

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Poster Session (P)

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## NAVIGATING THE CONTESTED SPACES OF SPACE SCIENCE AND TECHNOLOGY IN INDIA

**Abstract**

Space science and technology are contested spaces in India which we find can only be reached through a combination of outreach events, workshops and fieldwork. This active practice challenges the perception that knowledge is the right of only certain students (in the Indian context many assumptions are made about who should have access to certain kinds of knowledge).

As part of an education collective called Project Vision which is developing pioneering approaches to education in India and in the area of professional development, learning is a means to embody experiences, bringing the real closer to us. Our interests lie in creating networks of learning by actively engaging with the community of scientists and technologists of Bangalore.

Our foray into space education began when we were given a competition brief by Microsoft to design a learning tool for children between the ages of 8-14. Our team's project was called 'Moon Vehicle' and its aim was to stimulate learning around India's launch of the Chandrayaan-1 spacecraft to the Moon in the year 2008. The approach we took was to use art and design practice in this predominantly science-based enterprise. It was the beginning of our understanding of hands-on science in the pursuit of understanding Moon, space science, satellites and space communication technologies.

We engaged at multiple levels and spaces from museums to urban slum communities with students from a variety of educational settings. These collaborations ventured into a whole new ground of science practice combined with participatory art practice in education. The aim was to embed knowledge by transcending barriers of language and making esoteric science practice accessible and meaningful particularly to children. This has been done without economic means, using open source ideology as a tool.

To bring personal relevance and meaning of science and technology within the student's own lives is a great beginning. Visualizing, experiencing, making and sensing are ways of bringing far away science closer to us.

But what is it that we should do? The space industry believes in an education and cultural agenda through space science that will create a future workforce. But how does this model fit the kinds of spaces for learning and motivations for learning described here? Is the work of educators to support the interests of large-scale, high profile spaceflight missions? Or is its role to develop critical paths that will lead to new kinds of futures that incorporate excluded ideologies?