Digital inquiry into emerging issues of public concern: Controversy mapping in a Swedish school context

# Details

## Year

2019

## Issued

2019

## Language

English

## Start Page

## End Page

## Editors

Mäkitalo Å.;Nicewonger T.E.;Elam M.

## Authors

Mäkitalo Å.;Elam M.;Solli A.;Ferraz Feire S.

## Type

Book chapter

## Book title

Designs for Experimentation and Inquiry: Approaching Learning and Knowing in Digital Transformation

## Publisher

Routledge

## Topics

* Learning
* Internet usage, practices and engagement
* Literacy and skills
* Digital and socio-cultural environment

## Sample

Upper secondary school students (11th and 12th grades) who engaged in controversy mapping as a form of digital inquiry within a project on Science in Society, that was three weeks long and embedded as part of ordinary curricula and school activities.

## Implications For Educators About

* Digital citizenship
* School innovation
* Professional development

## Implications For Policy Makers About

Other

## Other PolicyMaker Implication

How people need to be equipped to exert their agency as citizens in a world that relies heavily on digitized information

## Implications For Stakeholders About

Researchers

# Abstract

How can young people make use of digital tools and methods to get to grips with the risks and dilemmas arising out of contemporary science, technology and society relations? This chapter addresses the forms of agency enabled through a set of techniques for exploring and visualizing controversial technoscientific issues on the web. Given the particular orientation of these techniques, the empirical focus is on tensions and disruptions they give rise to in educational practice as they are appropriated by students in a Swedish upper secondary school context. Designed to aid the visual representation of complex processes of issue formation, the mapping tools worked against the primary inclination of teachers and students to conceive of them as aids for sorting issues out by demarcating more reliable sources of information from less reliable ones. However, extending such goals, the controversy maps students produced invited discussion and engagement with unresolved issues still-in-the-making as well the performative role of mediating technologies in enacting these issues. In this way they provided opportunities for more open forms of classroom deliberation and critical engagement consistent with Dewey’s vision of the vital role of education in democratic societies.

# Outcome

"The digital methods were challenging in many respects, but also instrumental for the students in getting get a grip on ongoing controversies online. They did provide means to digitally explore, scrutinize and account for the socio-technical formation of controversial issues.... The designed features of these digital methods were also instrumental for our analytical purposes of exploring some of the tensions that technoscientific issues in a networked society will most probably bring to school.... As we have seen in our empirical examples the students we followed did not only anticipate such normative expectations as assessment of their school performance, but clearly also themselves evaluated their actions by norms that privilege scientific, evidence-based arguments.... To exert agency as citizens, some educative experience of the internet as a space for civic engagement should be provided. As a hands-on experience of collecting, sorting, exploring, scrutinizing and visualizing large sets of online data, controversy mapping as a method provides ample opportunities to learn from and discuss some of the functionalities of the media ecology of networked societies. The methods are designed, in Dewey’s terminology, to scrutinize issue formation, that is how emerging matters of concern are brought to public attention. As such, they highlight technoscientific innovations and the risks they bring as not yet resolved issues. This, we argue, is just as important as an educational experience of learning about science-in-society since it invites discussions about science-in-the-making (i.e. research as a process).... Instead of reducing online information search and simplifying such issues beforehand the digital methods used for controversy mapping do not discriminate but invite complexity themselves used.... What we have seen can, accordingly, be refined to an educative experience.... Although controversy mapping as a form of digital inquiry challenges any investigators with a high level of complexity – both when it comes to the 'substantive issues at stake in the controversy as well as the performative role played by mediating technologies in the enactment of these controversies' (Marres Moats, 2015, p. 1) – it can also be productive in connecting new forms of technical mediation with improved critical information literacy and discussions on civic engagement in a networked society." (Authors, 63-64)