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3.2.2 Creating spaces for the research community and citizens to interact

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First Published August 28, 2018 Final Updated April 25, 2019

Abstract

The roles required of researchers have become more diverse. With increasing demand for dialog with society in recent years, various attempts have been made to create spaces for exchange. As a result, universities and research institutes have been developing systems and organizations to support areas that cannot be covered by individual researchers alone. This paper outlines the current state of affairs.

Keywords

Outreach, science communication, dialog and collaboration

1 The role required of researchers

1.1 Diversifying researcher roles

As outlined in “3.1.1 Researchers’ responsibilities and ethical, legal, and social issues” (ELSI), the roles required of researchers are becoming increasingly diverse as the relationship between society and science and technology changes. Rather than closed-off communications within the researcher community, communication with people outside the researcher community is becoming increasingly necessary. In addition to communicating the results of their research to society in an easy-to-understand manner, researchers are also required to learn what ethical, legal, and social issues (ELSI) exist in their fields of

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research and “create together” with society what form science and technology should take within future society.

The concept of “creating together” or working together with society has been incorporated into the Science and Technology Basic Plan since the fourth plan (approved by the Cabinet in August 2011, and implemented in FY2011). The fifth plan (approved by the Cabinet in January 2017, and implemented from FY2017) states that the government will “engage in dialog and collaboration with diverse stakeholders in society,” that is, engage in dialog and collaboration to encourage diverse values, foster trust in the research community, and improve the social literacy of researchers (see “3.2.1 Science communication: An overview of policy development and academic research” for an overview of the evolution of science communication policy in Japan).

1.2 Researchers’ real-world activities

This raises the question of how researchers who are actually involved in dialog with people outside the research community view their own activities. Between June and July 2017, a questionnaire survey was carried out among researchers who had registered their e-mail addresses on a research map operated by JST (of those in full e-mail correspondence with JST: 16,079 e-mail addresses were sent a request for the survey, with a response rate of 18.1%). According to the results, most of the respondents who had practical experience in science communication activities claimed to have conducted the following activities (JST Science Communication Center, 2017): visiting lectures, open lectures, symposiums/seminars (86.6 percent); open-house events at their institutions and open campus initiatives (81.6 percent); publication of books for non-specialists, article submissions, and so on (60.3 percent); and dissemination of information via websites, blogs, and social media (e.g., Facebook and Twitter) (56 percent). Results thus indicated a large number of activities and participating researchers involved in communicating science.

Viewed in light of the original premise (i.e., “dialog and collaboration with diverse stakeholders in society,” as stated in the Fifth Science and Technology Basic Plan), in addition to activities to transmit information from the research community to society, activities that allow the research community to learn from society and collaboration activities between researchers and society should be implemented. According to the JST Center for Science Communication (2017), these activities were listed as “participatory dialog events such as science cafes and workshops” (43.3 percent), “activities that examine the social impact of science and technology (exchange of opinions with citizens, researchers in different fields, industries, workshops, and so on)” (22.1 percent), and “collaborative surveys and research with citizens (Science shops, and so on)” (17.0 percent). As such, a certain number of researchers appear to be actively involved in society.

2 Attempting to create a variety of spaces for exchange

2.1 Science Cafes as places for dialog

In Japan, one of the well-known “places where the research community and the public can meet” is the Science Café. A column in the June 2004 Science and Technology White Paper introduced a trial that was being conducted in the UK at the time, known as the Café Scientifique, a coffee shop in which scientists and the general public could engage in discussion. The number of Science Cafes has gradually increased since then, and in the Spring of 2006, an attempt was made to hold Science Cafés simultaneously throughout Japan (organized by the Science Council of Japan and the Japan Science and Technology Agency). Many science cafés continue to be held today; although not exhaustive, the “Event Information” page on the “Science Portal” (<http://scienceportal.jst.go.jp/events/events.php>) provides some information on such events.

Nonetheless, even within the same Science Café event, the scale, purpose, and format vary depending on the organizer (Matsuda Kentaro, 2008; Nakamura Masaki, 2008). Some Science Cafés are held purely for the purpose of sharing the joy of science, while others aim to discuss social issues related to science and technology with the public. Science Cafés are not only held on natural science topics, but topics from the humanities and social sciences. One cannot judge the purpose of an event simply by looking at the event overview posted online. For example, the Science Café I was once involved in running had a slightly different role. While it was in part a public relations activity for the research institution, it also functioned to improve the dialog skills of participating researchers. One of the centers selected for the World Premier International Research Center (WPI) initiative, a project conducted by MEXT, is the Kyoto University Institute for Integrated Cell-Material Sciences (iCeMS), which hosted the “iCeMS Café” Science Café from March 2008 to October 2016. While many researchers participate in dialog activities with the hope that people will learn about science, few are able to listen to opinions stemming from values different to their own and are willing to learn something from them. It was an attempt to nurture researchers able to rethink their own research in the context of wider society through dialog (Kano Kei et al., 2015).

2.2 Other spaces for dialog

There have been many other efforts besides the Science Café to provide opportunities for researchers to engage with society. For instance, from the perspective of effectively communicating science, the “FY2006 Special Development Funds for Promoting Science and Technology: Report on the Survey on Developing Methods for Implementing Effective Programs to Promote Understanding” introduces a variety of initiatives. Regarding attempts to discuss the issues that exist between science and technology and society with researchers and citizens, the DeCoCiS database—developed as part of the research and development project, “Development of Methods and Interface Organizations for Deliberation and Collaboration between Citizens and Scientists” (DeCoCiS) at the JST Research Institute of Science and Technology for Society (RISTEX)—offers a detailed record of participatory methods and practical examples. It includes

descriptions and practical examples of various participatory methods. Additionally, various practical examples are introduced in the reports, “Promotion measures for deepening the relationship between society and science, technology and innovation: Toward co-creation in science, technology and innovation” (Committee on Safety and Security in Science and Technology and Social Collaboration, 2015) and “Issues in the practice of ‘dialog’ and ‘collaboration’ to address social expectations and concerns about science and technology” (JST Center for Science Communication, 2016).

3 Development of support systems and organizations in universities and research institutions

What perspectives are needed to create spaces like those mentioned above? With whom do we aim to engage in dialog? What do we hope to gain from one another? What kind of support do we need for researchers who go out into spaces for dialog, and who should create such spaces? There are many perspectives to consider. For an inexperienced researcher or institution, it may be confusing to know where to start. To date, a variety of information and support systems and organizations have been developed in an attempt to design and operate spaces for dialog, including those listed hereunder.

3.1 Useful information for researchers who wish to start dialog activities

The website and booklet, “The Researcher’s Starter Kit for Science Communication,” created as part of the JST Society and Technology Research Development Project, “Fostering Public Patronage for Basic Science” (Todayama Kazuhisa, 2005–2008).

The website, Outreach Activity Support Information for Researchers, operated by Twenty-First Century Kaitokudo, Osaka University, which serves as point of contact for social contribution activities and social cooperation connecting citizens and Osaka University.

Training programs for researchers: “Basic science communication training,” “Media training program for researchers,” and “Dialog skills training program.”

The JST Center for Science Communication was responsible for the compilation and dissemination of programs from 2012 to 2014. There are currently three implementing entities carrying out their own training programs.

3.2 Organizations and spaces developed by universities and research institutions to support dialog between researchers and society

- Outreach staff at the World Premier International Research Center initiative (WPI), and so on. Since March 2010, each WPI center established as part of a project by MEXT has had its own outreach officer (the WPI program itself began in 2007). In addition to outreach staff, the Kyoto University Institute for Integrated Cell-Material Sciences (WPI-iCeMS) established a science communication group as one of its research groups at the time of the institute’s founding, and continued research

and practical activities in collaboration with the International Public Relations Office in the administrative division. The group's activities ended in March 2017.

- Although the roles played by university research administrators differ from university to university, some universities have systems to support dialog between researchers and society. For example, Kyoto University holds an annual event called “Kyoto University Academic Day” led by the Academic Research Support Office and the Research Promotion Division. Launched in 2011, this initiative was prompted by the “Promotion of Science and Technology Dialog with the Public (Basic Policy Approach)” announced in June 2010. In order to lower the barriers to participation for researchers who have never participated in dialog activities before, briefings are held in advance and advice is given on presentation materials. Meanwhile, at Osaka University, the URA department of the Corporate Planning Office supports researchers' participation in dialog activities as part of its work to support the dissemination of research information.
- Although the context of “science communication activities” conducted in museums and science museums may be a little different from those discussed above, museums and science museums have historically carried out numerous activities in partnership with the public, such as local wildlife surveys in partnership with local residents. Numerous events are held at the National Museum of Emerging Science and Innovation (Miraikan) for researchers and citizens to come together to think about issues facing society.

As pointed out by Yoshizawa Go et al. (2011), there is a need for interface organizations that promote the use of scientific knowledge in policy making—that is, for organizations that stand between researchers, policymakers, and the public and which seek better ways to collaborate, while encouraging the participation of both parties and providing appropriate information. However, due to issues such as continuity, they have yet to take root in society.

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http://www.mext.go.jp/b_menu/hakusho/html/hpaa200401/ [In Japanese]

Related data sources

- Researchers’ Starter Kit for Science Communication
<http://www.cshe.nagoya-u.ac.jp/scicomkit/index.html>
- DeCoNavi: Database of participatory methods and practices
<http://decocis.net/navi/about/>
- Kyoto University Academic Day
http://research.kyoto-u.ac.jp/academic-day/about_ad
- “Information on supporting researchers’ outreach activities” on the Osaka University Twenty-First Century Kaitokudo website
<http://21c-kaitokudo.osaka-u.ac.jp/outreach>
- Event information page on the Science Portal

<http://scienceportal.jst.go.jp/events/events.php>

Information on related base course subjects and research projects

- STiPS Osaka University, “Introduction to science and technology communication A” (1 credit, Spring semester)
- STiPS Osaka University, “Introduction to science and technology communication B” (1 credit, Summer and Winter semesters)

*As of April, 2019