EMPOWERING GIRLS AND YOUNG WOMEN THROUGH STEAM

OVERVIEW
IREX empowers girls and young women – in and out of school, and particularly those without access to high quality STEAM (science, technology, engineering, arts, and math) education - to pursue the jobs of today and tomorrow. While an estimated 85%-90% of jobs in 2020 will require digital skills, 23% fewer women than men in the developing world are online. In the U.S. alone, STEM jobs will grow to more than 9 million by 2022, but women hold less than 25% of today’s STEM jobs. IREX programs identify underserved girls and young women who are in or out of school, provide skills building opportunities, access to female mentors, and opportunities to create real-world solutions. IREX engages educational institutions, community and youth resource centers, government, the private sector, and other local partners in its efforts to build the pipeline of women and girls in STEAM fields.

IREX PROGRAMS

SHE’S GREAT (Supporting Her Empowerment – Girl’s Resilience, Enterprise, and Technology):
IREX will address gender inequality and harmful cultural practices by building economic, technology, and leadership, skills for girls in and out of school. Connected to mentors and supported through community advocacy, secondary school girls will lead STEAM clubs; out of school girls will receive training linked to employment and entrepreneurship.

**Funded by the US Department of State**

World Smarts: IREX offers a 10-week, problem-based STEM challenge curriculum in which youth collaborate virtually with peers across the globe to create real world solutions to local problems.

**Funded by the Carnegie Corporation of New York**

Tech Age Girls: IREX provides digital skills and professional skills, empowerment and leadership training to girls without access to technology training, and offers mentoring, access to women tech leaders, and advanced skill building.

**Funders include USAID and the Department of State**

Youth and Community Resource Centers: IREX supports and builds institutional capacity for youth and community resource centers that in turn provide youth with learning opportunities all along the STEAM spectrum, from basic digital skills to advanced coding training, robotics competitions, and arts for community change.

**Funders include the Bill and Melinda Gates Foundation and USAID**

PROGRAM HIGHLIGHTS & RESULTS

Offering secondary and post-secondary teachers a problem-based STEAM challenge
IREX provides curricula, teacher training, and technical support for teachers and faculty to offer problem-based STEAM learning. Through World Smarts, IREX has trained 30 teachers and empowered over 125 female students in the U.S. and Ghana to build their STEM skills and confidence. In Iraq, IREX coaches over 20 universities in offering Design Days, long-term student-led innovation projects that culminate in one-day events with potential employers engaging approximately 100 female students.

Providing intensive learning experiences through camps
In sub-Saharan Africa, Eastern Europe, and Asia, IREX designs STEAM camps for girls. SHE’S GREAT camps will increase girls’ retention and increase interest in STEAM in school. A problem-based learning approach will be used to raise awareness and lead communities to implement local solutions. In Moldova, IREX partnered with UN Women and the Moldovan Association of IT Companies to offer Girls GoIT Summer Camps. Girls developed programming and coding skills and created projects, such as a web platform promoting eco-lifestyles and recycling.

Engaging young girls and women in non-formal STEAM education and training
Through its extracurricular programming and via youth and community resource centers, IREX offers girls and young women empowering skill-building programs in settings. Through our Tech Age Girls programs in 8 countries, IREX has provided over 1300 young women with IT training, mentors, and hands-on opportunities to exercise their skills as community change agents. 80% reported that tech skills made them more competitive in the job market and nearly 60% pursued additional career related training.

Increasing youth orientation – particularly female youth - for STEM subjects
With over 50% female participation and nearly 95% not having participated in science fairs or clubs before the program, 91% of World Smarts girls and boys reported being enthusiastic about science, 89% about technology, and 87% about engineering after their participation. In Moldova, female participants in Roboclubs (Robotics Clubs) shower a greater orientation towards robotics and artificial intelligence than male participants, despite lower levels of interest prior to the program.
IREX DEVELOPED TOOLS & SERVICES

Tech Age Girls Curriculum
Addressing the significant gap in digital skills between men and women, this curriculum provides basic and advanced digital and leadership skills and gives guidance on accessing women tech leaders and arranging mentorships.

Creating Supportive Learning Environments for Girls and Boys: A Guide for Educators
Supports teachers and administrators to be more gender-inclusive by preparing them to evaluate, design, and use gender-inclusive practices in instructional materials, classrooms, schools, and communities.

Design Day Toolkit
A roadmap for post-secondary institutions to host design day events (long-term projects to foster student innovation culminating in events with employers). Designed for engineering in line with ABET (Accreditation Board for Engineering and Technology) standards but adaptable to other subjects. Students, faculty, and private sector partners develop a practical solution to an industry-posted problem.

World Smarts Curriculum
A 10-week, gender-sensitive, standards-aligned curriculum, including educator training materials, providing step-by-step guidance for educators to take youth through a problem-based STEM challenge in collaboration with virtual team members from another country.

Gender Equality and Social Inclusion Resources
Resources provide a blueprint for consistently and effectively advance gender equality and meaningful inclusion of disadvantaged and marginalized identity groups. IREX training expertise helps staff and partners ensure attention to power differences and access across different identity groups and design and implement inclusive programs.


IREX is an international nonprofit organization dedicated to building a more just, prosperous, and inclusive world by empowering youth, cultivating leaders, strengthening institutions, and extending access to quality education and information. With an annual portfolio of $80 million and 400 professional staff worldwide, IREX employs field-tested methods and innovative technologies to develop locally driven solutions in more than 100 countries.

ABOUT IREX

CONTACT US
Dr. Vijitha M. Eyango, Director, Youth Practice, Global Programs veyango@irex.org