

SciREX Summer Camp 2018

STI and Society in 2030 3-Day Challenge for Policymaking

The SciREX Summer Camp 2018 took place at the National Graduate Institute for Policy Studies (GRIPS) for 3 days from August 28-30, 2018. Commencing in 2012, this annual event was the 7th of its kind to have discussions under the theme of “Science, Technology, and Innovation (STI) and Society in 2030.”

Until the 6th, the event normally allowed students’ participation from the SciREX core universities (GRIPS, the University of Tokyo, Hitotsubashi University, Kyoto University, Osaka University and Kyushu University), but the 7th for the first time allowed the participation of students from non-SciREX core universities. The 2018 version was a success by being joined by a record 157 members, including 56 students, 54 faculty members, 16 government officials, and 31 others including speakers from other organizations.

Tuesday, August 28, 2018

Lectures:

Prof. Tateo Arimoto, SciREX Deputy Director, welcomed the students. He started his opening remarks by pointing out the problems surrounding the S&T policies in that scientific methodology and values have been changing so rapidly that the relationship between science and society, or science and policy are not working well. He said that it is critical to find the methodology and system that solve these issues and also important is to train young people to work out on them. Mr. Keita Nakazawa from the Ministry of Education, S&T talked about what SciREX program is. These talks ensured the students that they were going to experience “evidence-based policymaking.” (Photo 1)

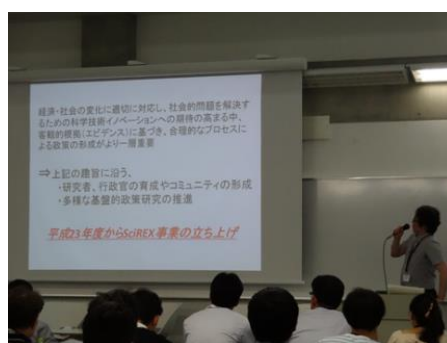


Photo 1 left: Prof. Tateo Arimoto talks about Evidence-based policymaking.

Photo 1 right: Mr. Keita Nakazawa talks about what SciREX program is.

The above talks were followed by a panel discussion on “auto driving,” focusing on how S&T policies are applied to this technology (photo 2).



Photo 2: Prof. Yasuhiro Akagi, Nagoya University's Institute of Innovation for Future Society; Ms. Yuka Nakagawa, Lawyer, Nakagawa Law Office; Mr. Katsuya Abe, ITS Promotion Office, Ministry of Land, Infrastructure and Transport's Traffic Management Division; Prof. Takayuki Morikawa, Nagoya University's Institute of Innovation for Future Society discuss about "auto driving" with Prof. Tateo Arioto, SciREX Deputy Director, the commentator

Discussions in 9 groups:

The students began discussions in 9 groups under the **9 sub-themes of the event** as follows:



① 5-year Basic S&T Plan
Goal: to try to draft 6th 5-year Basic S& Plan (2021-2025)



② University
Goal: to predict the universities as of 2030 (Image and demand)



③ Energy
Goal: Energy mix as of 2030



④ Space
Goal: Space policy after 2025
Received Bureaucrat Prize



⑤ Medicine
Goal: to come up with evidence-based sustainable medical policy



⑥ ELSI
Goal: to discuss ethical, legal, and social issues; Received Best Presentation Prize and Faculty Prize



⑦ Safety of Children

Goal: what S&T can do to terminate child abuse



⑧ SDG

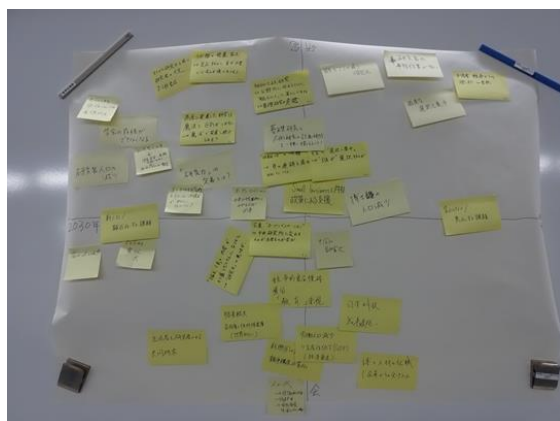
Goal: how STI can contribute to SDG
Received Student Prize



⑨ Data

Goal: Data-driven strategic policies
Received Faculty Prize

The “**Safety of Children**” group listened to Mr. Kudo of the Ministry of Education who talked about “the current status and countermeasures for child abuse” and also Dr. Yuko Shiraishi of RIKEN’s Brain Science Institute (BSI) who talked about “child care and brain.” The “**Energy**” group played an energy-source selection game. Each student had a role of government, environmental NPO, consumption body, manufacturing association, and each insisted which energy source should be selected. As it is not possible to establish a power plant without consensus within the group, each student was convinced of the difficulties of selecting one power source. The “**S&T Basic Plan**” group consisted of 10 members, 6 students (3 Japanese national and 3 non-Japanese), 1 facilitator, 2 supporting members, and 1 incumbent administrative advisor. The expertise of the students was in variety from public policy and management to



chemistry and biology. Each wrote the most critical issues s/he thinks in the current S&T policies on a piece of paper and laid them on a graph with horizontal line of years and society and basic research on the vertical line (Photo 3). They also made a list of “which would remain as challenges 10 years later?” “What are the new challenges 10 years later?” and “what kind of data and evidence are used now?” all of which they decided to ask at the Cabinet Office where they would visit on the following day.

Photo 3: S&T Basic Plan group: Each posted “the challenges in the S&T policies in Japan” to make a graph with the vertical line of society and basic research and horizontal of years. The pieces of paper includes: crisis of basic research, decreasing number of working population, widening gap in society, crisis of academic societies.

Wednesday, August 29

To show an example of the group activities, the S&T Basic Plan group activities follow:

Site Visit to the Cabinet Office where the STI Basic Plans are designed

The “STI Basic Plan” is the Japanese 5-year STI policies that commenced in 1996. The current 50-paged 5th Plan describes the STI policies for Japan to pursue from 2015-2020. The goal of the “STI Basic Plan” group was to lay evidences to design the 8th Plan that will begin in 10 years (2030-2035).

The group visited Prof. Hitoraka Ueyama, a full-time member of the Council of Science, Technology and Innovation at the Cabinet Office (Photo 4). Prof. Ueyama said that the STI Plan was designed to meet the pressures from foreign countries,

including the United States, to make more efforts to prioritize basic research, but the focus has changed since then to place importance on creating innovation. He also said that the discussions on the 6th Plan had just begun and no discussions had ever been made for the 8th Plan. The students were shocked to hear that no discussions have started for a decade-later plan, and at the same time were assured of the big challenge they were facing.

Prof. Ueyama pointed that Japanese companies would further be globalized after 2020 just like the big companies have already done so. His words made the students have a much broader view when thinking of Japan in 10 years.

Photo 4: The “Basic STI Plan” group students with Prof. Hirotaka Ueyama at the cabinet Office



Discussions with Dr. Mitsuru Kishimoto of RIKEN

After returning to GRIPS, the group listened to the lecture by Dr. Mitsuru Kishimoto, RIKEN, on “RIKEN’s History and Future” and “the role of RIKEN’s Strategy Office” (Photos 5). RIKEN was launched in 1917 to contribute to the development of Japanese industries. RIKEN then changed its organizational status flexibly to meet the era and it is now a corporation. Such flexibility is an important factor for the S&T Basic Plan group to face in coming up with the 6th plan. In 1986 RIKEN’s organization and human resources were advised to be more inflexible, which made them establish an international frontier research system and enabled them to accept human resources from outside and establish 7 divisions for visiting researchers. This was innovative in those days. RIKEN has thus been flexibly getting along with the era, but Dr. Kishimoto said that RIKEN’s role is now changing, as Japan is shifting its priority from basic research to theme-oriented research.



Photos 5: Discussions with Dr. Mitsuru Kishimoto, RIKEN

To cope with this change, RIKEN launched a “Future Strategy Office” to design a society in a century, besides the mid-term research plan they had been carrying. The Office nurtures “experts who have dreams” with a bird’s-eye view of the world. They are expected to match the “future societal issues” and “future technologies” and come up with “future societal vision.” They first set up “the image they would like to be,” discuss how to reach it, and write a scenario to realize it. The group was impressed to hear that it is an image as long as 100 years later. As it should be based on “becoming happy with S&T,” the scenario should not be unrealistic. Thus, Dr. Kishimoto said that the RIKEN researchers recognize the value and importance of their research and the managers support the scenario.

Then, the students asked Dr. Kishimoto to go through the S&T policy items they drafted on pieces of papers the previous day, and asked for his advice. He pointed out that the students should think about scenarios on what will be going on in 10 years, or what they would like to do in 10 years, and then what evidence is needed. It was not easy to imagine what will be going on a decade later; and also it was not easy to wrap up each member's "what s/he would like to do in 10 years." Thus, the six members were stuck and had no idea as to how to proceed.

Under the above circumstances, the group went into the interim report presentation. Based on the themes the members wrote on the pieces of paper at the beginning (Photo 3), the group added the points they gained through hearings, and then used Dr. Jiro Kawakita's KJ method. The group presented that they would deepen the discussions among the members based on the data obtained through these three stages and show the result at the final presentation the following date.

The comments from the faculty members in the audience included "you say 'evidence,' but what do you mean by 'evidence?'," "how about making a scenario toward 2030?," "how about making a critical thinking like whether the 'assumption is correct?'," and "how about being more bold as the theme is so big?" As they were aware that there would not be enough time to make a scenario toward 2030 and find the evidence in realizing the goal, they all agreed to try to make as much as lively discussions as possible among them and would see what they can report at the final presentation.



Photos 6 : Interim report presentations (from left to right): Data, University, Medicine, Energy groups

Thursday, August 30, 2018

Each group started the last-minute discussions at 09:00. Even the "S&T Basic Plan" group members who on the previous day had no idea on how to wrap up their opinions had finished their discussions by midnight, and was talking about how they would present their discussion result.

At 13:00 the "Basic S&T Plan" group made the final presentation (photo 7). They reported that their discussion points could be summarized as "Globalization," "the Relationship between University, Industry and Citizen," and "Definition of Research" based on their opinions and hearings. Also, they came up with two scenarios: one with fast development of globalization and another with moderate development of globalization. The former scenario included how to deal with the students from abroad and how to design English language education at Japanese schools. The latter included how to train young Japanese researchers in the era of declining birth rate and increasing number of elderly people, and how to set up the countermeasures for Japan not to be left behind the world. The fact that there are two scenarios or two policies implies that it is possible to establish a wrong policy depending on how we read the globalization speed.

The group's presentation concluded by raising a question to the audience: while the scenario is discussed based on a prerequisite that "the research ability should keep its level as it is," would the research ability as of today be as important in 2030 as it is now, or a new definition of research be required in 2030?

Prof. Takayuki Hayashi, facilitator of the "S&T Basic Plan" group, commented that he could see the group was discussing this way and that for the past three days, but tried not to intervene the discussions. He said that they made an excellent presentation. The S&T Basic Plan is tremendously important policy that it is not easy to grasp what the issues are, which ones are most important and what are the relationships between the issues. In such a short period of time and with people of such diverse backgrounds, it must have been very difficult to make discussions. However, this is actually what is happening at the Cabinet Office. He commended the good work of all the members of the group.

The members of the group said: "It was hard to wrap up the discussions, after talking with people with a variety of background on a fixed theme," "Having science background, I do not have an opportunity to think about policies. This was a valuable experience," and "I learned that what I believe right could not be interpreted as right in a different field. I do not want to compromise, but was able to broaden my view." Also, a student from a non-SciREX core university said that s/he majors in science communication, but had hard time for the past three days. The good thing was that s/he could find some who have similar opinions with him/her and establish a network.

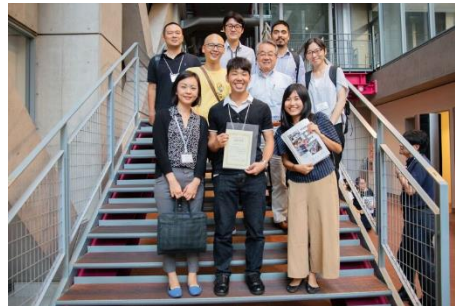


Photos 7: Final presentations

The BEST PRIZE was given to the University group that challenged the image of Japanese universities and demand for universities as of 2030 (Photo 8). They predicted that the number of 18-years old will decrease in 2030; higher skills are required for human beings because of the development of technologies like AI; and what are required for universities under such circumstances. They concluded that universities should have a flexible system that accepts foreign students and workers, and be a place that provide professional skills.

To be noted is that the group was very proactive in coming up with evidences by actually making a survey to the students attending the summer camp to know what the students from abroad and workers are expecting for universities, in

addition to using the already-available data like the simulation of the numbers of 18-year olds in the future and the number of universities. The members said, “Having three students from abroad made us to discuss the issue more broadly,” “We were told to discuss based on evidence, but did not know where to find the evidence,” “The diversity of the opinions among the members made it difficult to wrap up, but it turned out to work well to have a good conclusion,” and “I learned a lot about Japanese systems.”



Best Prize: University Group

Best Presentation Prize & Faculty Prize
ELSI Group



Bureaucrat Prize: Space Group



Faculty Prize: Data Group



Student Prize: SDG Group

Photos 8: Prizes

Overall, the students learned the difficulties in making policies and had a valuable experience of broadening their views through discussions.

Photo 9: All on GRIPS Stairways

