

The role of science education in a changing world

8 - 12 January 2018 @ Snellius

Description and aims

The purpose of the workshop was to address the following question: *How can scientific knowledge be utilized through education to address global challenges?* As such, the workshop had an interdisciplinary nature and cuts across the intersections between social and natural sciences to offer an evidence-based vision of science *in* society in light of global challenges, such as: climate change, refugee crisis, gender inequality etc.

Tangible outcome

The participants will develop a report (30 pages long) that proposes a new vision of the role of science education in society and which addresses contemporary theoretical concepts: scientific practices, social justice, identity, equity, gender, democracy, active citizenship etc. The report will include recommendations for future research and classroom practice and will include examples of current international projects. The report is currently in development and will be completed and disseminated by March 30.

Scientific issues/outcomes

The participants of the workshop worked in 4 small groups and examined the following areas of research and related theoretical constructs:

- a) The role of science education and teacher preparation in society
- b) Nature of science and social justice
- c) Identity, equity, and gender
- d) Scientific practices and argumentation

The following scientific issues and outcomes of the discussions and sharing of good practices in different countries were achieved:

- It became evident during the whole-group presentations that specific concepts and recommendations for addressing global challenges were applicable in all groups.
- An examination of current recommendations for reform in science education around the worlds shows that there exists a discrepancy between contemporary global challenges and reform efforts, which focus on goals related to economical competition instead of goals related to students' well-being and social justice.
- Goals related to reducing inequality, promoting social change and social justice through STEM are completely absent from reform documents in science education in different countries.

Organization/Format

The format of the workshop, which included a series of presentations, as well as a lot of time for small-group interactions and writing was fantastic. The balance was very good. We used 'Mentimeter' (software) as a way of making the presentations more interactive and it worked very well. The support staff and scientific advisory boards of the Lorentz Center were extremely helpful, supportive, and offered useful advice on different aspects of the organization and format of the workshop.

Lucy Avraamidou (Groningen, The Netherlands)

Lynn Bryan (Purdue, USA)

Sibel Erduran (Oxford, UK)

Martin Goedhart (Groningen, The Netherlands)