

**International Field Work B**

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## **Science and Technology Leadership Association (STeLA) Beijing Forum 2010**

### **Background about STeLA**

Science and Technology Association Leadership Association (STeLA) is an organization founded with the objective of developing leadership and create a network of the next generation in science and technology. The organization is being launched by graduate students studying science and engineering through MIT-Japan Program with the desire to answer the question, "How can science and engineering students change the global community." The founders recognized the importance of multicultural and interdisciplinary perspectives in addressing contemporary global issues, and became motivated to establish a network where the young generation can exchange ideas on where we can lead the global society and how we individual can contribute to the needs of society's leadership.

Every year STeLA held a forum in order to deliver the mission into real action. The forum is attended by participants from STeLA country members. The members of STeLA came from 4 different countries: United States, Japan, China and France. Until 2010, the forums have been held 4 times: 1<sup>st</sup> forum in Tokyo (2007), 2<sup>nd</sup> forum in Boston (2008), 3<sup>rd</sup> forum in Tokyo (2009), 4<sup>th</sup> forum in Beijing (2010).

### **Application Processes**

To become a participant of STeLA forum, there are several processes required. Graduate and undergraduate students in science and engineering from STeLA country members (USA, Japan, France and China) can apply through web.mit.edu website. Applicants are required to fill application form and curriculum vitae. Moreover, applicants are required to submit short essays regarding these following questions: (1) Choose one current global issue in which science & technology play a role and discuss how you think leaders from the scientific community should effectively address the issue?; (2) How do you envision STeLA 2010 will enhance your career in the future? The applicants who successfully pass the essays screening process are required to attend a group interview. For 2010 Beijing forum, all processes were done in June 2010.

## STeLA Beijing Forum 2010

General theme of STeLA 2010 forum is Technology Transfer. The forum was held for 7 days, from August 15<sup>th</sup> – 23<sup>rd</sup> 2010. The content of the forum was divided into 3 main parts: (1) leadership curriculum, (2) thematic session, (3) group project

### *Leadership Curriculum (August 16<sup>th</sup>)*

The guiding principle for the leadership education is the distributed leadership model developed at the MIT Sloan School of Management. Various cases, games, and exercises are modeled after education materials developed at MIT, such as Distributed Leadership, 4 Player Model, and Visioning.

- The idea of distributed leadership is to identify 4 essential capabilities of a leader which are **sense making** (understanding the environment and the problem), **relating** (connecting with people and resources), **visioning** (plan out the future and the necessary action steps), **inventing** (putting the plan into action). The importance of this model is to know when you have these capabilities and when you do not. No single person can perform all of these completely and therefore distributes the leadership among other organizers are the most efficient ways.  
Activity related: Beer-distribution game, Straw-tower game
- The 4 player model analyzes a format of group structure for effective leadership. The 4 roles of the group are **the mover** (establishing direction), **the follower** (completing the mover), **the opposer** (questioning and correcting the direction), and **the bystander** (feeding alternate perspectives). These four roles are dynamic through each individual and an organization may see these roles changing from person to person.  
Activity related: Paper-plane catch game
- Visioning is the ability to plan out and 'see' one's future. This ability is important in a leader. A vision of one organization is the goal that a leader and the rest of the organization will aspire to achieve. Activity related: Drawing vision in A3 paper and show it to the other participants

### *Thematic Sessions (August 17<sup>th</sup> – 18<sup>th</sup>)*

The thematic session is designed to provide real-world examples of scientific and technological global issues. It is related with the general theme of the forum which is about technology transfer. There are 2 sub-themes: (1) Technology transfer in agriculture. (2) Technology transfer in energy. The thematic session consists of scientific and technical knowledge (background reading, seminars, and lectures), site visits, and group discussions

- **Technology transfer in agriculture**

As a main material, case of Green Revolution in India is presented at the forum. Green revolution in India has occurred from 1940s to 1960s by transferring leading technology in agriculture, and it was said as a big success. In this session, participants are required to make a correlation map of stakeholders to analyze their relationship. After that, the discussions were conducted to talk about which roles the leaders in science and technology should take.

- **Technology transfer in energy**

An introductory presentation about clean coal technology in China was presented. The participants are required to do a role play to simulate technology transfer negotiation between developed country and developing countries. This role play allowed participants to understand many dilemmas faced by various parties in clean coal technology transfer negotiation, as well as allow participants to apply leadership skills that learnt on the first day.

### ***Group Project (August 19<sup>th</sup> – 22<sup>nd</sup>)***

Participants were divided into small groups and were given a task of building a device to focus and collect energy from the sun while simulating an international technology transfer situation. The tasks are divided into 2: (1) Making a solar collector. Every group gets the same amount of reflective materials and one unit of solar panel to achieve the highest efficiency of solar collector, (2) Design an application of solar panel in daily lives. The group project culminates in the final presentation, in which groups will present the devices that they built to a panel of judges and give a short presentation on what they learned from the activity (August 22<sup>nd</sup>).

In this project every group explore the creativity and also leadership skills to achieve the goal. In the end of every day, participants spend about half an hour every day to reflect on their roles within the team and to actively apply their leadership learning to practice. To make a connection with the thematic sessions preceding the group project, participants attempted to describe what they learned and the inspirations they obtained from the thematic sessions with their machines.

### **Lesson learned from the forum**

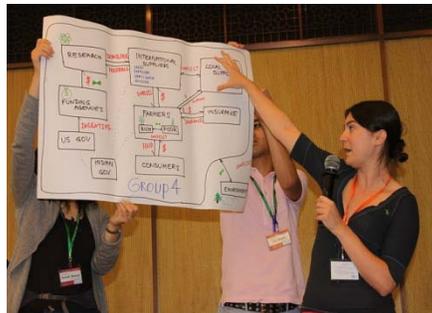
From the forum, I learned many new things. I am able to reach a new level of understanding about the importance of leadership skills of science and engineering students. I also learned about the importance of international network since we are the part of global community. STeLA 2010 brings new horizon to my perspectives, ideas and therefore I enjoyed the forum very much.

## Pictures

### Leadership Session



### Thematic Session: Correlation Map



### Thematic Session: Role play simulation



### Group Project

