

UNICEF EDUCATION

Education Case Study

GHANA

Sparking adolescent girls' participation and interest in STEM

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COVID disruptions have highlighted the need to reinvigorate Science, Technology, Engineering and Mathematics (STEM) education for girls in Ghana. Even before COVID-19 hit, many schoolgirls in the country faced obstacles in pursuing coursework, and later employment, in STEM fields. Several factors contribute to gender disparities, including a false belief among girls and their families that science-related subjects are better suited for boys. In the 2018/19 school year, 35 *per cent* of girls in the country passed examinations in mathematics at the end of high school compared to 41 *per cent* of boys. Moreover, only 7 *per cent* of adolescent girls possess digital skills compared to 16 *per cent* of adolescent boys.

When COVID-19 shuttered schools throughout the country, UNICEF and the Mastercard Foundation supported the Ministry of Education (MOE) and Ghana Education Service (GES) to initiate distance learning radio programmes, including gender-responsive lessons in STEM for Kindergarten to junior high schools students. Notwithstanding, a recent government-led rapid risk assessment, supported by UNICEF, found increased sexual abuse and violence against adolescent girls since schools closed in March 2020, and some studies have also shown an increase in teenage pregnancy.

These compounding factors have highlighted the need for a more robust, comprehensive effort to bring back affected girls to school. In tandem, [reimagining girls' education through STEM](#) is also necessary to transform gender norms in Ghana's education system, improve quality learning for girls, enhance academic performance and steer their transition from student to technical expert in dynamic STEM industries.

RESULTS AND LESSONS LEARNED

- **First, girls must stay in school.** From 2018 to date, UNICEF Ghana has been driving MOE policy on the re-entry of young mothers to

school, helping to carry out activities in the *'Guidelines on prevention of pregnancy among school girls and facilitation of re-entry of young mothers after childbirth'* and the *'Safe School Resource Pack.'* These guiding resources target vulnerable girls including pregnant and adolescent mothers, and they are some of the main tools used during Ghana's recent Back-to-School campaign in response to COVID-19. UNICEF helped train 524 national cadres of trainers who, in turn, trained district-level personnel to reach over 260,000 people in more than 120 districts with messages on preventing pregnancy among schoolgirls and bringing adolescent mothers back to school, among others. Data from the nationwide campaign is currently being gathered.

- **Skills development is a lifeline for adolescent girls.** To advance girls' participation in STEM, UNICEF Ghana is increasingly focused on helping adolescent girls to close the skills gap. From May 2017 to March 2021, through the *'Better Life for Girls'* initiative, UNICEF and the Korea International Cooperation Agency (KOICA) worked with the GES to launch gender-responsive teaching in mathematics and science in 72 junior high schools in Krachi East and Kpandi Districts, reaching over 4,000 girls. While the project recently ended, UNICEF and partners will continue to empower adolescent girls especially when it comes to sparking their interest in STEM, dismantling gender norms related to traditionally male dominated professions and addressing teenage pregnancy and gender-based violence. With funding from UNICEF Canada, the project has expanded to five additional districts (Saboba, Tolon, Nanumba North, West Gonja, West Mamprusi) in three regions in Ghana.
- **Female mentorship goes a long way.** In 2018, UNICEF supported a five-day STEM learning

camp, through *'Better Life for Girls,'* where over 300 adolescent girls received leadership and life skills training. They also engaged in hands on activities with leading female role models in STEM, including engineers, doctors and statisticians, who emblematised the sweeping benefits of STEM jobs. After the camp ended, the girls continued to serve as peer leaders: they went back to their schools and championed girls' and STEM education, impacting over 4,000 girls.

- **Engaging girls by engaging teachers.** Since 2018, with KOICA support, UNICEF helped train 276 teachers in 72 junior high schools to bolster adolescent girls' participation and interest in STEM education in the two districts. Refresher trainings have been organized every year, and with funding from UNICEF Canada, the training programme has now been scaled up to five additional districts. Moreover, with valuable contributions from KOICA and UNICEF Canada, UNICEF procured about 11,000 math and science related teaching and learning materials, including anatomical models, illustrations of animal and plant cells, abacuses, solar system models, lab equipment and construction tools for 1,500 teachers in 252 schools in the seven project districts.

NEXT STEPS

While all students returned to face-to-face classes in mid-January 2021, UNICEF Ghana will continue to work with the MOE and GES on gender-responsive radio lessons for STEM subjects to complement learning for nearly 4 million girls. In 2021, with support from Global End Child Marriage Programme, the Government of Ghana and the Mastercard Foundation, UNICEF Ghana is providing bursary support for 8,050 vulnerable girls to stay in and complete their basic education. *'Better Life for Girls'* has also demonstrated strong results with the potential to be [scaled nationwide](#) in the future.

Cost effectiveness: From 2017-2021, UNICEF provided financial as well as technical support to the *'Better Life for Girls'* project in Ghana, supported by KOICA's over US \$1.6 million investment in education. This enabled over 4,000 adolescent girls to stay in school, prioritizing their education and advancement in STEM and empowering them to reach their highest potential.

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