



Public-Private Partnership (PPP) Concept Note:
TeachHer – *Training a Master Teacher Corps to*
Inspire and Empower Girls to be STEAM Leaders

Executive Summary

At a time when UNESCO seeks to significantly elevate its focus on preparing girls to pursue careers in Science, Technology, Engineering, Arts/Design, and Math (STEAM), and to promote implementation of the 2030 Sustainable Development Agenda, the U.S. Mission to UNESCO (USUNESCO) has launched a new public-private partnership (PPP) to support these efforts, in collaboration with UNESCO, other Member States, and leading private sector and NGO partners. TeachHer will train a Master Corps of Teachers in the developing world to inspire and equip adolescent girls age 13 to 16 to pursue STEAM careers.

TeachHer was launched at an event on June 14, 2016, at UNESCO headquarters in Paris. The event was keynoted by the Second Lady of the United States, Dr. Jill Biden, and UNESCO Director General Irina Bokova. The First Lady of Costa Rica, Ms. Mercedes Peñas Domingo, as well as adolescent girls from local schools, participated in the event which drew over 180 UNESCO Ambassadors, private sector and NGO partners, foundation and business leaders, UNESCO Goodwill Ambassadors, and other dignitaries.

At the launch event, Dr. Biden welcomed the commitment behind the TeachHer partnership and emphasized how personal this cause is for her as an educator herself. In a passionate call to action, Dr. Biden noted, “If we invest in our teachers today; if we invest in women and girls today; if we give girls the opportunity to go to school and graduate; recognize their value and welcome their contributions; and make sure women have a seat at the table today, then tomorrow, no little girl will grow up in a world where her dreams are denied; her potential unrealized. It’s not just words that are going to make a difference. We need your commitment. We need you to act. We must act.” Similarly, UNESCO Director-General Bokova stressed that the imagination, wonder, and creativity of girls around the world must be front and center in every effort we make in terms of innovation. She thanked the United States for its leadership in this area as a UN Champion Country for Education and recently re-elected UNESCO Executive Board Member. The UNESCO Director General committed herself and her senior staff to fully supporting TeachHer, noting that TeachHer is fully aligned with UNESCO’s intended efforts to make STEAM education for adolescent girls “one of the flagships to be launched during the 2016-2017 biennium.”¹

¹ At a recent meeting, UNESCO Education sector colleagues announced that STEM education for girls will be a new third pillar of the Better Life, Better Future partnership (launched by then-Secretary Clinton in 2011) for the upcoming 2016-2017 biennium. This third pillar follows the previous two pillars of literacy and secondary education.

Leveraging UNESCO's core competencies in teacher training, gender sensitivity training, and global citizenship, as well as the Obama Administration's focus on expanding educational opportunities for girls and women, TeachHer will launch two one-week pilot programs (one each in Africa and Central America) aimed at training the first corps of Master Teachers in STEAM, supplemented with robust follow-on support, ongoing learning, and establishment of a STEAM implementation plan for selected pilot schools. The initiative – focused on as many as 100 teachers and administrators responsible for educating of students between the ages of 13 and 16 and selected by Member State ministries in each region – will build upon the Obama Administration's domestic efforts to build a Master Corps of 100,000 STEM Teachers, as well as First Lady Michelle Obama's *Let Girls Learn* initiative to expand educational opportunities for adolescent girls. Since TeachHer will also work with UNESCO and partner entities to create high-quality, turn-key, and adaptable STEAM resources that use an open license such as one of the Creative Commons licenses for both formal and informal educational settings, TeachHer will also be fully aligned with the efforts of UNESCO and the Administration to expand and improve Open Educational Resources (OER) for educators.

WHY it is important

Among the most powerful forces for achieving transformational development, ending poverty and ensuring a life of dignity for all, is increasing educational outcomes for women and girls. Expanding educational opportunities for women and girls continues to be one of the United States' priorities, underscored by First Lady Michelle Obama's leadership with her *Let Girls Learn* initiative. Despite high global demand for skilled technology and engineering experts, UN statistics show that women remain severely under-represented in the STEAM workforce in every region of the world and make up only 30 percent of the world's researchers. The numbers are even lower in engineering and computer sciences. Historically women have been significantly underrepresented in engineering fields, typically making up only 10 – 20 percent of the engineering work force globally. In the United States, 74 percent of middle school girls express interest in STEAM, but when choosing an undergraduate major, just 0.4 percent (i.e. only 4 in 1000) of women starting university select computer science. Teaching bias and education culture convince girls that STEAM careers are for boys. It is essential that we change that by showing girls at an early stage that STEAM careers are not just for boys.

However, despite the economic advantages of STEAM careers, research shows that if girls do not become exposed to them by the end of middle school, they are unlikely to pursue STEAM education and careers later. While other programs in the United States and abroad have shown some success with interventions aimed at engaging girls directly, such efforts comprise only one part of the overall solution. We must also address the way STEAM is being taught in schools to make sure girls walk out of the classroom equipped with the relevant skills and feeling as confident and empowered as boys to pursue STEAM careers. Accordingly, this partnership is an

opportunity to leverage UNESCO's core competencies in teacher training to develop a Master Corps of STEAM Teachers who can empower girls to be leaders in STEAM fields.

UNESCO's "Better Life, Better Future" partnership launched by then-Secretary Clinton in 2011 as part of the Global Partnership for Girls' and Women's Education, is focused on expanding and improving educational opportunities and outcomes for women and girls. UNESCO's Education Sector has recently announced that STEAM education for girls will be a new third pillar of the Better Life, Better Future partnership for the upcoming 2016-2017 biennium, following on the previous two pillars of literacy and secondary education. With 195-Member States, and a leader within the UN system for improving the quality of teachers and advancing educational opportunities for girls and women, UNESCO is a powerful platform to support Member States' efforts to advance the UN's 2030 Sustainable Development Agenda.

WHAT we want to do and WHERE we want to do it

TeachHer will offer regional one-week Master Teacher training seminars to equip targeted teachers, administrators, and policy makers in Africa and Central America with state-of-the-art methods for teaching STEAM in an inspiring, engaging, and gender-sensitive manner, while also imparting notions of global citizenship. TeachHer will leverage UNESCO's core competencies in teacher training to develop a Master Corps of STEAM Teachers and administrators who will empower girls to be leaders in STEAM fields and train other teachers to do the same, building on the success of [President Obama's domestic support for a STEM Master Teacher Corps](#).

Working through UNESCO and with UNESCO Member States, TeachHer will integrate best practice STEAM teaching methods into the core curriculum of participating UNESCO Member States. Such methods will inspire and impart STEAM skills to students in a gender-equal, engaging, and empowering way. The partnership will also seek to impart best practices in establishing effective supplemental enrichment programs to encourage girls specifically to pursue STEAM-related careers, including through after-school and weekend clubs, mentoring and other mechanisms to be tested out in selected pilot schools.

To help garner further support for this initiative, TeachHer is engaging a network of prominent advocacy partners – including business, educational, and entertainment leaders; and successful women role models from STEAM-oriented fields – to champion the cause of addressing the STEAM gender gap and to give time and resources to advancing this agenda.

The target audience for this project are teachers who educate girls aged 13-16, senior school administrators, and education ministry officials with responsibility for delivering STEAM-related curriculum to middle school students. The focus on teachers who educate girls aged 13-16 is to engage girls in STEAM fields early, before they begin taking exams that often establish their pathways into post-secondary education.

The Central America-focused teacher training hosted by Costa Rica will also include teachers from El Salvador, Guatemala, Honduras Panama and hopefully Nicaragua. Instruction for the Central American program will be delivered in Spanish. In light of the strong support of the Costa Rican First Lady and other government officials, as well as that of the U.S. Embassy in San Jose, we believe Costa Rica is an ideal location for this initiative due to its central location and ease of access from other countries in the region.

For the Africa regional teacher training, again the target number of participants is approximately one hundred. Training will be conducted in partnership with UNESCO's International Institute for Capacity-Building in Africa (IICBA) and the Sub-Saharan Field Office of the Institute for International Education (IIE), both based in Addis Ababa, Ethiopia. In addition to the host government of Ethiopia, participating countries include: Kenya, Tanzania, Ghana, Nigeria, and hopefully Malawi and South Africa.

WHEN we want to do this

This initiative will be launched with two regional one-week master teacher training sessions to take place during the second half of 2016. The training in Addis Ababa, Ethiopia will be held August 29-September 2, 2016. The Central America-based training will take place November 14-18, 2016. The exact number of educators trained will depend on funding availability from donors. Support to teachers for activities beyond these one-week training sessions, including assistance with follow-on implementation in classrooms, will be ongoing throughout the life of the program.

WHO we want to engage as our partners

TeachHer launched with an impressive group of partners outlined below. Specific roles and responsibilities will be more clearly defined following final negotiations with the partners and agreement of an MOU to govern the partnership. As an initial step, the Department of State is currently finalizing an MOU with the lead implementing partner, IIE, to operationalize the partnership:

Lead Convening Partner

The Department of State – through USUNESCO – will primarily play the role of convening partner, bringing all partners together to execute a joint vision. The Department of State will provide input to the project's overall direction and implementation, including: concept development; identification and coordination of potential partners; contributing to identification

of expert providers of teacher training curriculum and activities; contributing to development of post-training follow-on activities; and assistance with identifying women mentors to partner with teachers at schools in their communities. Linkages to USG exchange program alumni, such as those from the Department of State's TechWomen program, would be one way to facilitate such mentoring activities. USUNESCO will actively seek private partners to support and fund the partnership, from the list of vetted donors and partners approved by the Under Secretary for Management. USUNESCO will also seek to engage high-profile U.S.-based individuals to raise the visibility of this initiative and overall awareness of the need to address the STEAM gender gap as a means to promote sustainable development.

Advisory, Monitoring, and Evaluation Partners

UNESCO will support the initiative by providing technical advice and support on teacher training organization and curricula, in particular on: possible additional partner institutions; selection of participants and trainers; and the formulation of curricula. UNESCO's extensive networks, such as the [UNITWIN/UNESCO Chairs Program](#), the [UNESCO Associated Schools Project Network \(ASPNet\)](#), and [UNESCO National Commissions](#) in Member States will be valuable resources in pulling together a sustainable network of program participants. UNESCO will also provide advice and support on mechanisms to ensure the sustainability of outcomes of the teacher training programs. In addition to technical advice, UNESCO may also support the assessment and promotion of the initiative through documentation (including audio-visual) and the development of case studies on the impact of the training model. Finally, UNESCO would facilitate increased visibility of the program (particularly its model and outcomes) through participation of selected teachers, students, trainers, and partners in a possible future global conference on STEAM education for girls.

[UNESCO's International Institute for Capacity Building in Africa \(IICBA\)](#), one of UNESCO's seven global education institutes and centers, will provide technical advice and support to proposed STEAM teacher training in Africa, leveraging their extensive experience with teacher training activities in Africa and their strong relationship with the African Union. IICBA was officially established by the UNESCO General Conference in October 1999. The institute is headquartered in Addis Ababa, Ethiopia. As the only UNESCO Institute in Africa, it is mandated to strengthen the capacities of teacher education institutions of UNESCO's 54 Member States. IICBA expresses UNESCO's commitment in capacity building in Africa. IICBA implements its plans on capacity building mainly through: Technical assistance at the country level and training programs for standard setting. IICBA's missions are:

- To address the educational, technical and professional needs of Africa in teacher development, school leadership and management;
- To bring to African institutions the latest research and development in education globally;
- To enhance the capacity of Africa's teacher education institutions;

- To further the use of technological improvements in teacher development, such as the use of the electronic media in teacher education;
- To mainstream gender equality in teacher development; and
- To enable African education to benefit from work done by our partners by providing a forum for sharing experiences in the above areas.

Lead Implementing Partner

The [Institute of International Education \(IIE\)](#) will serve as the lead implementing partner and Secretariat for TeachHer, accepting and managing funds on behalf of the partnership, working with UNESCO and the Department of State to establish the overall strategic vision and direction of the partnership, and managing sub-grantees to execute that vision. An independent not-for-profit founded in 1919, IIE is among the world's largest and most experienced international education and training organizations. IIE manages some of the most well recognized programs in international education, including the Department of State's Fulbright, International Visitor Leadership, TechWomen, and Women in Technology (WETech) programs. Through over two hundred IIE administered programs, over 35,000 participants from more than 185 countries have been able to further their education through academic programs and exchange. IIE has over 700 staff and a network of 19 offices and affiliates around the world led by talented and dedicated international education experts, including in Addis where IICBA is based, and in Mexico City, which could support the Costa Rican training. Each office utilizes strong networks of colleges, universities, and NGOs in the region to implement initiatives driven by key regional needs as well as the goals of sponsors; these offices are central to administering many prestigious global programs. In addition, IIE administers 14 Regional Educational Advising Coordinators who provide training, resources and mentoring to support the U.S. Department of State's network of EducationUSA advisers around the world.

Technology Training and Information and Communications Technology (ICT) Entrepreneurship Partner

 , through its [partnership with UNESCO's YouthMobile program](#), will provide input to curriculum development for STEAM teacher training, particularly in its core areas of mobile applications design, leadership, and entrepreneurship training. With its extensive experience and proven curriculum that has helped expand participation of girls in computer science, Technovation can offer teachers best practice models for teaching technology in a fun and engaging way, including through its new Master Coach training program. In the all-important follow-up to the teacher trainings, Technovation will support master teachers in the TeachHer initiative across 13 countries by providing them with an initial training in STEAM content and pedagogical strategies; access to cutting edge science, engineering, technology and

entrepreneurship curriculum; ongoing year-round support as they implement the curriculum with their students; access to a dashboard with student learning analytics as well as advanced training to teach other teachers in their region. Technovation's online training platform includes: video-based training modules for any adult (teacher, mentor and even parents) to support girls to develop mobile apps solving local problems; videos featuring women engineers and Technovation alumnae from around the world talking about how they solve problems and innovate; and progress tracking, digital credentialing and portfolio features in the curriculum platform that provide information to partners regarding where and when teams struggle during the curriculum. Technovation will also connect each region with trained mentors (in-person and virtual) who will provide content knowledge to the students and teachers as they go through the curriculum. Mentors in each region will also have the opportunity to go through rigorous professional development training and earn Continuing Education Units awarded by the University of Southern California for mentoring a team of students. Finally, Technovation plans to organize regional pitch competitions for participating students and mentors, culminating in a TeachHer Technovation Summit competition at UNESCO Headquarters in Paris for winners of regional pitch competitions.

Technovation, a program of Iridescent, is a 501c3 non-profit that helps scientists, engineers and technology professionals share their passion with children from underrepresented groups. Technovation's mission is to inspire and educate girls and women to solve real-world problems through technology. Students work in teams to develop mobile app "startups" to solve real problems in their communities. Technovation Coaches (teachers, parents, or community members) and Mentors (women professionals in technology or business) lead the teams as they compete for a part of \$20,000 in awards through Technovation's annual Technovation Challenge competition. Technovation began as a small pilot program in 2010 with 45 girls. Over the past five years, it has transformed from an in-person program taught by Technovation staff to a global competition reaching thousands of girls. To date, over 3,000 girls from 28 countries have developed 650 mobile phone apps and learned to launch startup companies through Technovation.

Follow-up Mentoring Partner

We also plan to leverage past and current participants in ECA's [TechWomen](#) program as a source of mentors for teachers to engage in supplemental activities for the girls in their classes. TechWomen is an ECA-led and IIE-administered initiative that empowers, connects, and supports the next generation of women leaders in science, technology, engineering, and mathematics (STEM) from Africa, Central Asia, and the Middle East by providing them the access and opportunity needed to advance their careers, pursue their dreams, and inspire women and girls in their communities. Through mentorship and exchange, TechWomen strengthens participants' professional capacity, increases mutual understanding between key networks of

professionals, and expands girls’ interest in STEM careers by exposing them to female role models.

Other Committed Partners and Donors

In addition to cash donations from a number of individual philanthropists, the following organizations have pledged both financial and in-kind support to TeachHer. Their precise roles in the partnership are currently being developed.



We are in the process of reaching out to additional partners and donors and will include them in TeachHer once commitments have been finalized.

Fundraising

The TeachHer partnership is currently seeking to raise \$2 million to support Phase 1 activities, which include: identification of existing and development of new open educational resources in STEAM; pilot STEAM master teacher training sessions in both Africa and Central America; preliminary follow-on activities with pilot schools in both regions to integrate gender-sensitive STEAM teaching best practices into formal curricula; and initial follow-on activities to engage adolescent girls at pilot schools in both regions to engage in mentoring and extracurricular activities.

A rough breakdown of estimated budgets for specific program elements in Phase 1 – which includes the launch, trainings, and preliminary follow-on activities – is as follows:

- \$232,000 for project start-up, localization, and curriculum development (which includes both the curriculum used to train teachers, as well as the development of the “STEAM-in-a-Box” resources for teachers to use in their own classrooms after the training);
- \$336,000 for pre-training logistics (outreach, application process, selection, basic monitoring framework);
- \$1,032,000 for overall management and delivery of pilot regional teacher trainings in both Ethiopia and Costa Rica for approximately 200 educators each (i.e. 100 educators in each region); and
- \$400,000 for initial phase of extracurricular training and mentoring activities with participating, facilitated by Technovation’s network of coaches and mentors.

With roughly \$3 million in additional funding, we can expand follow-on activities through the development of more robust TeachHer AfterSchool programs, which will provide ongoing opportunities for adolescent girls to engage in hands-on learning activities, as well as receive mentoring and exposure to career opportunities utilizing STEAM backgrounds. Example activities include:

- \$500,000 to further expand Technovation's training and mentoring activities, including the facilitation of regional pitch competitions leading to a UNESCO-TeachHer Pitch Summit;
- \$500,000 to work with WeShare Solar to train teachers in how to use their solar suitcase kits in the classroom to engage students in real-world engineering design activities by building a solar panel kit, which is then deployed to bring light to schools, orphanages, clinics, and other places in need in the developing world;
- \$500,000 to produce video profiles of leading women in STEAM careers as an inspiration tool in classrooms;
- \$500,000 to start a small grants program to support parents and educators from participating schools in testing out new and innovative ideas for engaging and sustaining girls' interest in STEAM;
- \$500,000 to help expand TeachHer MasterClass training and TeachHer AfterSchool programming to additional schools in participating countries; and
- \$500,000 to help provide necessary internet connectivity and ICT resources to rural schools that lack these resources and are thus limited in their ability to provide more technology-oriented training to girls.

Private donations will be provided to the Institute of International Education (IIE), a 501(c)(3) entity and the lead global implementing partner in the TeachHer partnership. IIE will provide financial management for the project and distribute funding to partners for their services and contributions, as appropriate and in accordance with delivery of the work stream objectives. In accordance with U.S. law, no U.S. government funds will go directly to UNESCO.