

# Data Literacy Perceptions and Research Data Management Practices by Researchers in Japan

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# Data Literacy Perceptions and Research Data Management Practices by Researchers in Japan

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## *Background*

Open research data is one of the important issues in the science and technology policy in Japan. In *the Fifth Science and Technology Basic Plan (2016–2020)*, ‘open science’—promoting access to publicly funded research products such as research data and papers—is considered a cross-disciplinary issue. The Cabinet Office, Government of Japan (2016) states “Japan is partnering with other stakeholders, including funding agencies, universities and other research institutes, as well as individual researchers, to build systems for promoting open science”. The Japan Science and Technology Agency (JST) published *Data Management Policy for Strategic Basic Research Programs*, which requires in principle that “research directors will create data management plans after approval, and store, manage and disclose data according to the approved plan” (JST, 2016) in some research areas for the first time in Japan. Despite these policies, open research data is not included in ordinary research lifecycle in many fields. It is necessary to develop an appropriate data literacy training and support system for research data management.

## *Objectives*

The purpose of this survey is to reveal the current state of data literacy perceptions and data management practices by researchers in Japan to build better systems for promoting open science, including data literacy guidance, an open data policy, Data Management Plan (DMP), institutional data repositories, and an integrated search system.

## *Methodology*

The authors participated in a multinational survey and translated the questionnaire into Japanese. Researchers in all disciplines in Japan were invited to the survey by e-mail. Data were collected via LimeSurvey, a web survey system, from 24 February to 24 March 2017. The University of Tsukuba Library, the Department of Research Promotion, and Doshisha University Organization for Research Initiatives and Development cooperated in the data collection.

## *Results*

A total of 586 researchers participated in this survey obtained from 277 academics and 309 doctoral students, of which 73.5% of researchers had prior experience in making data available to others. Rates by discipline were as follows: Engineering and Technology (94.4%), Natural Sciences (89.8%), Medical and Health Sciences (85.5%), Social Sciences (64.5%), and Humanities (51.7%),  $\chi^2 = 55.817$ ,  $p = 0.000$ . However, only 6.7% claimed that their data is openly available to everyone and 74.6% had some concerns regarding sharing data with others, while 73.9% would like to receive some formal training regarding data literacy and research data management.

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