

Interdisciplinary education program and social practice at College of Sustainable System Sciences, Osaka Metropolitan University

Takahiro Endo
Osaka Metropolitan University

This paper first provides an overview of the interdisciplinary education program at College of Sustainable System Sciences, Osaka Metropolitan University, and then introduces a practical example of this program; a transdisciplinary collaboration in groundwater conservation activities in Azumino City, Nagano Prefecture, Japan.

In April 2022, Osaka Prefectural University and Osaka City University merged to form the new Osaka Metropolitan University, comprising 11 faculties and 1 college (College of Sustainable System Sciences). The faculties are structured as a conventional organization based on academic disciplines, while the college is a purpose-oriented organization that aims to solve various social issues, including environmental issues. The fields of interest of the college members are diverse and include natural sciences such as information engineering, biology, and psychology, social sciences such as public policy, economics, and sociology, and humanities such as linguistics and history.

The College of Sustainable System Sciences is one of the departments within the university that places particular emphasis on interdisciplinary education. For example, students are required to take Project-Based Learning program exercises (the PBL program), which are practical exercises focused on specific social issues. Students are required to study 1 of the 23 programs available.

As part of the predecessor course of the PBL program, the author developed a transdisciplinary class called the “Regional Environmental Activity Exercise,” which was conducted in Azumino City, Nagano Prefecture. In Azumino City, groundwater plays an important role in sustaining the local community. It is essential for production of specialties such as wasabi (horseradish), and it represents the source of all tap water. However, in the late 1990s, the local population became concerned about the declining level of groundwater. In 2010, as part of a transdisciplinary effort to restore the groundwater, the “Azumino City Groundwater Conservation Measures Research Committee” was established with members representing the city government, groundwater users, citizens, and researchers. The author led students to Azumino City as part of the “Regional Environmental Activity Exercise,” and solicited ideas for effective utilization of groundwater, which were reflected in the process of formulating the Azumino City Water Environment Basic Plan. This paper reports on the history and current status of groundwater governance in Azumino City.

Keywords: interdisciplinary education program, Project-Based Learning Program, transdisciplinarity, groundwater conservation