

LETTERS

Here's how to encourage, motivate girls to pursue science and technology



If you ask a girl in a rural secondary school to picture someone who is good at physics, chances are she will not describe herself. She may not even describe a woman.

That imagination gap is one of the crises in our education system. We can invest in laboratories, devices and new curricula, but if girls rarely see women occupying science, technology, engineering and mathematics (STEM) spaces, the message they receive is simple: This is not for you.

This year's International Women's Day theme, "Give to Gain", offers a lens for thinking about what we are willing to give so that girls can belong in STEM. For Uganda, that giving must start with four groups of adults: teachers, student teachers, teacher trainers and school leaders.

Across education reform in Uganda, a principle is becoming clearer. If these four actors do not move, our ambitions for girls in STEM do not move either.

First, we must invest in the people who stand in front of girls daily. When a girl sees a STEM teacher, her sense of what is possible expands. When teachers use examples that include women scientists and refuse casual bias in class, the signal changes. Gender responsive, learner-centred teaching is not an optional extra; it is inclusion in practice.

Second, the pipeline into the profession matters as much as the classroom itself. Scholarships and support for young women training to become STEM teachers do more than change one life. They seed role models in districts where girls have never been taught physics or ICT by a woman. When training institutions and employers provide mentoring and exposure, more of these young women remain in the profession and choose to serve in rural schools that need them most.

Third, school leadership and culture can either reinforce or dismantle bias. A head teacher who treats science as the preserve of boys can undo years of progress. By contrast, school leaders who track girls' participation, champion female teachers and insist that STEM clubs are open to everyone create a different story within communities.

Impact communication, grounded in strategic intent, ties these strands together. When ministries, implementing partners and schools speak with one clear voice about girls in STEM, they do more than raise awareness. They shape expectations, normalise the image of women leading laboratories and classrooms, and show parents that a daughter who excels in physics is not an embarrassment but an asset.

Give to gain becomes practical when we give trust and training to teachers, opportunity to young women entering the profession, authority to school leaders ready to make their schools inclusive, and coherence to the story we tell about girls in science.

If we do this, what we gain is more than improved STEM enrolment. We gain girls who recognise themselves in the futures we describe. We gain communities that see their daughters as scientists, engineers and innovators.

Even beyond International Women's Day, this moment should prompt reflection among everyone who shapes education: Teachers, trainers, school leaders, government and partners all have a role. If we want more girls to choose and thrive in STEM, we must design our policies, budgets and school routines with these adults at the centre.

The most strategic thing we can give girls is not another slogan, but inclusive teachers and leaders who show them every day that science and technology are also for them.

If we truly want to give to gain, let us give girls a system that expects them in STEM and then watch them transform it.

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