Inspiring Australia

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Abstract

Inspiring Australia is a national strategy for engagement with the sciences, working across all levels of government and industry 'to promote science and science literacy' in Australia. Launched in 2010, the strategy aimed to increase public engagement with science. The strategy sought to involve the science sector very closely, at all levels of planning and implementation. It contained 15 recommendations to achieve this aim, ranging from aspects of outreach and science promotion to achieving a sound evidence base for evaluation of the outcomes. Since its inception, the strategy has sought to form collaborative networks in all states and territories and to establish formal mechanisms for inspiring and evaluating science events and projects. This paper outlines the origins of the strategy, aspects of the recommendations and the outcomes after three years of funding. It is evident that the strategy has been successful in its major goals, but that there are still several recommendations which have only partially been achieved.

Introduction

In 2009 the Australian Government commissioned a report entitled "Inspiring Australia: a national strategy for engagement with the sciences". The Inspiring Australia report (Department of Innovation, Industry, Science and Research, 2010) provided recommendations through which Australia could strengthen science in the public domain and, therefore, in the scientific domain also. In the words of the Report (p.xiii):

> Sharing knowledge powers innovation. To fully realise the social, economic and environmental benefits of our significant investment in science and research, we

> must communicate and engage the wider community in science. Australia aspires to an innovative society with a technologically skilled workforce, a scientifically literate community and well informed decision makers. The *'Inspiring Australia'* strategy aims to build a strong, open relationship between science and society, underpinned by effective communication of science and its uses.

The report aimed to deliver a 'more scientifically engaged Australia' where Australians are inspired by and value scientific endeavour, where Australia attracts increasing national and international interest in its science, where Australians critically engage with key scientific issues and where young Australians are encouraged to pursue scientific studies and careers (p.xiii).

Australia already had a number of initiatives in place to promote science to the public. The Prime Minister's Prizes for Science and Science Teaching are prestigious acknowledgements of Australia's scientific strengths. National Science Week, which has been running annually for many years, energises and excites the public and schools around the country. Many scientific organisations and universities have been engaged in outreach for as long as one can remember. Nevertheless these initiatives were scattered and incoherent. The Inspiring Australia strategy sought to bring these into a single national framework and to enable greater synergy, increasing the return on investment in science. The strategy was, quite overtly, an initiative to gain greater public support for science through increased public engagement.

Consultations leading up to the Report were wide ranging. They took place over a year, consulting with over 230 science communicators, educators, journalists and scientists in all states and territories. Written submissions were also invited. An intensive study of the needs of a typical regional centre was conducted and the views of Australia's youth were obtained through the National Youth Forum. The views of the humanities and social sciences were also sought.

The report contained 15 recommendations for increased engagement. Leadership of the initiative was entrusted to Questacon, the National Science and Technology Centre, which is part of the Australian Federal Government's science portfolio. One of the first actions was to fulfill a recommendation for a national summit to devise ways forward.

This summit was attended by representative groups of interested parties from science, education and industry.

In keeping with the recommendations, the Inspiring Australia initiative has been characterized by frequent consultation through national summit meetings both to report on progress and to determine future directions. It has endeavoured to involve the various states and territories at a local level through Inspiring Australia officers, whose role is to promote local engagement and national collaboration. The Australian Government has contributed AUD $21 million for the first three years. This has leveraged further funding from state and territory governments and from many science, education, industry, media, communications and community organisations.

The recommendations

The Inspiring Australia strategy included recommendations to support promotional activities such as travelling exhibitions showcasing Australia's science. An important focus was on National Science Week, which was recommended to be expanded, "leveraging further contributions by organisations across Australia and targeting new and under-served audiences" (Recommendation 8, p.xix). The initiative also recommended ongoing programs targeting under-served groups, "such as those living in outer metropolitan, regional and remote areas; Indigenous communities; people for whom English is a second language; and people who are disabled or have limited mobility" (Recommendation 12 p.xx). A focus on Australia's youth was also highlighted.

Recommendation 9 (p. xix) contained an ambitious aim for information sharing at the political level:

> That the national initiative include collaborative projects that stimulate science organisations and networks across Australia to work together to promote information sharing, including holding 'Hot Science' briefings for elected members and policy officers of Federal, state and local governments, and leaders in the legal and business sectors.

Two recommendations were the subject of expert working groups to formulate more specific goals: these were recommendations 10 and 15 (pp xix and xx).

> Recommendation 10: That the national initiative support science communication and media training for scientists and that a short-term working group be established to review mechanisms for further developing Australian science media content.

This was the subject of an initial expert working group, led by the Australian Science Media Centre, to set up a sub-group of recommendations for effective use of the media to promote science communication and engagement.

> Recommendation 15: That the national initiative support a program of research in science engagement—such as baseline and longitudinal attitudinal and behavioural studies, activity audits, program evaluations and impact assessments—to inform future investment decisions by government and its partners.

This recommendation was the subject of an initial expert working group, led by the Australian National Centre for the Public Awareness of Science, to set up a sub-group of specific recommendations for this research.

Last, a national web presence for the initiative was proposed.

Four other working groups produced reports addressing specific areas of concern. These were *Science Engagement and Tropical Australia: Building a Prosperous and Sustainable Future for the North*; *Marine Science: A Story for Australia*; *Inspiration from the Deserts*: *Science Engagement in and about Australia's Desert Regions;* and *Indigenous Engagement with Science: Towards Deeper Understandings*. Each working group produced recommendations to inform the initiative and to propose projects to pursue those outcomes. Specific recommendations often involved aspects of science communication that dealt with the actual practice of science: for example, in the desert it was recommended that a new Desert Science Network be formed, that would seek to ensure that desert science communication activities contain a focus on local knowledge, Aboriginal traditional knowledge and scientific knowledge systems working together.

The recommendations of the Indigenous engagement report included resourcing and supporting the maintenance and enhancement of Indigenous knowledge systems and intergenerational transfer of Indigenous knowledge, recognizing the critical role of language in this engagement. An Indigenous Australian Science Agenda, guided by Aboriginal and Torres Strait Islander peoples, should ensure synergy with cultural, economic, social and environmental outcomes for communities. Cultural competency tools and programs should be developed, in order to enable scientific communities to understand how Indigenous knowledge systems deepen the value and relevance of science in Australia.

Outcomes

A flurry of activity has followed the launch of Inspiring Australia (Interim Report, Executive Summary, 2013). It is estimated that, in each year of the initiative, over 5,000 organisations across Australia have taken part in some kind of science activity, event, or project. Five thousand projects have been supported. These include projects in citizen science, in reaching disadvantaged groups, in making links with industry, and so on. A typical example of citizen science is the Redmap Project (Range Extension Database and Mapping Project) which invites Australians to share their sightings of unexpected marine life at their favourite fishing and swimming spots. This project is about understanding fish movements and management – of vital importance to the sustainability of Australian fisheries. Global warming is having a marked effect on marine movement. Redmap aims to become a continental-scale monitoring program along Australia's vast coastline to help track marine range shifts; but also to engage Australians with marine issues using their own data. Every month the website has 10,000 downloads. "We hope to create a network of fishers and divers that are driven to find out how fish are impacted by changing conditions, like ocean warming, by contributing to this knowledge," said Dr Gretta Pecl, the marine biologist who first started Redmap.

In contrast to Redmap is "Rocks on the Road", a project designed to raise awareness of the science of mining and its importance to the general community. The program offers insights into careers in science and opportunities to be employed in the sector in a variety of jobs. The project has a special focus on young women and

Indigenous Australians. Incorporating hands-on activities and educational resources, geologists and mining scientists tour the Western Australian Goldfields. An important aspect of the program is the careers roadshow. Going underground gives a first-hand experience of working on some of Australia's most important mines. Evaluations show that 73% of students learnt about careers of which they had previously been unaware. A similar number want to learn more. The program is targeting a range of age groups, including primary students, and is building a trailer to travel to remote locations. Over 5000 people so far have participated in the Rocks on the Road Program, in an area of the Goldfields spanning over 500 kilometres.

The estimated number of people that have been reached by the Inspiring Australia strategy is 6 million over three years: this is one quarter of the population. All state and territory governments and key science organisations have supported programs in the capital cities and in regional areas. Twelve of the fifteen recommendations have advanced significantly.

From the point of view of the Government, this has been a successful initiative, especially economically because for every dollar spent on National Science Week, a further $11 has been contributed from other sectors. Another element of the Inspiring Australia initiative, the $5 million Unlocking Australia's Potential grant program, has been successful in attracting twice that in support from other sources. This has been achieved in extremely straitened economic times, when such investment is hard to find.

In the view of Questacon and the national organisers of the strategy, however, the main significance of the initiative is not these financial outcomes. The involvement of local groups in a closely coordinated way has meant that there has been not only cohesion but also greater collaboration. Local Inspiring Australia officers have built lasting local networks. The cooperation and collaboration of the science sector itself has resulted in a significant move forward for public engagement, enabling the gap between science and the public to be lessened. The Inspiring Australia website (http://inspiringaustralia.net.au/inspiring-australia-into-2014/) states:

> …the real achievement has been to establish a model for the national coordination of science engagement, with the challenge now for scientists and communicators to keep

working together to make the most of this opportunity.

Nevertheless, the list of what remains to be done is long and challenging. The expert working group for Recommendation 15, relating to research, set up a framework for performance measurement that will be applied in the future to all events and activities, to check both aims and outcomes against the goals of the Inspiring Australia strategy. A preliminary survey of the Australian public which will form the basis of future comparative surveys has been conducted. An evidence base is, therefore, in train but it will be several years before any concrete national evidence of change will emerge.

The involvement of industry in science engagement is variable and could be better connected at the national strategic level, as is the communication between science researchers and key decision makers. The Inspiring Australia strategy is continuing to explore ways to bring these groups together in a productive way.

All these ongoing challenges require further funding, which in the economic climate of the present day is problematic. Nevertheless, regardless of the level of funding into the future, the leadership and coordination mechanisms that have been put in place will enable a continuation of a collaborative approach for future science engagement programs.

References

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