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I am pleased to be with this great gathering, which cares about talented students, to present the precollege education initiative for the Arab Science and Technology Foundation (ASTF). ASTF is the independent, nongovernmental, nonprofit organization that encourages and supports excellence and innovation, scientific research, and technology education in the Arab world. The ASTF was established 10 years ago by 425 scientists and engineers. It is now the broadest pan-Arab organization that deals with science and technology, connecting about 15,000 individuals and 400 entities.

ASTF organizes about 140 events each year, with programs in 18 Arab countries. It also organizes 11 regional competitions involving more than 50 local competitions to identify excellence and talented individuals. ASTF has outreach in the Arab region, virtually through seven networks and physically by six officers.

ASTF Activities

Three main conferences are the Congress on Scientific Research Outlook, Investing in Technology Forums, and Empowering Women in Science and Technology. ASTF also manages local and regional grants and awards, such as the Abdul Latif Jameel (ALJ) Grant for Scientific Research and Innovation and the L'Oréal UNESCO for Women and Science Pan-Arab Fellowship.

ASTF manages and watches initiatives for change, such as the Iraq Research and Development Initiative with Sandia Labs and the Civilian Research and Development Foundation (CRDF), Arab women science and technology initiatives, and the precollege science and technology initiative. Because this conference is about precollege students, I will talk about only the precollege education initiative.

The precollege initiative is an original initiative for inspiring, preparing, and supporting the younger generation in the field of science, mathematics, engineering, and innovation. The initiative is a set of programs and competitions. The group's target age is 9 through 17.

The initiative includes programs targeting the components of precollege educational models, which focus on science, engineering, innovation, entrepreneurship, interpersonal skills, and patent skills. Our ongoing programs develop curriculum firsthand, screen prospective teachers, and manage ISEF of Egypt and ISEF of Arabia. Our future programs include designs for a TV show, innovation competition, and twenty-first-century scale workshops.

In developing curricula, ASTF has enabled teachers to enhance their personal skills and has led the scientific research and engineering design in teaching the curricula to students and guiding them in carrying out their own research on projects for science fairs and competitions. Toward that end, we are training about 400 teachers in seven cities in Egypt; about 200 teachers in four cities in Morocco, and about 100 teachers in two cities in Tunisia.

ASTF is managing the International Science and Engineering Fairs (ISEFs) in Egypt and all Arab countries. In particular, ASTF organized the competition in Egypt. Today, teachers in Egypt, Morocco, and Tunisia encourage students to join ISEF. Training is done with the support of the Ministries of the Education and to prepare for ISEF Arabia.

ASTF also is managing GE's Edison's Experience program, a new program for teachers and students to live out an exciting innovation experience. The program is in five phases: (1) preparing and localizing a curriculum, (2) training teachers in the curriculum, (3) visiting General Electric facilities, (4) working on a research project, and (5) presenting results. The program will start as a pilot program in Saudi Arabia from the Arab region.

A future project of ours is *Design Squad*, a reality television show in which teens between the ages 15 and 19 design engineering projects and machines in order to win. ASTF has applied to license the show and adapt it for the region.

Characteristics of ASTF's precollege education initiative

- *Competitions.* Competitions are always based on international and standard benchmarks, but are customized to the Arab region experience.
- *Training.* Our competition always includes professional training programs for the participants.
- *Judging.* The finals are presided over by experts and professionals from all over our region and abroad.
- *Government and business support.* Competitions are coordinated with our countries' governments and ministries, as well as multiple mentor organizations and that part of the private sector which deals with science and technology.
- *Award ceremony.* Our competitions always culminate in an honorable award ceremony.
- *Media coverage.* Our competitions are covered by many media, including TV, satellite, and local channels and important newspapers in the Arab countries.