SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Innovative Space Education and Outreach (7)

Author: Dr. Norah Patten
Ireland

Dr. Geoff Steeves
University of Victoria, Canada

FROM EARTH TO SPACE: INNOVATIONS LEADING TO NOVEL SPACE EDUCATION TECHNIQUES TO INSPIRE THE NEXT GENERATION

Abstract

Space education has, for many years, been limited by a lack of access to spaceflight opportunities, a disjointed space education system for targeted audiences and the challenge of limited available funds. With the evolution of prize based incentives, such as the Google-Lunar XPRIZE; the commercial evolution of the International Space Station, for example NanoRacks; and crowdfunding opportunities to raise capital, for example KickStarter, we now witness feats in space education and outreach that have never before been possible.

In this paper, new approaches to space education, developed in Ireland, Canada and Israel are presented and compared, with particular focus on the pre-university age groups. What we witness today is that, in Ireland, a country without a space agency, experiments designed by teenagers are being sent to the International Space Station. In Canada, a country with a well established space agency, a need to develop space education connections with the community has resulted in the development of StarAcer Academy - an interactive comic specifically designed for primary students. And in Israel, a country which manufactures and launches its own rockets and satellites, SpaceIL has reached over 70,000 children through its STEM activities. The paper concludes with recommendations on innovative space education and outreach - drawing on the successes of such projects and detailing the lessons learned.