

The influence of science olympiad in school science teaching and learning: the case of Italian Earth Science Olympiad

Teresita Gravina (1,2), Vincenzo Boccardi (1), Costantina Cossu (1), Emanuele Piccioni (1), and Roberto Greco (3)

(1) Associazione Nazionale Insegnanti Scienze Naturali, via Mezzocannone 8, 80134 Napoli (Italia) , (2) Università degli studi Guglielmo Marconi, via Plinio 44, Roma (Italia) (t.gravina@unimarconi.it), (3) Unicamp, Institute of Geosciences, rua Carlos Gomes, 250, CEP 13083-855, Campinas (SP), Brazil (robertogreco01@yahoo.it)

Science Fair and Olympiads were reported as activities that are able to enhance the science literacy of students (Abernathy & Vineyard, 2001). Teachers have an important role in helping students to choose the type of competition that suits their interests, goals and learning methods. The International Earth Sciences Olympiad (IESO) aims at raising the number of students interested in Earth Sciences: a full description of IESO organization was provided by Greco et al. (2013). The selection of representatives for IESO is in charge of national Associations. In Italy this is provided by the Italian National Association of Science Teachers (ANISN) which represents a corporation aimed at initial and long-life formation of secondary school teachers and at enhancing the role of Science among new generations. Every year ANISN organizes the Italian Natural Science Olympiads, divided into different competitions for students of different ages and on different topics. In 2016, it was decided for the first time to establish into the Italian Olympiad competition a trial for students aged between 16-19 years old focused only on Earth Sciences; results and details about the Italian Olympiads of Natural Sciences were provided by Gravina et al. (2017).

In order to understand motivation and expectations of students and teachers involved in the Italian Earth Science competition, it was decided to arrange a qualitative investigation, based on proposed designed questionnaires, available at <http://olimpiadi.anisn.it/nazionali/#sondaggio>. The survey will be conducted during the 2018 edition of Italian Earth Science Olympiad. The questionnaires for students and teachers will be tested on specific schools and then distributed during each phase of the competition (schools internal selections, regional and national phases)

The result of this study would provide informations to improve the organization of the competition, in order to address the expectations of the participants. It will also help to understand if participating in science competition enhances interest and motivations of students and teachers in Earth Sciences study.

Abernathy T.V., Vineyard R.N. (2001) - Academic competitions in science: What are the rewards for students?. Clearing. House, 74(5), 269-276.

Gravina T., Occhipinti S., Boccardi V., Fantini F. (2017) - The Italian Earth's Science Olympiad: a reflection on results of first edition. Rendiconti Online Società Geologica Italiana (in press)

Greco R., Hlawatsch S. & Bronte N. (2013) - The International Earth Sciences Olympiad (IESO): A way to raise public awareness of geoscience, particularly amongst younger people and enhance the quality of geoscience education internationally. Episodes., 36(3), 235-239.