CONCEPT NOTE

UNESCO International Symposium and Policy Forum

Cracking the Code: Girls' Education in STEM

28-30 August 2017
Bangkok, Thailand

Background

More female students are in school today than ever before but they do not always have equal opportunities to complete and benefit from an education of their choice. Numerous overlapping factors affect girls' access to, achievement in, and completion of education. One area of longstanding concern is the low rate of female participation in science, technology, engineering and mathematics (STEM) studies and consequently STEM careers.

STEM are catalytic for the attainment of the 2030 Agenda for Sustainable Development. They are important drivers for innovation, proposing new approaches and solutions to tackle existing and emerging challenges to sustainable development, inclusive growth and social wellbeing. STEM careers are considered as 'the job' of the future; the European Parliament forecasts around 7 million new STEM jobs by 2025 in Europe alone. To achieve STEM's potential, both boys and girls, men and women need equal access to STEM education and careers.

To ensure inclusive growth and sustainable development for all, girls and women must be provided with equal opportunities to participate in and benefit from STEM. UNESCO is giving special attention to this issue as part of its overall efforts to promote the empowerment of women and girls through education and as a response to UNESCO Member States' decision on UNESCO's role in encouraging girls and women to be leaders in science, technology, engineering, art/design and mathematics. UNESCO is also developing a report in order to map the current status of girls' education in STEM education and identify the underlying factors that systematically keep girls out of these areas of study, with the aim of facilitating policy dialogue and making evidence-based policy recommendations.

Education 2030

Purpose

The overall purpose of the International Symposium and Policy Forum is to make the case for strengthening girls' education in STEM subjects, and ultimately female representation in STEM careers and decision-making. The event will provide a platform to present latest findings from research and practice and facilitate policy dialogue, experience sharing and collaboration among participants.

Expected outcomes

- Increased knowledge on the status of girls' education in STEM worldwide
- Enhanced awareness of policies and practices that are effective in supporting girls' and women's education in STEM
- Strengthened platform for global, regional and country networks, partnerships and cooperation on STEM education for girls and women

Duration and Format

The International Symposium and Policy Forum will be organized over three days. It will be a platform for debate, hands-on learning and innovation and will consist of interactive plenary and concurrent sessions, knowledge-sharing workshops and exhibition sessions.

The Symposium will present research findings from the forthcoming UNESCO report on the status of girls' education in STEM, the underlying factors that hinder their participation and highlight solutions from policy and practice. It will feature:

- plenary sessions, combining high-level and panel discussions, town hall formats, and other technology-based activities to engage participants;
- concurrent sessions, including: a) panel discussions to share research findings, school practices, and lessons learned, and b) workshops for hands-on learning activities, simulations and other opportunities for skills-transfer;
- exhibition booths, providing the opportunity for partners to present their products and approaches, allowing for hands-on demonstrations and interactions with participants.

The Policy Forum will be organized on the first day with the participation of Ministers of Education and other high-level representatives to examine how governments are prioritizing and promoting STEM education for girls, and how to address challenges through collaboration.

1. Technology will be integrated in all sessions through the use of mobile apps, web interfaces, and live streaming.

Participants

Between 200-250 delegates will participate in the event including: Ministry of education and other government officials; education practitioners and educators; researchers and experts; bilateral, multilateral and other development partners; representatives of intergovernmental and non-governmental organizations; and private sector representatives.

Participation will be by invitation only. Interested participants are invited to complete online the **expression of interest to participate** at their earliest convenience and no later than **17 July 2017**, midnight, Paris time. Selection will be based on: participant profile, gender and geographical representation, to ensure a balanced audience.

Programme

The programme of the International Symposium and Policy Forum will be based on the overarching theme of girls' education in STEM, with four sub-themes/tracks:

1. Building the foundations: Gender-responsive quality STEM education
2. Changing the equation: Addressing stereotypes and bias hindering girls' participation
3. Gravitating into the field: Reaching out, engaging and empowering girls and women
4. Wiring the network: Partnerships, cross-sector learning and cooperation

The programme will be developed through an abstract-driven process. Interested participants are also invited to submit a proposal to make a **presentation**, organize a **workshop** or reserve an **exhibition booth**. These proposals must be received by **Monday 19 June 2017**, midnight, Paris at the latest. Selected participants will be informed no later than 1 July 2017.

There is no registration fee for participation; however participants are encouraged to self-finance their participation. Financial assistance will be restricted to a limited number of participants, particularly from developing countries.

Working languages

The working languages of the event will be English and French; supporting documents and interpretation for all plenary sessions will be provided in both languages. Interpretation will also be provided for at least one of the four concurrent sessions that will be organized every day. The conference could accommodate other languages in separate concurrent sessions if there is sufficient demand and funds available.

Organizers, partners and supporters

The International Symposium and Policy Forum is organized by UNESCO, with financial support from CJ Group through the UNESCO Malala Fund for Girls' Right to Education. Support is also provided by the Government of Japan, All Nippon Airways (ANA), HNA Group and Hainan Cihang Foundation.

Other interested partners, including Member States, development partners, the private sector or others can contribute to the conference by: providing financial support to the core conference costs; organising and delivering concurrent sessions; showcasing their products, interventions and materials in the exhibition area; and/or providing the use of technological platforms and products (e.g. mobile apps and web platforms) for use during the conference.

Contact information
Justine Sass
Chief, Section of Education for Inclusion and Gender Equality
Division for Inclusion, Peace and Sustainable Development
Education Sector
UNESCO, 7 place Fontenoy, F-75352 Paris 07 SP
Email: gender.ed@unesco.org
Tel: +33 (0) 1 45 68 10 20

Annex 1:

TRACKS and Thematic Areas

TRACK 1: Building the foundations: Gender-responsive quality STEM education

- What are effective policies to increase access to STEM education for women and girls?
- What teaching strategies and learning environments foster girls' participation, achievement and retention in STEM studies? What programmes and initiatives have been proven to be effective or are promising?
- How can ICT-based technologies or approaches be used to reach more girls, build digital literacy and address the gender digital divide? What are practical solutions in low-resource settings?
- How do assessment procedures and tools influence girls' performance in STEM, and what are the implications for monitoring learning outcomes, competences, and achievement?

TRACK 2: Changing the equation: Addressing stereotypes and bias hindering girls' participation

- How do gender roles and expectations impact on girls' participation and achievement in STEM education?
- How do parents and other family members influence girls' aspirations, their sense of competence, and their interest in STEM fields and how can they be engaged to support girls to succeed?
- What gender stereotypes exist in STEM educational resources (e.g. books, school textbooks, online resources) and what are successful examples of efforts to remove gender bias in learning materials?
- How does gender interact with other social identities (e.g. race, ethnicity) to push girls out of STEM studies and careers, and what efforts are needed to ensure equitable and inclusive STEM education?
- What works to foster strong beliefs among girls about their abilities in STEM education, and address their own implicit bias about their abilities and professional opportunities in life?

TRACK 3: Gravitating into the field: Reaching out, engaging and empowering girls and women

- How can structured extracurricular activities (e.g. school clubs, camps, field trips) be mobilized to strengthen girls' engagement and interest in STEM?
- How are mentors, female role models and champions sparking girls' aspirations for STEM careers, and expanding women's networking opportunities?
- What can teachers, school counsellors, or other administrators to do to foster long-term engagement in STEM studies, and to steer more women into STEM careers?
- What role do peers play in girls' and women's interest, achievement and retention in STEM, and how can they be leveraged to have positive outcomes?
- What strategies work to address the gender confidence gap in STEM affecting so many female students?

TRACK 4: Wiring the network: Partnerships, cross-sector learning and cooperation

- What effective partnerships exist (cross-sectoral, public-private, parent-schools, counselors-students, industry-government, South-South) and how can they be replicated?
- How can schools cooperate with the surrounding communities, enterprises, universities and others to provide real-world learning opportunities that enable girls to apply their learning in different contexts?