn income for their families. Much research on the effect of social norms has focused on the concept of hegemonic masculinity, which encompasses a set of social norms (e.g., emphasizing sexuality, physical strength, and social dominance) that can be at odds with those that are conducive to academic success. Among the theories on how family affects social norms, much has been written about fatherless households, which tend to hurt boys' educational achievement more than girls' educational performance.
- 3. Characteristics of the education process.** Many education systems around the world do not focus on meeting the specific needs of each student. They do not create an inclusive environment free of gender stereotyping, such as pressure to study certain topics, or follow certain career paths. Attention needs to be paid to those specific issues and contexts in educational settings that affect and can mitigate the underachievement of boys and men.

Together, these factors contribute to the lost potential of boys within the educational system, which leads to lower levels of productivity that accumulate over time. The following table compiles data from the World Bank's Human Capital Index (HCI)²² to demonstrate that, globally, if boys received the same learning-adjusted years of schooling as girls, maintained over 10 years, overall production would increase by nearly 14 percent (Welmond and Gregory 2021, p.3).

²¹ Literature and evidence on boys' underachievement is emerging as is the World Bank operational response. This section and recommendations are largely adapted from the new World Bank report ([Welmond and Gregory 2021](#)).

²² Available at: <https://www.worldbank.org/en/publication/human-capital>



BOX 2. AN EMERGING CHALLENGE: BOYS' EDUCATION cont.

Change in HCI if boys' underachievement is eradicated.

	HCI 2020	Alternative HCI*	Increase in annual productivity (%)	Increase in total production over 10 years (%)
Middle East and North Africa	0.57	0.58	3.0	33.9
East Asia and Pacific	0.59	0.60	1.8	19.4
Europe and Central Asia	0.69	0.70	1.1	11.4
Latin America and Caribbean	0.56	0.56	1.3	13.9
North America	0.75	0.75	0.7	7.2
Sub-Saharan Africa	0.40	0.40	0.5	4.9
South Asia	0.48	0.48	0.4	3.7
World	0.56	0.57	1.3	13.9

Source: Calculations based on World Bank 2021

Note: *The alternative HCI is calculated based on the assumption that boys' learning-adjusted years of schooling are raised to the level of girls'. [Welmond and Gregory 2021](#)



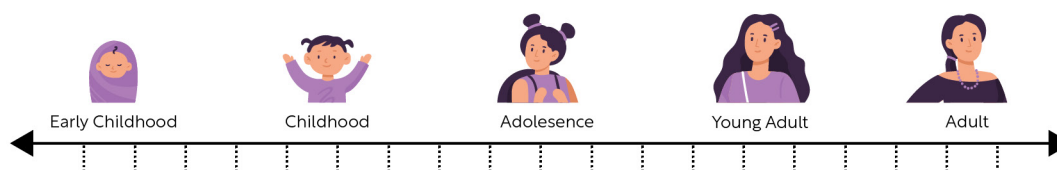
With such complex and interrelated barriers to education for all children, the World Bank focuses on solutions that are multi-dimensional, localized, and priority areas to address. Several global and regional strategies guide the World Bank's work on gender and, specifically, on addressing gender inequities in education.²³ For girls' education, context-specific solutions are applied to tackle the barriers girls face throughout the lifecycle (see Figure 9). Bank projects target multiple areas to remove barriers that girls face to accessing and completing an education. The Bank's four intervention areas mirror four types of barriers:

- 1. Removing barriers to getting girls into school.** This includes interventions focused on removing the cost and distance barriers, such as providing support for scholarships, stipends, conditional cash transfers, transportation, and expanding school access through infrastructure. It also includes working with parents, schools, and communities on interventions to reduce information gaps on returns on girls' education, facilitate advocacy and communication campaigns, and garner community support.
- 2. Promoting safe and inclusive schools for girls.** The WB has a number of interventions that focus on creating a safe and inclusive learning environment for girls, including increasing security at schools and creating safer infrastructure and programs that aim to prevent violence, including GBV. This

includes codes of conduct, teacher training, and channels for resolving sexual exploitation and abuse and harassment, among others. the provision of WASH facilities and menstrual hygiene management for adolescent girls is also a critical component.

- 3. Improving the quality of education for both boys and girls.** The WB is focused on eliminating learning poverty and promoting foundational learning (Herbert et. al. 2021). Country programs are investing in teacher professional development for gender-sensitive teaching practices and pedagogy, working to eliminate gender biases in curriculum and textbooks, and introducing extra-curricular activities, such as girls' clubs.
- 4. Developing skills for life and labor market success.** At higher levels of education, WB projects promote girls' empowerment and teach a variety of life skills essential for young women. A variety of skills development programs support young women through the schools-to-jobs transition so they can join the labor market. These projects include initiatives such as outreach programs to girls enrolled in secondary school on post-secondary education and training opportunities, scholarships for them to continue their education and training, and mentorship programs that encourage them in STEM fields, as well as in careers in both traditional and non-traditional sectors.

FIGURE 9. THE WORLD BANK WORKS ON GIRLS' AND WOMEN'S EDUCATION AT ALL LEVELS THROUGH A LIFECYCLE APPROACH



Source: World Bank 2023b

²³ Including the [WBG Gender Strategy FY16–23](#), [SAR Regional Gender Action Plan](#), [West and Central Africa Education Strategy](#), and more.

Evidence is strong on the negative impacts of the barriers and biases that girls and young women face in education, but it is more limited on the impact of interventions. In many areas where a broad base of evidence is lacking, the World Bank supports research through impact evaluations, household surveys, and other methods to determine what is most impactful and to improve project design. Table 1 rates the evidence available on the direct impact of an intervention addressing a barrier, not the level of importance of that particular barrier.

To follow is an examination of the four broad support areas, across 11 specific types of interventions, and activities for girls' education that are common in the World Bank's education project portfolio, together with evidence on program effectiveness.

TABLE 1: SUMMARY OF EVIDENCE ON INTERVENTION EFFECTIVENESS

Broad Area of Intervention	Specific Invention	Evidence of Impact Rating
Barriers to Access	1. Improve transportation and reduce time to reach school	A
	2. Scholarships and Cash Transfers	A
	3. Advocacy Campaigns and Changing Social Norms	C
Safe Schools	4. Creating Safer and More Inclusive Schools for Girls	C
	5. Ending GBV and Sexual Assault and Harassment	B
	6. Menstrual Health and Hygiene	B
Improving Learning	7. Teacher Professional Development and Training on Gender Norms	C
	8. Gender-Sensitive Curriculum and Textbooks	C
	9. Girls' Clubs	B
Transitioning from School to Jobs	10. Skills Development Programs and Assisting in the Transition from School to the Labor Market	B
	11. Increasing Participation in STEM-Focused Fields	B

Rating System:

- A. "Strong Evidence" indicates that there is more than one causal impact study demonstrating the effectiveness of the approach across contexts.
- B. "Evidence is beginning to emerge" refers to an approach for which there are few pieces of causal evidence OR a strong body of descriptive evidence.
- C. "Few studies in this area" indicates that there is little causal evidence which determines the impact of the intervention.

Intervention Area 1: Getting and Keeping Girls in School by Removing Barriers to School Access

1. School Distance and Transport

Long distances to school discourage school enrollment and attendance. Interventions that focus on reducing distance between students and the schools they attend include those that build new schools so students travel a shorter distance and those that provide transportation for girls. The farther girls have to travel to school, the greater their (and their families') concern for their safety (Sperling et. al. 2016). Figure 10 shows data from India and Mali indicating that, for both boys and girls, the distance to school is negatively associated with schooling.

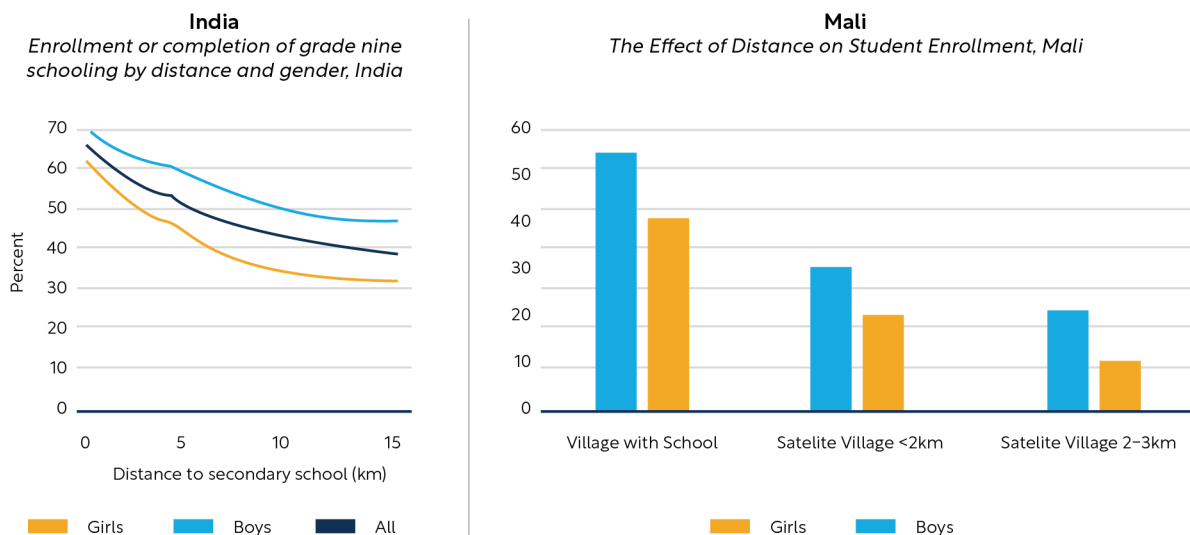
Research shows that reducing the distances that girls have to travel to and from school dramatically increases the probability that they attend school.²⁴ Providing transportation to and from school also has an impact. For example a randomized control trial in Zambia found that

providing bicycles to girls in rural areas (approximately 37,000 girls in 100 schools) reduced their commute time by at least one hour per day, reduced their absenteeism by 28 percent and their likelihood of dropping out by 19 percent, and also increased their test scores (IPA and WBR 2022). Another study of an intervention that provided bicycles to schoolgirls in Bihar, India found that it increased secondary school enrollment by 32 percent, and also showed an increase in the number of girls who appeared for the high stakes exam and passed it (Muralidharan and Prakash 2017).

Some examples of World Bank operations working to remove distance barriers include the following:

- Among a series of interventions designed to improve girls' education outcomes, the World Bank Khyber Pakhtunkhwa (Pakistan) [Human Capital Investment Project](#) is building new schools so girls can travel shorter distances to school.
- The World Bank's [Sahel Women's Empowerment and Demographic Dividend](#) (SWEDD) project provides bicycles to girls in schools in Mali, which has helped overcome distance barriers, increasing attendance and reducing dropout for many girls (World Bank 2018).

FIGURE 10. SCHOOL DISTANCE AND ENROLLMENT FOR GIRLS - EVIDENCE FROM INDIA AND MALI



Note: Satellite villages are villages in Mali located between two kilometers and three kilometers from a school. GER refers to gross enrollment ratio, the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

Source: Parsitau and Komoko 2022.

²⁴ Historical data from Afghanistan, Egypt, Indonesia, summarized in Sperling et. al. 2016, p 140.



- Our [Girls Empowerment and Learning for All Project](#) in Angola is improving safe transport for girls, by providing stipends to families that can be used toward bicycles (Murthi and Carret 2021).
- The [Education Quality Reform in Afghanistan](#) (EQRA) project provided grants for female students and teachers who live beyond a certain distance from school, to improve access to school.

2. Scholarships and Cash Transfers

Removing cost barriers is one of the most important interventions for increasing access to education for all students. There is a significant amount of evidence that conditional cash transfers, unconditional cash transfers, and scholarships have a large impact on school enrollment and attendance. Providing free school is an important first step and 99 countries around the world legally guarantee 12 free years of schooling (UNESCO 2020b). Still, parents face a wide range of direct and indirect costs, as well as opportunity costs, for sending girls to school. Scholarships and cash transfers seek to offset these costs, including opportunity costs at times.

A large body of evidence shows that scholarships and cash transfers can significantly increase access to school for girls. In Cambodia, a cash transfer program increased girls' school attendance by approximately 25 percentage points (Filmer and Schady 2011). Successful stipend programs include *Oportunidades* in Mexico, which increased primary school completion by 15 percent (Creighton and Park 2010); BRAC in Bangladesh, which increased enrollment by 55–60 percent (Schurmann 2009); and the Punjab Female School Stipend Program in Pakistan, which increased

girls' enrollment rates by 10 percent (Alam et. al. 2011). A randomized control trial in Burkina Faso found conditional cash transfers increased enrollment of marginalized girls by over 20 percent (Akresh et. al. 2013). There are numerous other examples of large gains due to cash transfers and scholarships (Sperling et. al. 2016).

A total of 30 WB education projects provide scholarships or cash transfers to promote girls' schooling. Some examples include:

- Stipends are offered to girls through projects in [Burkina Faso](#), [Kenya](#), Bangladesh, and more.
- The Adolescent Girls Initiative for Learning and Empowerment Project in [Nigeria](#) will provide scholarships to 500,000 girls from the poorest backgrounds for their retention in secondary school.
- The Girls Empowerment and Learning for All Project in [Angola](#) is providing scholarships to 900,000 youth, with a school registration bonus for girls.

3. Advocacy Campaigns and Changing Social Norms

Interventions can share information on the benefits of girls' education and combat harmful social norms and preconceptions by targeting parents, community leaders, and the media, such as TV, radio, and newspapers. A randomized control trial in Zimbabwe showed that an information campaign on girls' education and rights improved school enrollment (Cotton et. al. 2020).

The following World Bank project examples include work with parents and communities to promote positive messages about girls' participation in education systems at all levels:



- The Improving [Early Childhood Development Outcomes](#) in Rural Morocco project provides parent education sessions that focus on positive parenting and promotion of girls' enrollment in and attendance at preschool.
- Projects in [Angola](#) and [Nigeria](#) worked with parents and community leaders through a series of activities focused on information sharing and increasing adolescent girls' enrollment in school.
- In Kenya, the [Secondary Education Quality Improvement Project](#) conducted a targeted advocacy and social support program that involved mobilization of parents and community leaders for school enrollment. A similar program was delivered via radio broadcast through a project in [Burkina Faso](#) (World Bank 2021a).
- After the COVID-19 school closures and in response to an anticipated reduction in girls' enrollment and increases in harmful practices, World Bank projects in [Chad](#), [Sudan](#), [Bangladesh](#), [Benin](#), [Ethiopia](#), and [Uganda](#) all ran advocacy campaigns for girls' re-enrollment in schools (World Bank 2023b).

Intervention Area 2: Creating Safe and Inclusive Schools

4. Safer and More Inclusive Schools

Violence in and around schools has negative impacts on education outcomes for all children (Wodon et. al. 2021). Creating inclusive schools for girls focuses on ensuring that the school environment is one that is sensitive to girls' needs, and one in which they can feel safe. Girls with disabilities often face a double-discrimination burden, and are often the most marginalized groups in many societies. Research has shown that girls with disabilities may face up

to 10 times more violence than those without disabilities (UNFPA 2018). Discrimination can start early, and result in girls being excluded from reproductive and sexual health education (Koistinen et. al. 2019).

Creating inclusive schools is imperative to ensuring that all feel safe and welcomed. School safety can refer to a variety of interventions related to increasing security at schools and creating better infrastructure for schools. Ultimately, these interventions aim to have an impact on girls' enrollment, attendance, and retention through the education cycle.

The Burkinabe Response to Improve Girls' Chances to Succeed (BRIGHT) school program in Burkina Faso focused its efforts on designing girl-friendly schools. Through a variety of infrastructure improvements and incentives these schools were able to show increases in enrollment of up to 13 percent. Improvements in test scores were also observed. (Kazianga et. al. 2013). In Uganda, results from a randomized control trial show that after a Good Schools toolkit was distributed, there was a 42 percent reduction in physical violence to primary school students (Knight et. al. 2018). Other examples of World Bank projects focused on making schools safer and more inclusive for girls include the following:

- The [Fostering Resilient Learning Project](#) on the island of St. Maarten is constructing new gender-sensitive education facilities to provide safe, non-violent, inclusive environments in school.
- The [Girls Empowerment and Quality Education for All Project](#) in São Tomé and Príncipe has a similar approach that aims to provide safe learning spaces for all girls.

- The [Safe Schools Program](#) in Tanzania has a holistic approach that includes school guidance and counselling services; training of teachers, school heads, school boards, and parent-teacher associations; monitoring of students at risk of dropout; and community-based mechanisms for safe passage to school.
- The [Adolescent Girls Initiative for Learning and Empowerment \(AGILE\)](#) project in Nigeria is helping to make schools more inclusive for students with disabilities, by introducing ramps at schools; conducting outreach, awareness, and sensitization with families and communities to remove stigmatization for those with disabilities; conducting training for teachers on teaching with students with disabilities; and including braille books and materials where needed.

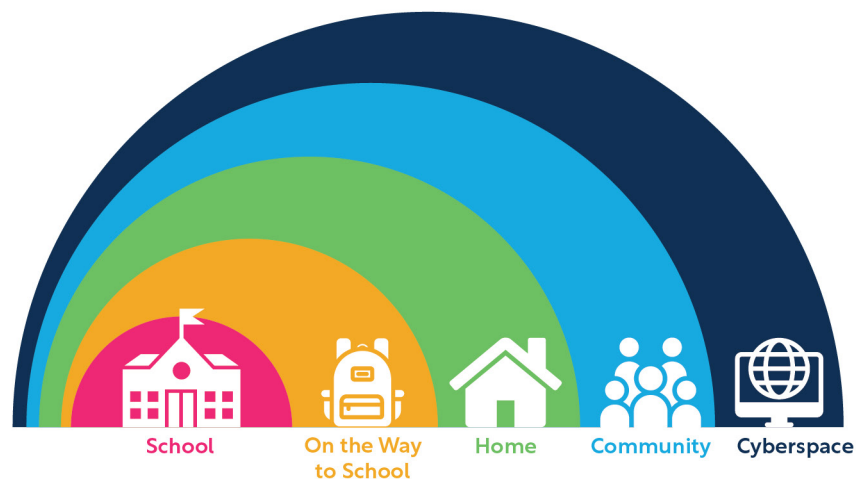
5. Addressing School-Related Gender-Based Violence

Tackling GBV requires a multi-level and cross-cutting approach, with schools playing a critical role. First, schools can actively pursue strategies to reduce GBV within the school setting. Second, they can strengthen their capacity to work with households and communities in preventing GBV out of the school, by challenging the norms and attitudes that uphold violent attitudes and practices toward women and girls (World Bank et. al. 2015).

A large part of feeling safe at school is linked to a reduction in GBV, which includes sexual exploitation and abuse, sexual harassment, sexual assault, and other types of GBV in schools. Lower educational attainment is also associated with children who have witnessed or experienced violence at home (Women and Law 2012).

Global statistics show that GBV is experienced by a large portion of girls. Data from multi-country Violence Against Children Surveys (VACS)²⁵ show that 15–51 percent of girls under the age of 18 in Malawi, Nigeria, Zambia and Uganda had experienced sexual violence (Swedo et. al. 2019). In Uganda, 28 percent of girls reported experiencing sexual violence before the age of 18. UN Women reports that over 246 million children are subject to GBV in or around schools every year (UNESCO 2016) and new studies evaluating the effect of the COVID-19 pandemic show that school closures increased the risk of girls and adolescents experiencing violence (Decker et. al. 2022) as well as high early pregnancy (Okeke et. al. 2022). This was accentuated in fragile contexts (Guglielmi et. al. 2020). There is widespread acknowledgement that many occurrences of sexual harassment, assault, and GBV are likely not reported (Crawford and Hares 2020).

FIGURE 11. WHERE SCHOOL-RELATED GENDER-BASED VIOLENCE TAKES PLACE



Source: UNESCO 2016.

²⁵ To date, 26 VACS surveys have been completed in: Botswana, Cambodia, Colombia, Côte d'Ivoire, El Salvador, Eswatini, Ethiopia, Guatemala, Haiti, Honduras, Jamaica, Kenya, Lao PDR, Lesotho, Malawi, Moldova, Mozambique, Namibia, Nigeria, Rwanda, Tanzania, Uganda, USA, Zambia and Zimbabwe.



Eradicating school-related GBV requires a complex set of interventions as the violence can take place both in and around school, including on the way to school, at home, in the community, and in cyberspace (see Figure 11). Interventions include those that work to prevent GBV within and out of schools and those that work to mitigate the impacts of violence on children in the short, medium and long term. The role of education is highlighted as the seventh strategy of the INSPIRE framework for Ending Violence Against Children (WHO 2016). The World Bank has also developed guidance for Operationalizing Safe School Policies and Practices (Saavedra et. al. 2021). Evidence from several countries shows that school-based interventions can be effective in reducing violence occurring in school, such as: a self-defense program in Malawi (Decker et. al. 2018), the Good Schools Toolkit in Uganda (Devries et. al. 2015), and a play-based life skills program in Pakistan (discussed in Crawford and Harris 2020).

Training school staff to identify and respond to GBV and equip school children with knowledge and tools to identify GBV and report it is also effective. A randomized controlled trial of an empowerment and self-defense intervention for adolescent girls in Nairobi decreased annual sexual assault rates (from 18 percent to 11 percent) and increased sexual assault disclosure from 56 percent to 75 percent (Sarnquist et. al. 2014).

Approximately 40 World Bank education projects are working to end GBV in school using multiple approaches, including the following:

- The [Nagaland: Enhancing Classroom Teaching and Resources Project](#) in India has created a GBV-reporting mechanism and action plan.
- The [Sudan Basic Education Support Project](#) includes activities to train schools and their surrounding communities on GBV reduction.
- The [Cambodia General Education Improvement Project](#) works through their school-based management committees to host trainings and discussion on GBV and reduction of violence against children.

6. Menstrual Health and Hygiene Management and Improving Water, Sanitation and Health Facilities

Menstruation reduces girls' attendance and participation in education worldwide. A study by UNESCO finds that one in 10 girls in Sub-Saharan Africa missed school while on their period (UNESCO 2014). Another study in Ethiopia finds that 50 percent of girls miss between one and four days of school every month due to menstruation (Unilever et. al. 2013). In Kenya, it is estimated that girls lose an average of four days of school a month, which costs them 165 learning days over four years of high school (Mire 2020).²⁶ A study in India finds that as many as one in five girls reported missing school due to their period (Sivakami et. al. 2019).

²⁶ Kenyan Ministry of Public Service, Gender and Affirmative Action: <https://gender.go.ke/sanitary-towels-program/>

Menstrual health and hygiene management involves a number of interventions that provide adolescent girls with knowledge, sanitary products, and facilities to understand and manage their menstruation (World Bank 2022e). Data on the impact of these programs are limited, aside from self-reported surveys. These interventions are often tied to adequate sexual and reproductive health education for adolescents, particularly programming around puberty and menstruation. Schools in many countries still face significant challenges in ensuring they have adequate facilities available for girls. A World Bank study on the intersection of water and gender highlights that the existence of a separate toilet is not enough to ensure usage by women and girls. Privacy, cleanliness, safety, and availability of water matter (Das 2017).

A quarter of all World Bank education projects have components that address menstrual health and hygiene management.

- For example, the [Boost Primary Student Learning project](#) in Tanzania focuses on improving the school environment to ensure girls feel comfortable and stay in school. It is creating more separate toilets and WASH facilities for girls and boys, increasing running water access (one handwashing facility per 100 students), and providing incinerators for disposal. The

project will also designate an active menstruation counselor at schools and have a separate room available for girls to manage their menstrual needs.

- The World Bank also supports projects with similar menstrual hygiene-focused interventions in [Haiti](#), [Uganda](#), [Sri Lanka](#), and [Togo](#), among others.

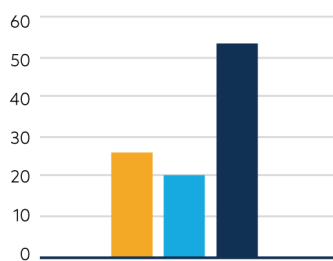
Intervention Area 3: Making Sure Girls are Learning Well by Improving the Quality of Education

7. Teacher Professional Development and Training on Gender Norms

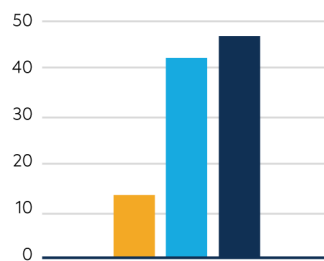
Teachers can play an important role in shaping school environments and combating gender bias (Carvalho and Evans 2022). However, many studies show that, in practice, teachers often give unequal attention to boys and girls in the classroom, due to preconceived notions about achievement and success among boys and girls. For example, educators, parents, and students themselves can hold negative stereotypes around girls' mathematical abilities (Figure 12). Instead of reducing negative stereotypes, education systems can often perpetuate them.

FIGURE 12. TEACHER PERCEPTIONS OF STUDENT ABILITY

Panel A: Are there differences in reading skills according to the teacher?



Panel B: Are there differences in math skills according to the teacher?



■ Girls are better
 ■ Boys are better
 ■ They are the same

Source: Carvalho and Evans 2022.

A large proportion of World Bank education projects support teachers with training that includes modules on gender-sensitivity. These modules cover topics like pedagogical techniques to ensure girls participate more in classrooms, acknowledging biases that teachers may have in classroom interactions with boys and girls, and working to ensure adequate attention is given to all students in the classroom. Over 70 World Bank projects aim to address gender bias in teaching methods.

8. Gender-Sensitive Curriculum and Textbooks

Gender stereotyping in textbooks and in other learning materials can perpetuate gender bias. Stereotypical role models and names of boys and girls in certain careers and professions, or in scenes depicting household work, send indirect messages about the roles of men and women to all students.

Analysis cited in a special study by UNESCO's Global Education Monitoring Report in 2020 (UNESCO, 2020a) focusing on textbook bias finds drastic gender differences in role models and activities portrayed by men and women in textbooks in India, China, Cameroon, Côte d'Ivoire, Togo, Tunisia, and more (Benavot and Jere 2022). An analysis of textbooks in Malaysia, Indonesia, Pakistan and Bangladesh reveals the proportion of female to male depictions in textbooks was less than half, and in Pakistan just 24 percent (Islam 2018). Even in those depictions, women were represented in less prestigious occupations and with more passivity. In Ethiopia, research finds men were significantly overrepresented as role models and achievers in eighth grade English textbooks (Mulugeta 2020). In Chile, fourth grade textbooks showed only two female characters for every 10 male characters (Covacevich and Quintela-Dávila 2014).

Many World Bank projects promote examples of women as role models and in less stereotypical roles, including:

- Through the [Chad Improving Learning Outcomes Project](#), reading materials are distributed that are sensitive to gender representation. They will include positive role models for girls and avoid gender stereotypes when representing men and women.
- In Cabo Verde, the [Human Capital Project](#) will produce gender-sensitive reading materials that have an explicit focus on girls' empowerment.
- The [Liberia Learning Foundations Project](#) introduces textbooks that challenge stereotypes.
- In the [Central Africa Republic](#), project activities include a curriculum that will integrate tools to promote inclusion and gender equality.

9. Girls' Clubs

Girls' clubs are an innovative way to create safe spaces for girls to acquire both academic and socio-emotional skills. These are usually girls-only spaces organized as extra-curricular activities. Girls' clubs can deliver services on a wider variety of themes, including extra reading and tutoring time, life skills training, sexual and reproductive health training, and women's rights and career counseling, (Cozzolino et. al. 2022).

Limited evidence on the impact of girls' clubs shows an increase in girls' awareness about their rights, self-esteem and self-confidence, and other characteristics associated with well-being (Marcus 2017). A program to introduce girls' clubs in Sierra Leone found that after the Ebola crisis in 2014 and 2015, girls in villages without these clubs were twice as likely to drop out of school than girls in villages with these clubs (Bandiera et. al. 2020).

- World Bank projects have supported the creation of girls' school clubs in [Haiti](#), [Ethiopia](#), [India](#), [São Tomé and Príncipe](#), [Tanzania](#), [Malawi](#), and [Lesotho](#).

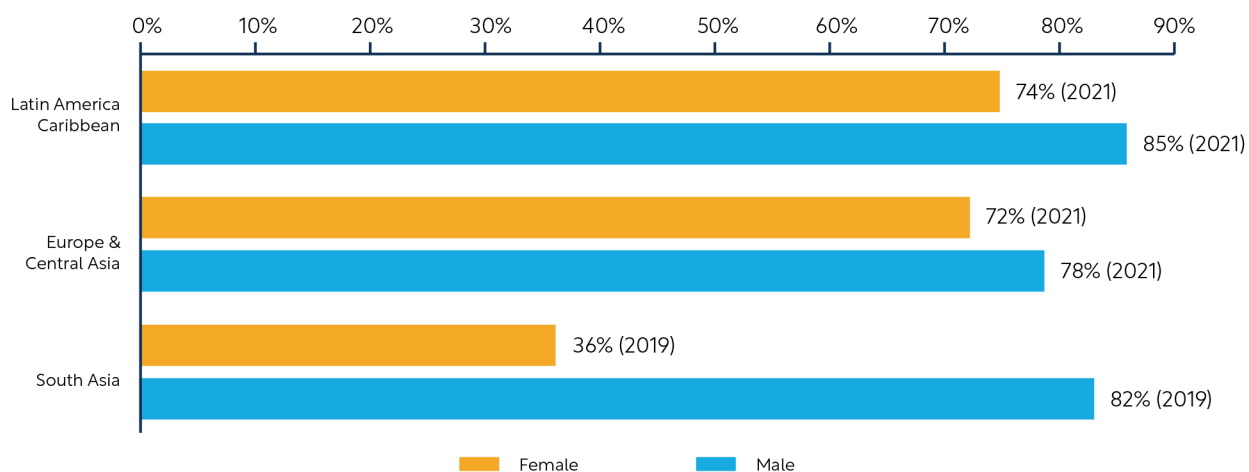
Intervention Area 4: Supporting Girls and Young Women in the Transition to the Labor Market

10. Skills Development Programs, Tackling Gender Norms and Assisting in the Transition from School to the Labor Market

Many studies show that per year of schooling, the returns to secondary education outweigh the returns to primary school (Sperling et. al. 2016; Patrinos and Psacharopoulos 2020). Secondary school completion leads to greater job stability for women, as well as increased wages. Upper secondary education programs are often linked directly to career paths. Yet, families and policymakers still hold strong perceptions that educating girls (especially at the secondary level) has high opportunity costs and low returns (Sperling et. al. 2016).

In many areas of the world, female labor force participation rates are still very low. In the Middle East and North Africa, and South Asia, these rates hover around 20 percent. Even among South Asians with advanced education, the female labor force participation rate is only 36 percent (see Figure 13). This analysis is not necessarily aligned with school enrollment and completion rates for secondary schoolgirls, meaning that in many of these countries, girls and young women are completing higher rates of education, but do not enter the labor market despite persisting through education.

FIGURE 13. MALE AND FEMALE LABOR FORCE PARTICIPATION RATES, WITH ADVANCED LEVEL OF EDUCATION



Source: World Bank Gender Data Portal.

Many World Bank projects that finance secondary and tertiary education address gender norms and support the transition of girls from school to the labor market.

Through the Education Global Practice, 23 projects totaling \$2.6 billion support skills development for all students. Projects also focus on adolescent girls’ empowerment programs, life skills, and safe spaces.

Evidence from Africa and South Asia has demonstrated the impact of adolescent girls’ empowerment programs, as interventions can combine creating safe spaces for teens with life and vocational skills. These programs have been found to increase women’s earnings, reduce adolescent fertility, and help girls stay in school.

From 2008–2015, the World Bank supported the [Adolescent Girls Initiative](#) (AGI) to help young women in eight countries make the vital transition between school and work. The programs were piloted in eight countries - Afghanistan, Haiti, Jordan, Lao People’s Democratic Republic (PDR), Liberia, Nepal, Rwanda, and South Sudan and provided training to more than 16,000 young women (World Bank 2016).

Findings from the AGI project informed the design of the regional [Sahel Women’s Empowerment and Demographic Dividend](#) (SWEDD) Project, a project that spans 9 countries (with more coming soon). SWEDD has partnered with the World Bank’s [Gender Innovation Lab](#) to test and rigorously evaluate innovative new approaches to empowering girls, such as engaging religious and community leaders as allies for change and shifting girls into STEM fields. Other WB project examples include:

- Liberia’s [Economic Empowerment for Adolescent Girls program](#) significantly increased participants’ economic activity and earnings, as well as their savings (potential startup capital), and its impacts endured after the training ended. The incorporation of business skills (even in the vocational training) appeared to have played a significant role in enhancing participants’ prospects for self-employment—the sector where employment is expanding most rapidly in Liberia (World Bank 2015c).
- In Bangladesh, the World Bank partnered with the government on the [Skills and Training Enhancement Project](#) (STEP) (World Bank 2019b). The project worked to remove barriers that prevent more women from entering the labor force to meet its future workforce demands in 45 polytechnic institutes to improve female inclusion and deliver industry-relevant skills (Layton et. al. 2021). The project provided stipends to over 240,000 beneficiaries (18 percent women), trained 126,000 unemployed youth (28 percent women), and certified the skills of 31,800 informal sector workers (22 percent women). Women’s enrollment in TVET institutions increased to over 20 percent by 2019, and women’s participation in the program enhanced their employment opportunities and empowerment.
- The [Economic Acceleration and Resilience for NEET Project](#) in Bangladesh seeks to increase access to education and skills training and promote the employability of youth who are not in education, employment or training (NEET), especially women, by working with a Norms Specialized Agency to work with both the NEET and their family members, especially their fathers and husbands who are found to have the greatest influence on female employment. The project also promotes equal access and opportunities for other subgroups including persons with disability, transgender, and ethnic minorities.
- The [Employment Fund](#) program in Nepal targeted women (including women from poor and marginalized groups), resulting in majority female participation. Participants significantly



improved employment and earnings, especially non-farm employment. Relative to a control group, participants' overall gain in employment was 47 percent, and average monthly earnings increased by 45–66 percent. Most of the participants had never worked outside of agriculture, and their vocational training options spanned professions that were less traditional for women but more remunerative (World Bank 2016).

- The [Enhancing Employability and Resilience of Youth Project](#) in the Maldives aims to improve female labor force participation through tailored TVET training and entrepreneurship development curricula, a mentoring and coaching program, as well as information, education and communication campaigns, among other interventions.

11. Increasing Participation in STEM-Focused Fields

There is a large gender gap in enrollment in STEM programs all over the world. Women are significantly less likely to enroll in many STEM fields, with the exception of life sciences, largely due to social and cultural perceptions about genders and subject study (Hammond et. al. 2020). Women account for only 28 percent of engineering graduates and 40 percent of graduates in computer science, and in fields such as artificial intelligence, only one in five professionals is a woman (Barron and Kattan 2022; UNESCO 2021b). Women in low-income countries are 7 percentage points less likely than men to enroll in tertiary programs in engineering, manufacturing, and construction. In upper-middle-income and high-income countries, the gaps widen to 15 and 17 percentage points, respectively (Hammond et. al. 2020).

It is important to create opportunities—such as scholarships, internships, and apprenticeships—for women to increase enrollment in STEM studies. In Nigeria, an impact evaluation of a World Bank project that provided ICT training to women university graduates reveals that participants were 26 percent more likely to work in the ICT sector after the training (Croke et. al. 2018). This suggests the potential for training to support the development of emerging sectors, and employment for women within these sectors, even if they have an initial lack of sector-relevant skills (Schomer et. al. 2020). New research from South Asia shows that combinations of financing subsidies and investments in STEM subjects pay rich dividends to countries at every stage of development—especially if they educate diverse groups, champion inclusiveness and foster opportunities and advancement, especially of women (Sosale et. al. 2023).

Another example of a successful scholarship program is from Lao PDR. Women's participation in the Department of Water Supply (DWS) within the Ministry of Public Works and Transport had been historically low, particularly in technical positions, at 12 percent. Recognizing the shortage of women on technical staff, DWS developed a scholarship program to help young women with high school diplomas access educational opportunities in water supply and sanitation engineering. Through this program, the project achieved a 10 percent increase in the number of qualified women in technical and leadership positions in public



water utilities (Schomer and Hammond 2020). The scholarship program included mentorship and job placements, highlighting the importance of having multiple intervention arms to support the school-to-jobs transition for women.

- In Tanzania, the [Higher Education for Economic Transformation Project](#) is making a strong, multi-pronged push to promote more girls and young women in STEM subjects (World Bank 2021c). The project is developing outreach programs to familiarize secondary school-age girls and communities with university programs, dispel misconceptions about women's STEM capabilities, and introduce information about STEM programs for women. It is preparing an implementation plan to operationalize the national gender equity strategy to attract and retain women in priority degree programs and monitor progress toward targets. It is also introducing mentorship programs for women, especially in STEM areas, and providing scholarships to women for a foundational STEM course.

12. Other Impactful Interventions

The World Bank is not limited to these 11 types of interventions. To follow is a selection of additional programs and projects that target girls' educational outcomes.

Early Childhood Education and Childcare Programs: A World Bank study estimates that 40 percent of all children below primary school age need childcare, but do not have access to it (Brixi et. al. 2022). During school years, girls are

also often seen as the caretakers of their younger siblings.²⁷ Expanded access to childcare can relieve the burden on older girl siblings. In Mozambique, for example, the establishment of a community-based childcare program increased the likelihood of older siblings' enrollment in school by 6 percent (Martinez et. al. 2013).

Remedial Education and Second-Chance Education Programs: Remedial and second-chance education programs support students that went through a low-quality basic education system and require additional help to catch up, re-enter education systems if they dropped out, and acquire additional market relevant skills. These programs, which can overlap with accelerated learning programs might be the only option for young people faced with potentially bleak labor market prospects. In Ghana, a remedial education program for students who were falling behind significantly improved learning outcomes, with twice as large an impact on girls (Duflo et. al. 2020).

Second-chance education programs are often associated with girls who become pregnant and are trying to return to schooling. A long-running second chance education program in Jamaica for pregnant teenagers showed a lower rate of repeat pregnancy among participants than those not enrolled in the program. It also had positive effects

²⁷ Studies also show that in households where primary childcare falls on someone other than parents, daughters are less than half as likely as brothers to complete primary school. More details in Sperling et. al 2016, page 129.

on girls' enrollment at higher levels of education, both in completing their secondary education and pursuing further education (Amo-Adjei et. al. 2023). A similar program was implemented in Sierra Leone after massive increases in adolescent pregnancy during the Ebola crisis (Mason 2016). Even when not targeted at girls with early pregnancy, second-chance education programs can bring them back to the school system. A program in Ethiopia found that participation in the program dramatically increased formal schooling for girls by 38 percent (Sperling et. al. 2016, p.235).

Boarding School Programs for Girls: Establishing boarding schools for girls, particularly at the secondary school age, is often an attractive option to policymakers, as it directly tackles some of the distance and transport barriers to girls' education that impact attendance. However, there is little comparative evidence on the impact of boarding schools that target students from low-income situations versus schooling without boarding. Moreover, the costs of these schools tend to be very high, as boarding and housing costs are in addition to costs for education. Concentrating girls in this way also poses risks. There have been cases where boarding schools for girls have been targets of violence.

Adult Literacy Programs for Women: Adult literacy programs for women can lead to increased economic opportunities and improved livelihoods. They can also have a positive

impact on their children. Literate mothers are able to pass on the benefits of their own educational improvements to their children in multiple ways via reduced infant mortality, better childhood school attendance, improved family income, higher vaccination rates, and more (Thomas et. al. 2020, p.40). Dozens of programs around the world target adult literacy for women, including the Aagahi Adult Literacy program in Pakistan. Since 2005, over 60,000 adults (over 90 percent of them women) have attended the program and improved their basic literacy and numeracy skills.²⁸

Women Teachers as Role Models: In many countries, especially in Sub-Saharan Africa, there are far more men teachers than women teachers (UNESCO 2021a). In 2018, only 30 percent of teachers in Sub-Saharan Africa at the secondary-school level were women. Teachers can play an important part of a girl's education experience, particularly as role models. While the impact of teachers as role models is less studied, a few studies show positive impacts on educational outcomes. Studies show that having women math teachers, for example, improved girls' math outcomes (Evans and Nestour 2019), and that having women teachers can have a positive effect on girls without hampering boys' learning (Muralidharan and Sheth 2016).

²⁸ <https://www.tcf.org.pk/2017/11/aagahi-empowering-women-through-literacy/>



The World Bank is the largest external financier of education in the world, with an active portfolio of around \$23 billion encompassing 180 active education projects in over 90 countries. These projects cover the entire education cycle and focus on many different themes and areas of intervention in education: teachers, curriculum, school infrastructure, and more. Additionally, there is a strong focus on improving foundational learning (World Bank 2023a) for all students and reducing learning poverty (World Bank 2019a). A recent World Bank report on smart buys for education also highlighted a cost-benefit analysis of common interventions for all students (World Bank et. al. 2020). Evidence signals that programs that do not specifically target girls, still have large impacts on girls' education outcomes (Evans and Yuan 2019b). Many general programs have the same desirable impacts on boys and girls.

Although there is no single solution that tackles all the barriers that girls face, programs that include multiple interventions to address multiple barriers to girls' education can have greater impact. These programs not only focus on getting girls into school, but also on retaining them there. In recent years, more World Bank projects focused on girls' education have multiple intervention arms, including offering scholarships, providing transport, removing textbook bias, building separate toilets for girls, and more.

Policies and programs should be designed to consistently support girls throughout their education cycle—first, getting them into school and keeping them there; then, making sure they are safe in schools and learning; and finally, helping them transition from the education system to the labor market. Intervention impact can be amplified if programs take into account the entire education cycle that girls and young women must persist through in order to succeed. At any level of education, and especially through the transition grade levels from primary to lower secondary school, and from lower secondary to upper secondary, there is a risk of girls not returning to school. Meaningful improvement in girls' education outcomes demands multi-dimensional, long-term approaches.

Scholarships and cash transfers have sizeable impacts on promoting school access, enrollment, and retention. Poverty keeps many children out of school. Conditional cash transfers and scholarships that offset costs to education that families face (as well as opportunity costs of children in work or early marriage), can help ensure more girls enter the education

system. Investments in programs for secondary school-age girls are important, as are those that link girls' education to their next steps for work and entering the labor market.

Programs that look at other aspects aside from learning at school can also help keep girls in school for longer and prepare girls and boys for more equitable approaches to gender. These include health interventions, menstrual hygiene management, violence reduction and prevention mechanisms, life skills training and socialization on gender norms and behaviors. Interventions that tackle the norms against girls' education are particularly important for ensuring girls stay in school longer and shielding them from early marriage or pregnancy.

More and better data is needed on what works in girls' education. A recent meta-analysis of over 300 studies focusing on what works to improve education outcomes shows fewer than 40 percent of studies contained gender-disaggregated data (Evans and Yuan 2019a). This makes it difficult to understand the impact of interventions on girls. Areas where more evidence and data are especially needed are on the impact of social campaigns for girls' education; the impact of gender-sensitive curriculum, textbooks, and teaching; and the impacts of school-based interventions for girls, such as separate toilets, making schools safer for girls, and GBV reduction mechanisms. More monitoring and evaluation of education programs is needed, and a greater focus on critical gender-related indicators can reveal which interventions are most successful at tackling barriers.

More attention is also needed on addressing boys' educational underachievement. This is an emerging area of research and work for the World Bank. While many high-income countries are increasingly focusing on the issue, few policies or programs have been put into place. The challenge requires closer attention from policymakers, development agencies, and analysts. As argued in the case of girls, it is important to start with concerted efforts to improve the educational experience of all learners, using methods that engage and motivate those at the lower end of achievement (predominantly boys) while also being effective for all students. More research on boys' educational underachievement is also needed. This includes in-depth country studies, thematic studies (such as on disadvantage, higher education, and the effect of labor markets on educational choices), and applied research to evaluate the impact of interventions.



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