

Student Involvement in Open Science

As the Open Science movement is making an impact, few will doubt that the future of science is open. But what does this mean for students? And what about the future of scientific education? So far these questions go largely unanswered. The student community has so far been left out of conversations about the future of science and is not adequately educated in Open Science.

Locally, some tentative steps are being taken that stress the students' involvement in the movement, for example expressed by the manifesto [*Reshaping the Academic Self*](#) by the Utrecht University Open Science Programme. We however believe that these processes need to be accelerated, taken up more widely and are in desperate need of insights from the students' point of view.

This is why we started a student-focused and student-led initiative for Open Science. The Student Initiative for Open Science (SIOS) was founded in Amsterdam almost three years ago and now has chapters in Utrecht and Twente. SIOSes educate students about Open Science and try to have their voices be heard. Through workshops and their tight networks, SIOSes have gotten a unique perspective on the needs and wants of students with respect to Open Science.

Unfortunately, our experience so far shows that most students are largely ignorant about the movement's relevance to them; very few encounter it directly within their education. With its strong emphasis on innovations in academic structures, Open Science's jargon simply seems uninteresting to most students.

Luckily, local moves are made towards integrating Open Science values into programmes. In our presentation, we will give examples of such innovations in scientific education that are reshaping curricula, such as courses on replication and good research

practices, as well as using and teaching open-source statistical software. Some innovative ways of incorporating Open Science practices in student projects challenge entrenched ideas about education. Think of podcast making as a research output to (partially) replace a written thesis. This goes well beyond Open Education; in our view, scientific education will need to find ways to integrate all building blocks of Open Science, from Open Data to public engagement, into university curricula.

These new approaches have a diverse impact. They provide tools for students who want to pursue an academic career, moreover, some initiatives (like podcast making) give students a considerably broader toolkit, with applicability beyond the academy. We will explain how this attracts and motivates students with wide interests.

Educating students on Open Science is not only beneficial to students themselves, but also to science in general. The student perspective is valuable as it can function as a bridge between the general public and the scientific world; students may ask questions about research and academia that non-academics would not think of asking and academics deem obvious. Therefore, we do not only argue for the importance of Open Science education but also for actively involving students in the Open Science movement - let the future of science have a say in the future of science.