



High schoolers as researchers – Results from a Finnish science education project

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Citizen science offers a way to address two challenges in the field of atmospheric sciences. It can help in improving the outreach of the research work and it can provide resources for research tasks that require human input but not elaborate technical skills, such as direct observations and simple data processing. It can also be a powerful tool for science education.

In 2014-2015 the Finnish Meteorological Institute (FMI) organized a science education program for Finnish high schools in which the schools and students were invited to contribute to ongoing research at FMI. Altogether 12 schools and over 200 students across the country participated in the project in which the students' research tasks varied from direct observations to small scale case studies. Direct observations consisted of snow cover, phenology, and road slipperiness and measurements of snow depth. Case studies were related to identifying local climate actions and adaptation needs and developing new uses for FMI's open data. In addition, some students were involved in processing and analyzing archived space weather observations.

In the end year of the project a self-evaluation was conducted to assess its impacts and potential of continuing such co-operation. Student, teacher and researcher feedback was collected using online surveys and semi-structured interviews. These results were also discussed in a workshop with education professionals. Vast majority of all feedback was positive and encouraging. Even though the scientific gains from the project were modest, the results indicate that this kind of collaboration has significant potential to improve the outreach of research and the quality of science education. The project has been earlier discussed in Harjanne et al. (2015).

References

Harjanne, A., Ervasti, T., Karhu, J.A. and Tuomenvirta, H. (2015) Combining science education with citizen science – Experiences from a research institute led science education project, *LUMAT*, 3(7), 948-959.