

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

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SPACE POPULARIZATION THROUGH INNOVATIVE SPACE DESTINATION SCHOOLS: A  
PROJECT FOR SPACE AWARENESS & OUTREACH

**Abstract**

Space Education Research Lab (SERL), a specialized research lab at the Institute of Space Technology (IST), Islamabad, Pakistan, is a constituent Lab of the National Center of GIS Space Applications. SERL aims to develop specialized human resources in the field of space science, technology and applications from grass root level. IST has been involved in space awareness, education, outreach and popularization for the last 18 years and extended its footprint among thousands of school, college and university students all across Pakistan. This research endeavor is drafted to share a novel concept of Space Destination Schools, a project of SERL, NCGSA, IST, Pakistan. Space outreach and popularization is a challenge in developing countries due to lack of awareness, low literacy rate and scarcity of resources technology. It was assessed to reach distant places of country, to the local students, and offer them hands on space voyage and spark their interest for space science, technology and its applications. A twelve hours interactive lecture with a touch of storytelling was designed that was covered in 3 days. The story begins with big bang, covering mysteries of Astronomy, Astrophysics and reaching the Planet Earth. It then investigates the habitable Earth, the atmosphere and climate change. The next part talks about aviation and its applications. Each segment equipped with videos, simulations, software tools and hands on exercises. The next challenge was the introduction of Rocketry to leave atmosphere and to reach into space, demonstrated with the practical launch of aqua rockets. The concept of satellites, ISS and the Webb Space Telescope were also introduced. The structure applications of satellites along with orbits and a practical demonstration was done by the design and launch of CANSAT. GNSS receivers were used to explain Navigation satellites. Finally, telescopes were shown to witness the sunspots at day and the celestial bodies at night with a talk of careers in space along with the benefits of space technology to achieve the UN sustainable development goals. SERL has conducted various Destination Schools in yesteryears with the support of local governments. The SERL includes science communicators, aerospace engineers, space scientist, satellite experts, RS GIS experts to entertain and educate the audience. The team has expertise in different local languages that increases the relationship and eases the communication for better understanding and impact. This model can be replicated in various countries and customized according to available time and resources.