



UN Women

Topic 2: Equal access and involvement in higher-degree education for women

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1. Definition of key terms

Tertiary education: Education at the college or university level.

Higher degree: An award at a level higher than a bachelor's or first degree, including master's degrees and doctorates. Higher degrees are conferred by universities and some other institutions of higher education, making them part of tertiary education.

Sustainable Development Goals (SDGs): Seventeen global goals adopted by the United Nations in 2015, serving as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

The International Standard Classification of Education (ISCED): a reference framework for organizing education programs and related qualifications by levels and fields. ISCED levels include 0 = early childhood education, 1 = primary education, 2 = lower secondary education, 3 = upper secondary education, 4 = post-secondary non-tertiary education, 5 = short-cycle tertiary education, 6 = bachelor's degree or equivalent, 7 = master's degree or equivalent, and 8 = doctoral degree or equivalent.

Gender Parity Index (GPI): An indicator indicating the ratio of female to male values of a given indicator, commonly used to assess gender disparities in various fields, including education.

2. Introduction

The establishment of higher education institutions and systems that actively practice and model gender equality norms, where the voices and ideas of women are valued and elevated, represents a powerful tool for society to expedite progress towards the equality and empowerment of women and girls worldwide. Gender equality in higher education and research is crucial to ensuring women's rights and promoting social justice. Tertiary education serves as a pathway to economic independence for women, disrupting cycles of gender disadvantage and serving as a marker and

facilitator of gender equality.

Furthermore, gender equality in tertiary education ensures that all individuals, regardless of gender, have the opportunity to contribute their talents to addressing global challenges and driving progress for humanity. Additionally, the return on investment in higher education tends to be higher for women than for men globally, spanning both low-income and high-income countries. Beyond financial gains, higher education brings various social benefits, including indirect and non-financial advantages, contributing to better individual and family health.

However, despite these benefits, there is a need to address practical barriers that disproportionately affect women due to their societal roles. Effective policies to combat structural barriers, such as addressing issues related to maternity in most higher education institutions or research bodies, are insufficient and require attention and action.

3. Background information

As of today, women continue to be, on average, underrepresented in higher education, especially at the most senior levels, such as master's or doctorate levels. Globally, women outnumber men at all tertiary education levels except for the Ph.D. level, where 52.1% of tertiary education students are women. Nevertheless, substantial variations exist between world regions. Sub-Saharan Africa stands out as the only region where women are consistently underrepresented at all levels, particularly at more advanced education levels. In other world regions, the overrepresentation of women at the bachelor's level increases even more at the master's level. However, this trend experiences a sharp reversal at the Ph.D. level, with women becoming underrepresented at this advanced level of education in all regions except Central Asia, Latin America, and the Caribbean.

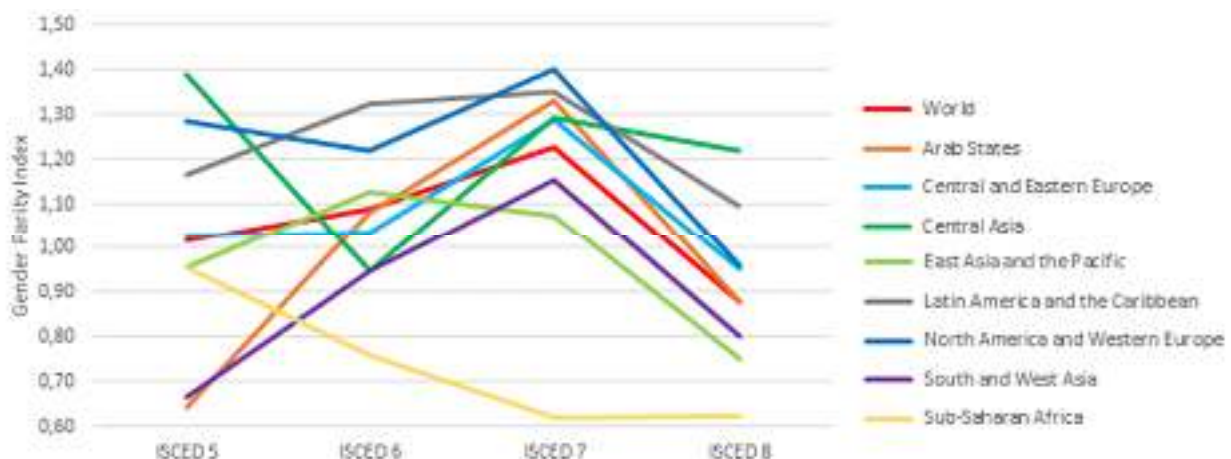


Figure 1: Gender parity index for enrolment in tertiary education in 2020. When GPI = 1, men and women values are equal.

In fact, in many countries, women outnumber men at all tertiary education levels except for Ph.D.: 52.1% of tertiary education students are women. However, there are considerable differences between world regions. Sub-Saharan Africa is the only region where women are underrepresented at all levels, particularly at more advanced education levels. In other world regions, the overrepresentation of women at the bachelor's level increases even more at the master's level. However, this trend sharply reverses with a significant drop at the Ph.D. level, where women become underrepresented in all regions except Central Asia, Latin America, and the Caribbean. Most developing countries are prone to natural disasters, which put the population's income at risk, leading to income volatility. This may force difficult choices on cash-constrained low-income

households, often resulting in decisions to restrict girls' education to save money. Another reason for the persistence of gender disparities in education in low-income countries, not tied to deliberate gender discrimination, is the lack of development itself. For example, poor maternal and women's health, resulting from inadequate health infrastructure, significantly lowers women's life expectancy. This causes them to suffer from poor health past their childbearing years. As a result, households may invest less in girls' education than in boys' education to avoid wasting money on education that girls may not be able to benefit from. Moreover, adolescent girls and young women may lack access to contraceptives or other means of birth control, implying that an unintended pregnancy could prematurely interrupt their education, a situation that usually does not happen to boys.

Furthermore, higher education for girls is considered less important than for boys, with one in four people globally agreeing that higher degree education is more crucial for a boy than for a girl. Gender inequality is evident in the leadership of higher education institutions, where women are underrepresented as lecturers, researchers, and leaders across various national contexts. Despite constituting more than half of higher education students, women are more likely to fill less prestigious roles in higher education. For instance, a survey of nine Latin American countries found that only 18% of university rectors were women, and a survey of 48 European countries revealed that only 15% were women. Additionally, just 21% of the top 200 universities globally, according to the Times Higher Education Rankings, have female rectors.

The field of STEM (science, technology, engineering, and mathematics) is crucial for innovation, addressing environmental and health concerns, and economic advancement. Despite its significance, STEM faces global and persistent issues of underrepresentation and marginalization of women, coupled with systematic undervaluation of women's work. Notably, the gender gap in STEM is relatively higher in countries with higher overall levels of gender equality, emphasizing the importance of policies addressing gender inequality in higher education institutions.

Research conducted by the American Association of University Women (AAUW) in the United States, where more women than men have a bachelor's degree, aimed to understand why the gender gap persists in the STEM field. While girls historically lag behind boys in math skills, they are taking the same math and science classes, earning slightly higher grades. However, in high-stakes math tests, boys continue to outscore girls by a small margin. Fewer girls take advanced placement (AP) exams in STEM-related subjects, and those who do usually have lower grades than boys in the same classes. The "stereotype threat," where society expects girls to have worse abilities in STEM subjects compared to boys, negatively affects girls' performances in high-stakes math tests, despite strong performances in the classroom, starting from elementary school.

In the transition from high school to university, many young women divert from a STEM career path. In 2006, almost one-third of all male freshmen planned to major in a STEM field, compared to only 15 percent of all female freshmen. However, upon entering university, girls exhibit the same confidence as boys in their math and science abilities, with comparable retention numbers.

Despite the still relatively small percentages of women in some STEM fields, the overall proportion of STEM bachelor's degrees awarded to women has significantly increased over the past four decades. Women's representation among doctoral degree recipients in STEM fields has also improved in the last 40 years. In 1966, women earned about one-eighth of the doctorates in the biological and agricultural sciences, 6 percent in chemistry and mathematics, and 3 percent or less in earth, atmospheric, and ocean sciences; physics; engineering; and computer science. Forty years later, in 2006, women earned almost one-half of the doctorates in the biological and agricultural sciences, around one-third in earth, atmospheric, and ocean sciences, chemistry, and math, and approximately one-fifth in computer science, engineering, and physics.

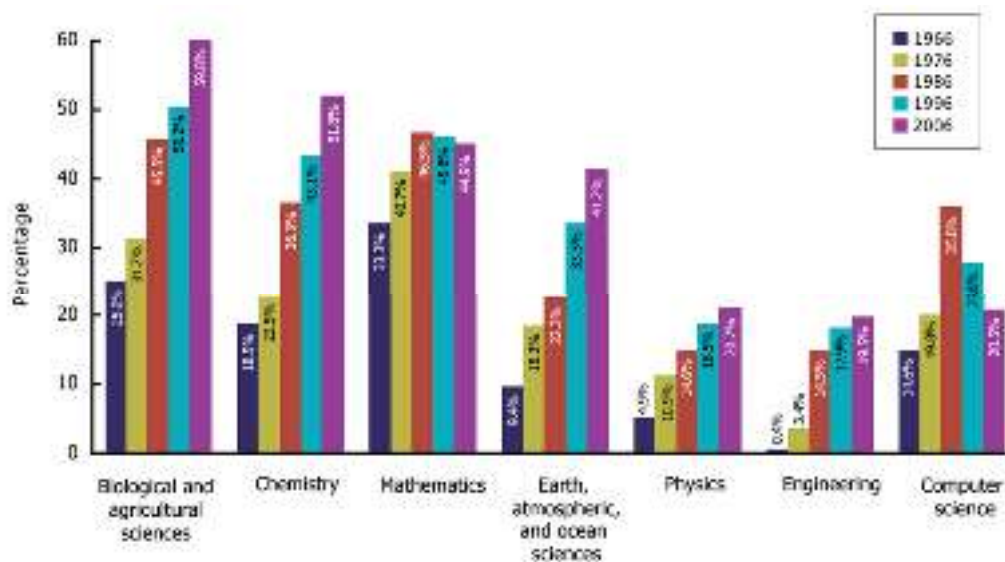


Figure 2: Bachelor's degrees earned by women in selected fields in the USA.

Furthermore, female researchers at higher education institutions represent only 39.7 per cent of the world's total. There is also evidence suggesting that male researchers have benefited from a larger share of research funding, positively impacting their long-term academic success. Additionally, male researchers generally publish more research papers than their female counterparts, especially in top journals.

During the Covid-19 pandemic, particularly during the first wave and lockdown months, the number of scientific publications increased. However, this increase was less pronounced for women than for men. The impact was more significant on young female researchers, highlighting gender disparities caused by social barriers. The responsibilities of childcare were unevenly distributed towards women when schools were closed, leaving them with the additional burden of caring for their children at home and less time to engage in research and publication activities.

4. Attempts to solve the issue

The international community has demonstrated its commitment to promoting gender equality and eliminating discrimination against women in the education field. For instance, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) calls for global efforts to ensure equality between men and women in various forms of education, including pre-school, general, technical, professional, and higher technical education. Additionally, 109 countries have ratified the 1960 UNESCO Convention Against Discrimination in Education, emphasizing that education is a fundamental human right rather than a luxury. This convention underscores states' obligations to provide free and compulsory education, prohibit any form of discrimination, and promote equal educational opportunities, including access to higher education based on individual capacity.

Furthermore, the fourth goal of the Sustainable Development Goals (SDGs) aims to ensure inclusive and equitable education while promoting lifelong learning opportunities for all. The fifth goal specifically advocates for gender equality and the elimination of any type of discrimination against women and girls. According to the Global Education Monitoring Report, nearly 50 percent of countries have implemented policies and legislation to protect women and girls from

discrimination in the education sector.

It is noteworthy that many policies and legislations in this regard have been initiated by higher education institutions themselves. To effectively make progress on gender equality and transform internal cultures, universities should develop their internal regulations and policies. This approach enables universities to target specific gaps in gender equality, as each institution has its unique characteristics and challenges. Ghent University in Belgium, for example, has implemented a range of policies for parents, including maternity and paternity leave for staff, breastfeeding breaks, flexibility options for pregnant students, and childcare services for both staff and students. These initiatives collectively create a supportive environment that facilitates work-life balance for female staff and students. Additionally, Uva Wellassa University in Sri Lanka established the Centre for Gender Equity and Equality, which works to ensure equal opportunities and terms for both genders within the university community. The centre oversees the implementation and monitoring of gender equality policies while promoting a gender-sensitive environment with zero tolerance towards sexual and gender-based violence, contributing to fostering gender equity within the institutional culture.

To eliminate the social and practical barriers preventing young women from completing their tertiary education, the provision of childcare facilities in higher education institutions is crucial. However, these facilities are among the least commonly offered support services for female students, with only 62 percent of universities providing them in 2022.

Higher education institutions have implemented various measures to address gender inequality in academic research. For instance, Waseda University in Japan has established a confidential mentoring program focused on the academic and personal lives of female junior researchers, PhD candidates, and postgraduates aspiring to become researchers. The mentors, who are senior researchers in leadership positions within the university, help mentees develop problem-solving skills. Through this program, mentees learn from their mentors' experiences and benefit from their advice.

Additionally, The African Institute for Mathematical Sciences (AIMS), a pan-African network of excellence centers for postgraduate training in mathematical sciences, has launched The AIMS Women in STEM initiative. This initiative seeks to provide evidence-based recommendations to support leaders in universities, governments, businesses, and society in enhancing gender equality in STEM fields. The initiative also organizes mentoring and networking events to further its objectives.

5. Major countries involved

European Union:

In 2022, 42% of the EU population aged 25-34 years had tertiary education, marking a 1% increase compared to 2021. However, this progress falls short of the EU's 2030 target, which aims to achieve a tertiary education degree for 45% of women in this age group by 2030. Notably, there is a significant gender disparity in tertiary education within the European Union. Among individuals aged 25-34, a higher percentage of women possess tertiary education compared to men, with 48% of women and 37% of men having attained this level of education.

Ethiopia:

Ethiopia faces challenges in achieving gender equality in higher education. The tertiary gross enrollment ratio (GER) for women is only 8%, compared to 13% for men in 2018. The graduation rates also highlight gender inequality, with 17% and 29% of girls graduating in the academic years ending in 2007 and 2011, respectively. The Ethiopian Ministry of Education addressed these issues

by publishing a girls' education strategy document in 2010, acknowledging the need for intervention. However, misconceptions about girls' academic abilities, economic factors, and institutional gender bias contribute to these challenges. Furthermore, women remain underrepresented in higher education leadership positions in Ethiopia, holding only 10.6% of executive management positions across the country's 45 public universities in 2019-20.

Colombia:

In Colombia, the Saber 11 exam plays a crucial role for students finishing high school as it is necessary for applying to tertiary education institutions and scholarships. There is a slight gap in scores between girls and boys, with boys tending to outperform girls marginally (on average: boys 48.61 and girls 47.72). Despite this, more women than men are enrolled in higher education, constituting 52% of the student population. However, in STEM programs, the number of male graduates almost doubles the number of female graduates.

Rwanda:

Gender disparities in Rwanda persist and widen at higher education levels compared to primary and secondary education. In secondary education, disparities lead to girls performing less well in final examinations, particularly in science subjects. Consequently, females make up only 26.8% of the student body in public higher education institutions. In contrast, females slightly outnumber males in private institutions, although these institutions often provide lower-quality education. The dropout rate after enrollment is higher among girls than boys, with reasons often related to marriage, abortion, or pregnancy. Additionally, the high cost of living and increased student poverty have led some young women into prostitution.

China:

In China, the number of women students in higher education has continuously grown, surpassing male students. In 2009, approximately 10.82 million female students exceeded the 10.62 million male students for the first time. A survey from 2011-2012 showed no gender difference in students entering top universities, indicating that female students in China have equal opportunities for high-quality higher education. However, the research also revealed that women from rural areas are 66% less likely to enroll in top elite universities compared to men from the same region. Women from rural areas tend to attend cheaper and lower-quality universities. This disparity is more pronounced among ethnic minority populations, where women's chances are about 85% lower than men's. In many rural parts of China, sons are considered the main supporters of the family, and parents are more likely to invest money in their sons' further education than in their daughters'. The survey also highlighted the belief, especially in rural areas, that women's schooling is considered a "luxury" and is less likely to yield returns compared to male schooling.

6. Official documents about the issue

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