



National-scale engagement of school students using an active research project: the SEA-SEIS North Atlantic Expedition's outreach programme

Sergei Lebedev (1), Raffaele Bonadio (1), Laura Bérdi (1), Janneke de Laat (1), Clara Gómez García (1), Bruna Chagas de Melo (1), Louise Collins (1), Sadhbh McCarthy (1), Daniel Farrell (2), David Stalling (3), Arne Schwenk (4), Chris Bean (1), and the SEA-SEIS Team

(1) Dublin Institute for Advanced Studies, Geophysics Section, Dublin, Ireland (sergei@cp.dias.ie), (2) Coast Monkey, coastmonkey.ie, (3) AerialSparks Project, aerialsparks.org, (4) K.U.M., Germany

A research project with an exciting field component presents a unique opportunity for broad public engagement. Outreach with schools is especially valuable in that it can have a profound, lasting impact. It shows the students how science works, encourages them to study science, and broadens their career perspectives – to quote from the feedback survey for the outreach programme that we present here as an example.

The project SEA-SEIS (Structure, Evolution and Seismicity of the Irish Offshore) kicked off in 2018 with a 3-week expedition on the research ship Celtic Explorer. For the first time, broadband ocean-bottom seismometers were deployed across the vast Irish offshore, with a few instruments also in the UK and Iceland waters. Prior to the expedition, we asked schools across Ireland to help the scientists to give each seismometer a name. Participating in a real, exciting research project got the students enthusiastically engaged. Many of the classes participating in the naming competition then took part in our live, ship-to-class video link-ups. After a brief introduction to the project and meeting the team, the students asked numerous questions about the research, life on the ship, and how one becomes a scientist. The follow-up survey responses from the teachers confirmed that the engagement was not only exciting (“it was like speaking to Indiana Jones!”) but had a lasting impact. With most of our scientists on the ship being female, the female students in the classrooms were particularly encouraged. The SEA-SEIS outreach programme is sustainable and now continues with follow-up national competitions (a seismology song-and-rap one for secondary schools and a drawing one for primary schools – we shall present some remarkable entries).

The programme's success in engaging students across the country and sharing with them the excitement of research demonstrates the value of active research projects as a means of broad outreach and education. Obviously, the outreach programme could not succeed without the scientists on the project putting in the work. Fortunately, researchers see quickly the very real impact of the outreach and get involved with enthusiasm and commitment. The programme's outcomes thus include not only school students getting more interested in science but also young researchers getting experience and appreciation of the education and outreach work.

Website: www.sea-seis.ie