

SciREX Summer Camp-2021

(a provisional translation of the article in the SciREX Quarterly No. 16)

The SciREX Summer Camp, launched in 2012, held its 10th version ONLINE from Friday, September 3 to Sunday, September 5, 2021. The 105 participants were the students and faculty plus staff members from the SciREX core center universities (Graduate Institute for Policy Studies–GRIPS, University of Tokyo, Hitotsubashi



University, Osaka University, Kyoto University, and Kyushu University), government officials (mostly from the Ministry of Education, Culture, Sports, Science and Technology–MEXT), and the SciREX program member organizations.

Innovation System in the Post-pandemic Era

The theme of the 2021 version was “Innovation System after the Pandemic.” How the COVID-19 has changed the society, research and education? What kind of system should be established in the future? These were discussed under the following 9 sub-themes (groups) by the students of different nationalities and backgrounds from the 6 universities.

Nine Groups (sub-themes):

1. Implementation of Sustainable Carbon-free Society through life-style innovation in the post-pandemic era
2. Researchers' Involvement in Policies in Post-pandemic era
3. Space applications in the COVID era (**in English**)
4. Road Mapping for Mission-oriented Innovation Policymaking
5. Countermeasures for Future Infectious Diseases based on the COVID-19 Experience
6. Science, Technology and Innovation Viewed from Data
7. Education in the Post-pandemic Era

8. International Relations and International Communications after Experiencing COVID-19
9. The Wealth of Nations: Pandemics, Industrial Revolutions, and Economic Growth (in English)

Based on their discussions, all the 9 groups made presentations on Day 3 resulting some of them to win the Best Prize, Outstanding Prize, and the Students' award.

Reviewers:

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the Most Important is “Trust”

The first day: Dr. SUMIKURA Koichi, GRIPS professor, made an opening remark at the orientation, wishing the following 3 days to be an opportunity to virtually interact with other participants and “create knowledge.”

It was followed by a remark by Mr. NAKATA Eisuke, Director of the MEXT Science Policy Promotion Office. He talked about why the camp is held and the outline of the SciREX program. He said “As we do not have enough funds to be invested in solving social issues these days, it is expected to make policies by use of effective methods and based on evidences; policymaking can be accomplished not by the government officials’ listening to the researchers, but by co-working with researchers; the important in co-working is ‘trust’ between them.”

Remarks by the directors of the SciREX core centers followed. Dr. NAGATA Akiya, Director of CSTIPS at Kyushu University wished a strong network among the participants be born through the camp, despite many restrictions caused by the pandemic.

Well-being & 6th STI Basic Plan

The orientation was followed by 2 lectures. The first lecturer was Mr. NAKAZAWA Keita, Director of Specialized Education Division, Higher Education Bureau, MEXT. He talked how Japan has promoted Society 5.0 and established the STI Basic Plans.



The goal of making innovation policies has so far meant to make “Economic Growth.” However, due to the longevity, people can enjoy more time in margin; we can easily access to sufficient information these days; and the SDGs have widely been accepted. These factors made us recognize that the important is to care individuals’ well-being rather than just pursuing economic growth.

He then showed the market capitalization ranking and mentioned that those companies that are capable to store and actively use data are dramatically growing; we are in the era of “data creates value”; the 6th S&T Basic Plan includes “safety” and “security” because of the fear of “surveillance society”; and “social disparity” may develop with the progress of digital transformation.

The next lecturer was Dr. KAWATO Mitsuo, Director of ATR’s Brain Information Communication Research Laboratory Group who talked “Overcome mental disorders with brain science: Experience in my startup company.”

The number of mentally disordered in Japan has been increasing. Japan is among the top countries viewed from the number of people suffering from this disease. The treatment method is prototyped and subjective. As it is a field full of problems to be solved, the potential is big. By adopting an objective diagnosis and tailored-made treatment, we could decrease the treatment period, medical costs, and social burden.

The Q&A session included a question of “what Dr. Kawano expects when a student wishes to manage a startup company like the XNet (startup) run by Dr. Kawato. Prof. AOSHIMA Yaichi of Hitotsubashi University replied that one can see only a part of a company if its size is big, but if you experience a venture company while you are a student, you can have the advantage of seeing the whole picture of a company or business.

Technologies not easy to develop into businesses

The second day began with the lectures of “How policymaking should be – An example of quantum technology innovation strategy” by Mr. OKU Atsushi, Director, Personnel Planning Division, Minister’s Secretariat, MEXT.

He talked about how he was involved in establishing quantum technology innovation strategy and the government's 4th science and technology basic plan. He wrapped up the following 6 points in making policies.

1. To collect information as much as possible on domestic and international trends, clear the issues to make new policies, and implement the policies
2. To the request for making policies, to react by speedy discussions across ministries and agencies together with specialists
3. Through data collection and analyses and hearing from specialists, to ensure evidences, and prove and review the hypotheses to solve the issues
4. Based on 3. above, to make systematic policies (make clear the goal, details, evaluation indexes)
5. To implement the policies, secure measures (budget, tax, legal, and organizational factors) and establish the system (ministries and agencies, industries, academia, and politics)
6. Periodical follow-up (to be systemized) and review

Among these, he emphasized that 1. is the most important. He warned that after identifying the issue and just going through 1. to 4. above may end up just a pie in the sky. Establishing a system mentioned in 5. would be a milestone to actually implement the policy.

The Q&A session had such a question that a private company has 90% of its staff overseas, and the staff is distributed worldwide depending on the field; when a company is globalized, it would be important for the government to support Japanese technologies as a national strategy.

Mr. Oku replied to the question by saying that the meaning for a government to establish strategies is to draw a blueprint so that the companies can put their hands on, and to prepare an environment and measures to make the technology develop to businesses. The core technologies for the quantum sensor and quantum computer were originally from Japan. However, the companies could not make it develop into business. This has made MEXT notice the importance of preparing the environment for making the research at a small laboratory to develop into business by presenting a roadmap in the investment plan. As to the business crossing the country borderlines, he said that the government support would be necessary in cooperation with such foreign countries that share the common value with Japan.

When an issue is correctly defined, the problem is almost solved

Dr. ANDO Nika, SciREX Center specialist, who has experienced launching, managing, and evaluating funding programs that aim to solve social issues, talked “Explaining Policies in Logic.”



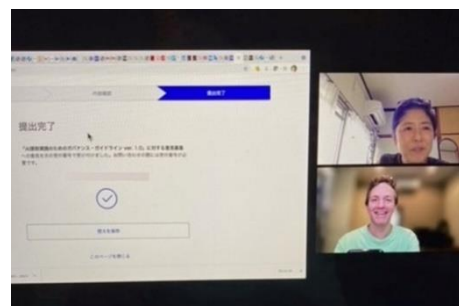
She introduced a logic model as a measure for making a policy. “Think about the ideal and the reality. The gap between them becomes an issue.” She warned that seeing only the current status without thinking about the ideal would end up with just a symptomatic treatment. She encouraged the participants to think whether the proposal can be attained in the already existing system; whether the proposal represents the bottleneck; and why the proposal is most effective among various possible approaches and options.

Presentations and Prizes

The third day was filled with the final presentations. The 9 groups made their presentations that were reviewed by the following criteria.

1. Identification of the issue: appropriateness and uniqueness
2. Policymaking process: good use of evidence, objectivity, discussion process
3. Policy proposal: concreteness, excellence of policy design, feasibility, novelty
4. Presentation: easy to understand, appropriateness in answering questions

First, the participants’ vote made **Group 9** to receive the **Student’s Award**. This group submitted, after the Camp, their output to the Ministry of Economy, Trade and Industry (METI)’s public comment page, and METI accepted it (photo at the right).



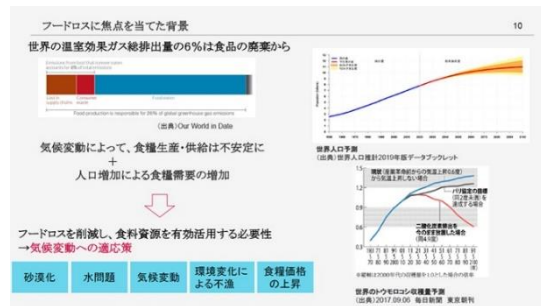
The Group 9’s theme was “the Wealth of Nations: Pandemics, Industrial Revolutions, and (Necessity of AI Governance for) Economic Growth.” They recommended legality of governmental guidelines; understandable AI for stakeholders; clarification of problematic issues and specific terms; definition for positive and negative impacts of AI; measures to mitigate negative impacts of AI; and enhancement of model and process transparency of AI.

Then, the announcement of the **Outstanding Prize** followed. The Prize was planned to be given to two groups, but ended to be awarded to three groups, as it was difficult for the reviewers to select only two out of all the excellent presentations. As a result, **the Outstanding Prize was given to Groups 1, 2, and 7.**

Group 1 focused on “Implementation of Sustainable Carbon-free Society through life-style innovation in the post-pandemic era.”

They proposed the following policies:

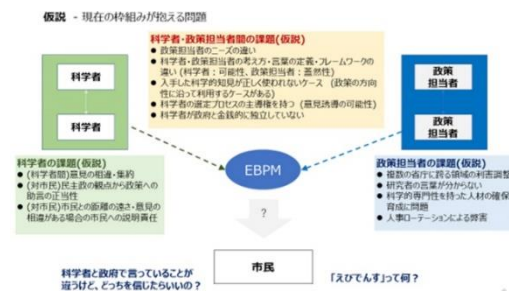
1. Tax to be added when disposing food
2. Preferential treatment for optimum food producers and providers
3. Active use and support for technology development for eliminating food loss.



Group 2 focused on “Researchers' Involvement in Policies in Post-pandemic Era.”

This group presented the insufficiency of such people or organizations that can identify and adjust the difference of views (language and stance to policies) between the actors in policy formation process, and can bridge the academia and administrators.

They proposed securing such median people or organizations.



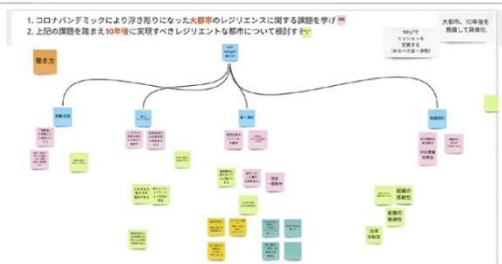
Group 7 focused on “School education in post-pandemic era.” Education field is full of issues, including busier teachers and more diverse needs for schools. To cope with these, the group proposed using outside resources and digitization of the teaching materials so that the teachers can have more time with each student, which encourages the students to enjoy their school.

教員の役割の変化

役割	主体	
	従来	将来
知識の伝達	教員	ICT
学習進捗確認/動機付け等	教員	ICT/教員
人格形成	教員	教員
キャリア教育	教員	教員
	教員	教員

The last announcement was for **the Best Prize**. It was given to **Group 4** whose theme was “Road Mapping for Mission-oriented Innovation Policymaking.”

議論②

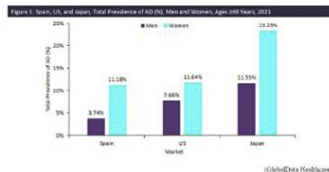


Making clear the group’s mission, they presented “Resilience in big cities as surfaced by the pandemic” and proposed a working style that does not rely on the location and time in 10 years as follows

- Location: 2 million people relocate from Tokyo area to local areas
- Commutation: a society of zero commuting time and no delay in train schedule
- Tool: tools to contribute to the new work style both in scope and content

Besides the above prize winners, **Group 3** focused on the death toll of the dementia individuals in Japan that increased although not by the pandemic. The group proposed the use of space applications to locate early-stage dementia individuals through Michibiki (quasi-zenith satellite system).

Japan has the fastest growing prevalent cases of Alzheimer's



A. ナッジ理論を活用した既存+αの機能

- ・ナッジ理論
…人々の行動を強制ではなく自然な形で誘導
 - ・自宅地点を登録し、Stay Home時間に応じてポイントを付与
=ポジティブなインセンティブを利用
- 利用モチベーションの向上

Group 5 focused on “Countermeasures for Future Infectious Diseases based on the COVID-19 Experience.” Presenting the burden on the local governments and health centers that carry epidemiological investigation, the group proposed (1) strengthening the exam at the airport as a border security measure; and (2) strengthening contact confirming applications to cope with insufficient epidemiological investigation.

Group 6 focused on “Science, Technology and Innovation Viewed from Data.” Each group member had his/her own theme and analyzed the data on the theme. One of the themes was on the “national space exploration plan and research productivity.” It evaluated and analyzed the number of papers and citation per space exploration plan and used the analysis result to make a policy proposal.

結果	研究発表	論文数	引用数	WORDS
宇宙計画立案	127論文	4,420件	19,800	
宇宙計画立案の論文数/引用数/引用数	0.85	0.13	0.86	
競争的資金数/論文数	0.29	0.01	0.11	
出版論文数/引用数	3.12	1.26	2.13	
出版論文数/引用数/出版論文数	0.15	0.72	20.75	

課題

2. 「調査」ができていないこと、
論文の引用数は、「日本」の論文、調査方法の標準
化が低いこと。
- ・標準化ができていないことによる影響：
・日本人にとって、「日本」全体の論文が
高評価になる。
- ・レストランなどで提供される料理の味と品質が異なる。
・しつこいサービス、サービス標準化の低い状態になる。
- ・例：「日本食レストラン調査報告書」

Group 8 focused on “Japanese food for anybody, anytime and anywhere.” They reviewed the traditional Japanese branding strategy and inbound strategy that were based on

interaction of people. Face-to-face interaction is not possible due to the pandemic, but “things and information can move around.” The group proposed spreading the Japanese food culture through standardizing Japanese food and advancing the image of Japanese food.

Finally, the 4 reviewers wrapped up the presentation session, commending all the groups’ excellent work.

Closing

To close the Summer Camp-2021, Dr. SUMIKURA Koichi, GRIPS, and Dr. AOSHIMA Yaichi, Hitotsubashi University, thanked all who participated



in and helped to make the event a success and wished the 3-day camp has brought all of them awareness and would develop a network among them.