



SRTTU conducts 2nd Energy Education Festival to increase awareness of students and teachers about greening skills

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Introduction

The 2nd Energy Education Festival with the main focus on training for greening skills in subject of energy resources and usage management took place in Shahid Rajaee Teacher Training University, Tehran, Iran on 16 February 2020. Over 700 students together with their teachers in various grades attended this event to learn about new concepts for energy education. The students got the first impression about the topic of greening and the teachers learn about the new methods to teach this subject in classes. The participants would get experiences in several fields with focus on the practical learning experiences based on science, technology, engineering and mathematics (STEM) in energy field especially renewable resources:

- ◆ Get familiar with clean energy; e.g. fuel cell, energy generated from hydrogen and Li-ion battery
- ◆ Practical activities and training in energy consumption management
- ◆ Inquiry based learning experiences in energy education
- ◆ Different games and hobbies related to greening process
- ◆ Art and energy education including painting
- ◆ Media and Energy Education
- ◆ Poetry and literary texts about the best ways of energy saving

The director of festival, Dr. Rasol Abdullah Mirzaie, and head of science faculty gives some details about this event. He mentions that “ According to the most important mission of SRTTU in education, this university focuses on educating students and training teachers with new approaches in education like as STEM and also raise the awareness about renewable sources of energy and their benefits for the today’s world. Therefore this event has a double side effect: First our undergraduate students who will be recruited as teacher in the ministry of education latter will be trained for development and presentation of novel education methods for new topics like greening and second the visitors who are the students and teachers in different graded would gain up to date awareness about the developments.”



About organization of this event, Dr. Mirzaie mentioned: “Development of new education methods are also among main research focuses in SRTTU and our postgraduate students and professors working deeply on this subject. The energy education festival was organized by Fuel Cell Research Laboratory (FCRL) in cooperation with Electrochemical Society of Iran (ECSI) and Iran’s Ministry of Education (MEDU). The organizers tried to show the recent developments in practical STEM based learning experiences in the field of green energy. More than 60 experts took part in 30 station and presented ideas and methods to the participants. The participants who were students and teachers from different grades showed different engagement and enthusiasm to various activities which helped the organizers for further modification.”

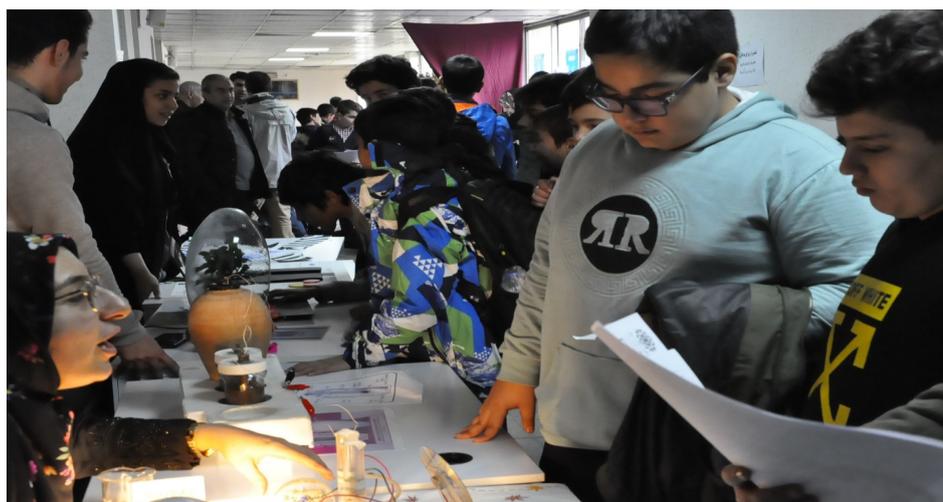
About history and philosophy of this festival, Dr. Mirzaie points out:” This issue can not be denied that the first step of even a small change in social behavior is the process of increasing the awareness of kids and youth. They can give new ideas with their creative and fresh minds. Those children who participate in such a festival can refine families behaviors about the future of nonrenewable energy and environmental impact it can cause. And also teachers have to get a better mentality about how to teach these subject with more practical and attractive methods in classes. The subjects are already included to some extent in the textbooks but the method of teaching need to be developed and oriented based on students interest. Therefore the festival focus not only on complicated methods of educating but also on very simple methods like painting which is very attractive for students in lower ages. In the first festival at 20-21 Feb 2019 we focused mainly on painting. We asked the students to paint about energy, energy usage, energy production and transportation, the advantages of clean and renewable energy, new idea about renewable energy usage and their influence on our environment. This art works were judged by referees and the bests have been awarded. This method was very much attractive for students of primary and middle schools and we got very good engagement. Then after we could show the



Interviews

Faezeh KouhiMoghaddam, 26 from Tehran, a physical chemistry student at fuel cell research laboratory in SRTTU . This year she will be graduated in master's degree. She tried to build a simple modulation of low temperature fuel cell and she presented it in the festival successfully.

She said: “ Taking apart in such a great festival was a pleasant experience that I have ever had. It was a great challenge for my colleagues and I. SRTTU gave this opportunity to us to interact with kids and teach them the basic and complicated concepts by some simple activities.”



Ms. Shaghayegh Hashemi (B.A chemistry student), Ms. Zahra Khalilnejad (B.A chemistry student), Mr. Soheil Damghanian (B.A chemistry student) was a group of three undergraduate students who trained children by different games for a better use of energy and greening process. They are studying in Shahid Rajaee Teacher Training University and they will become chemistry teachers in near future. They are really delighted about participating in the festival so they can achieve precious experience for the future job.

Ms Hashemi said: In today's world, modern education needs new education methods. We make endeavors to aware visitors and specifically children about energy saving ways by diverse interesting games. We designed a puzzle of greening process concept that children can do it in groups and they can get familiar with different source of energy.

Marzieh Ali Kazemi is a 28 student in chemistry master degree and educated in M.S that presented her own Ashkani battery in the festival. Ashkani battery or Parthian cell is the oldest cell has found in the world. This invention is considered to date 150 BC of Parthian empires of Persia.

She said: Students and kids who visit festival like this can inspire from a simple models for building complicated tools. I did my best to describe the different parts of this battery as easy as possible for kids. They really were interested in to know how did the battery works.



Masoumeh Asgari was one of the festival visitors. She is a elementary school teacher in Iran. She is educated in education management master degree and she has taught for 27 years.

She said: In according to indiscriminate consumption in energy around the world we should try more to train and prepare children for a better use of energy. My students effectively be aware of clean energy and their production process and also they learn how to use them. In addition, government can participate more with elementary teachers for developing this project as a vital issue for next generations.



Researchers ,teachers , students and those who might be interested to help us for a more affective festival for next year can contact us by:

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