This fact sheet was made to mark International Women's Day 2022 and highlight how education can challenge gender bias and stereotypes in and through education.

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#HerEducationOurFuture #BreakTheBias

Challenging gender bias and stereotypes in and through education

The latest facts on gender equality in education

Discriminatory gender norms, biases and stereotypes persist

- Gender stereotypes and biases that are discriminatory are built in people's minds as early as childhood and limit children's and young people's futures. They can be reinforced but also challenged through the curriculum, teaching and learning materials and practices as well as daily interactions with teachers, parents and peers.
- Beliefs about gender are shaped by norms. Gender norms describe how women and men are expected to behave according to the social context, determining their attitudes and behavior. They can be especially difficult to change since this involves changing rules that profit the more powerful segment of the population, who put the rules in place.[1]
- Gender norms in society are often replicated within education, and reflected in gender disparities and inequalities in access, participation, completion and achievement.[2]
- Gender biases persist, despite progress in closing disparities between men and women. About half of men and women believe that men are better political leaders, and over 40 percent think that men are better business executives and should have priority for a job when these are scarce. Still today, 28 percent think it is justified for a man to beat his wife.[3]

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- Gender norms and expectations can push both girls and boys out of school. Girls may be expected to marry early, which often leads to early pregnancy and early school leaving. Boys can be expected to be breadwinners, causing them to leave school early to find work.
- Gender norms influence beliefs that certain careers are only suitable for men and others for women. They are passed on to children by their families, teachers and society at large.[4] In 2017 globally, the percentage of females studying engineering, manufacturing and construction or ICT was below 25 percent in over two-thirds of countries.[5]
- Breaking gender bias and stereotypes is key for girls' and women's empowerment. Discriminatory gender norms will not change without education challenging them, providing opportunities and skills for critical thinking.[6] Changing negative gender norms also requires the support of men and boys. While there is evidence that men and boys may resist change, they are often found to support it as well.[7]

Education can reinforce or challenge gender bias and stereotypes

Parents and peers

- Parents and peers have the most influence on the way that the gender norms and attitudes in society are internalized by children as they grow up.[8]
- In some countries, many still believe girls' education is less important than boys'. While only 0.6 percent of people surveyed in New Zealand agree strongly with the statement "a university education is more important for a boy than for a girl", 36.3 percent of respondents in Pakistan do so.[9] In Lebanon, 77 percent of students (male and female) considered that women should work mostly to become a good wife and mother, and 66 percent said that there are many jobs that women should not do.[10]
- Parental attitudes influence education and career trajectories.[11] A study in Germany revealed that 10 percent of parents want their sons in technical and 8 percent in craft trade occupations but only 2 percent of the parents want their daughters in these fields.[12] In the United Arab Emirates, parents disapprove of their daughters pursuing careers that involve physical labor or a lot of interaction with men, such as in technology and mechanical engineering.[13]
- Bullying among peers is often gender-related and reinforces societal discrimination and bias. Fifty-four percent of lesbian, gay, bisexual, transgender and intersex (LGBTI) people in Europe have experienced bullying in school at least once based on their sexual orientation, gender identity, gender expression or variations of sex characteristics, according to an IGLYO survey in 2019 which included more than 17,000 children and young people aged 13 to 24. The survey also showed that 83 percent of students had at least sometimes heard negative comments towards LGBTI students, and 67 percent had been the target of negative comments at least once.[14]

Teaching and learning materials

- Teaching and learning material have a powerful role in shaping the world view of children, as they transmit knowledge and present social and gender norms.[15] They can either perpetuate or challenge gender stereotypes.[16]
- In many countries, girls and women remain under-represented in textbooks. In secondary school English textbooks, the share of female characters in text and images was 44 percent in Malaysia and Indonesia, 37 percent in Bangladesh

and 24 percent in Punjab province, Pakistan.[17,18] Only six percent of the characters in the Chilean grade six science textbook were female.[19]

- Teaching and learning materials still include gender stereotypes. A study of Chinese primary school social studies texts showed that all the soldiers were male while all teachers were female.[20] This has serious implications on how girls and boys construct their gender identity and may limit their career choices.
- Curricula and learning materials often either ignore or misrepresent and pathologize LGBTI people. Fewer than one in five respondents to the IGLYO 2019 survey reported having been taught positive representations of LGBTI people in school. A recent review found that nearly half of the 47 Council of Europe member states did not address sexual orientation, gender identity, gender expression or variations of sex characteristics in the curriculum, seven made it optional and only 19 made it compulsory.[21]
- Case studies commissioned by UNESCO and the Global Education Monitoring (GEM) Report have shown mixed progress in tackling bias in textbooks. In Comoros, textbooks still include gender stereotypes, partly due to the lack of gender training for textbook developers. Ethiopia has made progress, but stereotypes remain, which can be linked to women having been excluded from the process of developing textbooks. Nepal has been working to make textbooks and learning materials more gender-sensitive by introducing guidance on gender, appointing a gender expert to review the gender responsiveness of learning materials and launched a policy in 2007 to organize gender audits every five years. Yet, even in 2017, most textbook writers were still male, while a gender audit has been done only twice since 1999.[22]
- Some countries are showing positive change. In Jordan, women are portrayed as prime ministers, as fighters and pilots in textbooks. In Palestine, they are shown voting and as demonstrating in the streets. In India and Malawi some textbooks ask students to identify gender biases in accompanying illustrations and invite them to discuss these stereotypes with their peers.[23]

Teachers

- Teachers, their beliefs and attitudes, have significant influence on students' educational achievement, attainment, and post-secondary outcomes.[24] Teachers are important role models for students. Yet teaching staff needs to become more diverse to match the student diversity.[25]
- Evidence from Australia, Hong Kong (China) and Norway has shown that when pre-primary teachers manifest traditional views of gender roles in the classroom, both teacher and student behaviors reflect gender stereotypes.[26]
- Unlike boys, girls randomly assigned to teachers with stereotypical views of gender roles in Turkey show lower performance on mathematics and reading assessments, with the impact worsening each year the student is in class with the teacher.[27]
- Teachers' assessments of mathematics ability in the United States disadvantage girls, with a larger effect on African-American and Hispanic girls.[28] Girls' confidence in their mathematical ability and their interest to pursue careers in technology, engineering, or mathematics declines when they are exposed to teachers with implicit biases against girls' ability in science, technology, engineering and mathematics (STEM) fields.[29]
- A study of pre-service teachers in Germany found those who held stereotypical gender-based beliefs on students' mathematics and language ability were more likely to recommend boys to STEM-oriented secondary schools and girls to language-oriented schools.[30]
- In some countries in Southeast Asia and the Arab States, teachers view boys as less academically inclined than girls.[31] Research from countries in Africa, South Asia and the Caribbean reported that boys are often seen as unruly and more disruptive in class than girls.[32]
- Many teachers lack the confidence and knowledge to support LGBTI learners. The majority of students (58 percent) surveyed by IGLYO in 2019 never reported bullying incidents to any school staff and fewer than 15 percent of respondents systematically reported their experiences of bullying to any school staff.[33]

School counselors

- School counselors can play an important role in steering young people towards tertiary education and help them make the best choices for their future studies and careers.
- Counselors frequently perpetuate gender stereotypes, impacting the education and career choices of students.[34] An online random survey of high school counselors in the state of Wisconsin, United States, found that, even though they believed female students outperformed males in mathematics and were more likely to succeed, school counselors were less likely to recommend mathematics over English to female students.[35]
- Case studies commissioned by UNESCO and the Global Education Monitoring Report from Botswana, Germany and the United Arab Emirates show that school and career counseling programmes often lack gender responsiveness. Often, initiatives and programmes to help students make informed choices, free of gender bias, about their future fields of study and career come from outside of school.[36]

Despite progress, gender disparities persist in access, skills and the quality of education[37]

ACCESS

- The primary enrollment rate of girls has only increased by 11 percentage points since 1995 from nearly 79 percent to 90 percent in 2019, less than half a point per year.
- Although this rate is faster than boys', whose enrollment rate increased from 86 to 92 percent over the same period, getting every girl into primary school will not happen until 2050. 127 million girls of primary and secondary school age are out of school.
- Three-quarters of all primary-age children who may never set foot in school are girls (9 million).
- In Afghanistan, Central African Republic, Guinea, Niger and South Sudan, fewer than 80 girls for every 100 boys completed primary school in 2020, and boys are more than twice as likely than girls to complete lower and or upper secondary school in Afghanistan, Niger and South Sudan.
- Large gender disparities persist, particularly for disadvantaged learners. In 23 countries, mostly in sub-Saharan Africa but also in Afghanistan, Bangladesh, Guatemala, Haiti, India, Nepal and Pakistan, less than 10 percent of poor rural young women have completed upper secondary school. In Benin, Cameroon, Congo and Mali, hardly any of the poorest girls have completed upper secondary education.
- In Malawi, Nigeria and Sierra Leone, marriage and pregnancy keep about 10 percent of adolescents, mostly girls, away from education. In many instances, this is due to implicit and explicit policies and rules to exclude pregnant adolescents and young mothers from school.

SKILLS

- Women still accounted for almost two-thirds of all adults unable to read in 2019 – 485 million of them lack basic reading skills, with very little improvement seen over the past two decades. In 59 countries, women aged 15 to 49 from the poorest households are four times more likely to be illiterate than those from the richest households.
- Disparity in ICT skills is emerging. Among 10 low- and middle-income countries with detailed data, women are less likely to have used a basic arithmetic formula in a spreadsheet in the 7 poorest countries, while parity exists in the 3 richest countries.

LEARNING

- Across the three latest large-scale learning assessments which took place in 2019, namely Programme d'Analyse des Systèmes Educatifs de la CONFEMEN (PASEC), the Trends in Mathematics and Science Study (TIMSS) and the Southeast Asia Primary Learning Metrics (SEA-PLM), there was a small gender gap, on average, in favor of boys in mathematics. Girls were at a particular disadvantage in Burundi and Gabon. Notable gaps were also observed in Bosnia and Herzegovina, Canada and Chile. But boys performed worse in Southeast Asian countries, especially Cambodia and Malaysia, and in Oman, Saudi Arabia and South Africa.
- Average results were similar in reading, although with a small gender gap in favor of girls. Among the sub-Saharan African and Southeast Asian countries that took part in PASEC and SEA-PLM, girls had worse scores than boys only in Burundi and the Democratic Republic of the Congo. Boys did much worse in reading than girls in Benin, Cameroon and Senegal, and especially in Cambodia and Malaysia.
- Gender segregation by field of study constrains girls' career choice. In Organization for Economic Co-operation and Development (OECD) countries, only 14 percent of girls who were top performers in science or mathematics expected to work in science and engineering, compared with 26 percent of top-performing boys. Women account for less than 1 percent of the applicant pool for technical jobs in artificial intelligence and data science in Silicon Valley.
- Globally, only 6 percentage of mobile application and software developers are female.

QUALITY

- School-related gender-based violence, in its physical, sexual and psychological forms, affects children's and youth's school attendance, well-being and learning.
- Access to water at home is an important prerequisite for freeing children, especially girls, from water-fetching duties that interfere with their ability to attend school. In Nepal, spending one hour a day fetching water lowers girls' primary school completion by 17 percentage points.
- School may be the only place some children have access to water, sanitation and hygiene facilities. In Liberia, few households have hygiene facilities that meet the basic international standard, but 69 percent of schools do, while in Honduras the shares are 12 percent of schools and 84 percent of households. School-based water, sanitation and hygiene facilities can support girls' menstrual hygiene, reduce absenteeism and facilitate their retention in education during adolescence.
- Overall, women were overrepresented in pre-primary (94 percent), primary (67 percent) and secondary school (54 percent) teaching staff in 2020. Sub-Saharan Africa was the only region where female teachers made up less than half of the teaching staff in primary and less than a third in secondary education, with no improvement in shares since 2015. This stresses the importance of role models in a region where girls' access to education remains relatively limited compared with that of boys'.

WIDE

The ten countries with the biggest challenges in girls' education

The ten countries with the highest percentages of girls from the poorest households who are not attending school

Out-of-school rates for girls in the lowest wealth quintile

Country	Year	Percent (%)
Primary school age		
Mali	2018	67%
Nigeria	2018	66%
Benin	2018	64%
Guinea	2018	61%
Pakistan	2018	59%
Mauritania	2015	59%
Senegal	2017	55%
Afghanistan	2015	52%
Papua New Guinea	2018	46%
Ethiopia	2016	43%
Lower secondary school age		
United Republic of Tanzania	2015	81%
Guinea	2018	79%
Mali	2018	76%
Benin	2018	73%
Nigeria	2018	72%
Pakistan	2018	70%
Mauritania	2015	63%
Afghanistan	2015	62%
Madagascar	2018	61%
Senegal	2017	58%
Upper secondary school age		
United Republic of Tanzania	2015	98%
Côte d'Ivoire	2016	95%
Guinea	2016	94%
Mali	2015	92%
Madagascar	2018	90%
Pakistan	2018	89%
Benin	2018	88%
Uganda	2016	86%
Zambia	2018	84%
Senegal	2017	83%

Source: WIDE

The World Inequality Database in Education (WIDE) managed by the GEM Report and the UNESCO Institute for Statistics (UIS), draws attention to unacceptable levels of education inequality across countries and between groups within countries.

The data displayed shows the countries with the highest out-of-school rates for girls in the lowest wealth quintile. These are the latest data available.

Looking at out-of-school numbers, in primary school, more than two-thirds of girls are not enrolled in 2 countries. In lower secondary school, more than two-thirds of girls are not enrolled in 6 countries, with Benin, Nigeria and Mali featuring on both lists. In the bottom 10 countries, no more than 2 out of 10 girls can expect to attend upper secondary education among those aged 15-17 years.

Girls' disengagement from education is due to many factors, including child marriage, adolescent pregnancy, discriminatory gender norms in society, child labour and the lack of easy and safe access to schools near where they live. These girls need to be given a second-chance to re-join education systems, and accelerated learning opportunities so that they can catch-up on their time lost.

Gender-transformative education has the power to challenge gender norms, bias and stereotypes.

Gender-transformative education is essential to challenge gender norms, bias and stereotypes. It involves addressing the different needs, aspirations, capacities and contributions of girls, boys, women and men, and non-binary persons but also challenging existing and discriminatory practices, and creating radical change. A gender-transformative approach to education is one that creates opportunities to actively challenge gender norms and wider inequalities. This includes:

- Parental outreach programmes to dismantle harmful gender stereotypes about suitable education and careers for girls and boys.
- Gender-transformative curricula and regular activities in schools from an early age to encourage the critical examination of harmful gender norms and gender inequalities.
- Revision of teaching and learning materials to make them free from gender bias and stereotypes, challenging traditional gender norms and promoting diversity.
- Gender-transformative training for teachers, enabling them to critically examine their own bias and to challenge and deconstruct traditional gender norms and stereotypes.
- A diverse teaching workforce which promotes gender equality and treats all learners equally.
- A safe school environment for all, including LGBTI students.
- Access to non-judgmental and accurate information on sexual orientation and gender identity and expression in educational settings.
- Whole-school approaches to raise awareness of gender bias and stereotypes and how to act against them.
- Access to role models and mentors to debunk stereotypes and myths about gendered abilities and careers and open pathways.
- Mandatory gender-transformative school counseling which dismantles stereotypes on careers suitable for women and men and encourages girls and boys to pursue careers in areas where they are underrepresented such as STEM for girls and caring and teaching professions for boys.

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