



COMMUNICATING SCIENCE ACROSS CULTURES, COMMENTARIES FROM SESSIONS
AT PCST2018

The PCST 2018 sessions on “Communicating science across cultures”: an overview by the session chairs

Steve Miller and Ka’iu Kimura

Abstract

The 15th international conference of the Public Communication of Science and Technology network took place from April 4–6, 2018. Given its location in Dunedin, New Zealand/Ōtepoti, Aotearoa, it was a natural venue for two sessions on communicating science across cultures.

Keywords

Popularization of science and technology; Public engagement with science and technology; Representations of science and technology

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In 2017, a call was put out asking whether there was interest in contributing to sessions on cross-cultural communication at PCST-2018. The response was so positive that ultimately two sessions were developed and run at the conference in Dunedin. The sessions at PCST-2018 included fascinating discussions of projects that have taken very different approaches to various challenges of cross-cultural communication. In enthusiastic discussion at the end of the second session, contributors decided to share their stories further.

This series of commentaries resulted from those discussions. In it, [Steven Tingay](#) describes the Ilgarjiri — Things Belong to the Sky project between Australian indigenous artists and astrophysicists, initiated during the 2009 International Year of Astronomy. With development of the Square Kilometre Array project being built partly in Australia and in South Africa, this project has been expanded to include indigenous South African artists. [Steve Miller, Sue Bowler and Sheila Kanani](#) explain the approach taken by U.K.’s Royal Astronomical Society in RAS200 Sky and Earth to work with diverse audiences and engage citizens who would not normally consider astronomy and geophysics as “for them”. [Marina Joubert](#) reports on a South African study of science engagement behaviour of local scientists that reveals the unique influences linked to the country’s politics, cultural composition, biophysical environment and socio-economic challenges. [Nancy Longnecker and Craig Scott](#) describe cross-cultural collaboration in which a class of university science communication students and museum staff produced a museum exhibition showcasing collaborative projects that involved Maori colleagues. Lastly, [Tibisay Sankatsing Nava and Corinne Hofman](#) elaborate on NEXUS 1492 which

addresses a challenge for heritage management across the Caribbean to protect local heritage resources with increased local understanding and engagement.

In addition to the projects described above which are presented in this series of commentaries, additional projects are described briefly in this introduction. Pedro Russo described UNAWE — built around large collaborations of astronomers, educators, students and teachers — uses the beauty and grandeur of the Universe to encourage young children to develop an interest in science and technology and foster their sense of global citizenship from the earliest age. The UNAWE network connects over 2000 individuals to share ideas, resources and best practices and work together across geographical, social and cultural divides to develop and implement educational activities in over 64 countries. UNAWE resources are now freely available. An important task of the International Office is to support the further development, localisation and distribution of resources from local programmes that can be further adapted to meet the global community needs.

Kalepa Baybayan, master navigator and one of the captains of the Hokulea Polynesian voyaging canoe, outlined how, at the eastern edge of the Asian continent, oceanic explorers constructed durable watercraft with the use of primitive tools and developed a system of navigation that utilized visual clues and human senses. The Hokulea's own four-year world-wide voyage, which ended in 2017, is a story of collaboration between culture, science, history, and technology. As scientist and protestors struggle to allow the Thirty Meter Telescope project to start construction on Mauna Kea, Hawai'i, Baybayan explained how Hawaii's newest science center, 'Imiloa, could be part of a solution that honors the traditions of exploration while fostering respect for native beliefs, helping culture and science find a way forward together. The 'Imiloa approach is to integrate indigenous Hawaiian perspectives and modern science education by design, in the belief that embracing multiple "ways of knowing" strengthens our understanding of the world.

Like many museums around the world, the Otago Museum embraces the idea of inspiring the next generation of curious minds. Sam Botting and Rachel Wesley gave some of the history of the museum's science centre. By 2015 the facility was showing its age, and a decision was made to completely renovate and refurbish it. Building on a Kāi Tahu cosmological framework provided a link between indigenous and scientific knowledge. they outlined the challenges already overcome and still to be faced during planning, Tūhura opened in late 2017 and has proven very popular, attracting large numbers of visitors to the interactive science centre, the planetarium and the Tropical Butterfly House.

Overall, the sessions in Dunedin and the commentaries that follow showed the great variety of science communication projects and the different approaches available to enhance cross-cultural communication. At the heart of the projects are partnerships that involve fellow citizens in issues that affect their daily lives and their futures and in decision making about sharing and managing their knowledge. In what follows, some of the individual authors expand on these necessarily brief outlines of their contributions to these vital discussions. It is hoped that this series will inspire further dialogue and research in the important but under studied area of cross-cultural communication.

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