



## **Mutualistic Symbiosis between Researchers and Educators: the Case of Two Education Officers on the Joides Resolution**

Alessia Cicconi (1,2), Marion Burgio (3), and Sharon Cooper (4)

(1) Liceo Classico "F.Stabili-E.Trebbiani", Ascoli Piceno, Italy (alessia.cicconi@unicam.it), (2) School of Science and Technology, Geology Division, University of Camerino, Italy, (3) Lycée Louis Barthou, Pau, France (marion.burgio@gmail.com), (4) Lamont Doherty Earth Observatory/Columbia University, USA (scooper@ldeo.columbia.edu)

Geoscience education from the primary school through the high school level is highly affected by the way teachers themselves deal with the teaching of science. Many studies on science education in general have found that teachers who lack research experience are less confident in teaching science with an inquiry methodology – the way that reflects how science really works and is found the most effective regarding students' achievement in science and their confidence in addressing STEM careers.

The International Ocean Discovery Program (IODP) has carried out for years an education and outreach program that involves educators and teachers, with the position of Education Officer, in the expeditions on board the JOIDES Resolution (JR), an oceanographic vessel specialized in drilling ocean sediment cores for research purposes.

This immersive experience gives teachers the opportunity to be part of the research process with the aim, among many others, to fill the gap that sometimes exists between how science is explained in textbooks and the real practice of scientific research.

Using a scientific parallel, having teachers working with researchers could be considered a mutualistic symbiosis: on one hand researchers have a job, usually difficult to understand for the public and made simple by the teacher; on the other hand the teacher, working with researchers as a researcher will gain more confidence using an inquiry methodology in teaching science.

In this oral presentation we want to present the outcomes of the outreach projects of two Education Officers, the first one who participated in Expedition 360 and the second one that will take part in the Expedition 367, in terms of 1) their perception and opinion of this immersive experience seen as professional development; 2) perceptions and opinions of teachers involved from shore, with or without their classes.

This exploratory study has carried out with qualitative and quantitative methodology using questionnaires and surveys.