

2010 ASTEN Fellowship Report

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ASPAC 2010 Conference: share. learn. grow. together

22-25 March, 2010, Otago Museum, Dunedin, New Zealand



In early 2010 I received an ASTEN Fellowship grant, which enabled me to attend the ASPAC 2010 Conference held in March at the Otago Museum in Dunedin, New Zealand. The ASPAC Conference brought together 118 delegates from 19 countries. The conference recognised the collaborative potential that exists through the interchange of ideas and experiences between cultural organisations and as such focused on three key resources to share:

1. **Information (Visitor Experience)** – providing greater solutions through sharing information across ASPAC networks and working smarter through utilising knowledge.
2. **Material (Exhibition Development)** – increase travelling exhibitions across ASPAC networks, further utilising and re-purposing resources efficiently and productively.
3. **Personnel (Growing our people)** – providing the exchange of personnel across ASPAC organisations along with relevant experiences in efforts to improve science communication methods and scientific literacy.

My role at the Powerhouse Museum is Manager, Education Programs where I am responsible for a department that develops programs and resources in science, design and social history for a wide array of education audiences including Primary, Secondary, Tertiary and Adults. The Powerhouse Museum has as one of its key strategies in its newly developed Strategic Plan, 2009-2012, 'To deliver programs which explore creativity, technology and the science in ways which stimulate learning and innovation'.

Through learning about those real examples of colleagues at the Conference, this knowledge is directly transferrable to my current role and helps inform my development and delivery of programs. I was able to gain insights into examples of best practice and learn equally from those practices that have not worked so well.

As such, the professional development opportunities of attending the conference for me were four-fold:

1. **Being an active participant** (pg 2) – supporting the cross-fertilisation of ideas, through presenting a paper at the Conference on participatory programs that enhance visitor experience at the Museum along with contributing to forum discussions.
2. **Being an active learner** (pg 3) – listening to the experiences of a diverse array of professionals from varying cultural contexts, on an array of topics from science communication, evaluation and exhibition development to engaging with community.
3. **Developing networks with key stakeholders in science communication** (pg 5) – from a multitude of science centres and museums around the world and strengthening these networks across the science and technology exhibition industry throughout both Australasia and the Asia-Pacific region.
4. **Exploring visitor evaluation** (pg 5) – participating in a workshop focused on evaluation, which explored the conference's sub theme of 'visitor experience' and is particularly relevant to my role in evaluating the effectiveness of programs in engaging audiences in science.

This report will highlight some of the key insights and developments that I was fortunate enough to learn about through attending the conference, and the ways in which these can help inform the development of new initiatives and enhancements to practice at the Museum.

1. Being an active participant

ASPAC/ ASTEN Fellows presentations

On Tuesday 23 March, ASPAC and ASTEN Fellowship recipients presented to conference delegates various initiatives that their Museums and Science Centres were undertaking in various areas such as Education and Public Programs as well as exhibition development. Ganigar Chen, Director of Science Communication and International Relations Division from the National Science Museum, Thailand facilitated the session.

I presented a paper titled '*Participatory Programs: Giving visitors a voice and supporting our community*'.

The presentation highlighted a number of recent participatory programs and experimental visitor experiences from three Programs Departments at the Powerhouse Museum that are providing greater opportunities for visitors to engage with our collection on a number of platforms, as well as allow visitors to respond to issues which affect them and the greater community. In doing so, we want our visitors to have a voice, helping make cultural organisations such as the Museum more dynamic and relevant to our community members and visitors, recognising their role as 'important civic spaces' (Gurian 2007). The intention of the paper was to provide colleagues with useful examples of successful 'entry points' for their visitors to participate more actively with their institution.

This session was very useful in sharing initiatives and new approaches in a range of areas that people could utilize in their organisation including; Scitech, Perth's attempts to attract new audiences to their centres, in particular adults; the Discovery Science and Technology Centre, Bendigo's utilisation of its strong community base in the delivery of high quality programs; the National Science and Technology Museum, Taiwan's use of team competitions in science education to stimulate cooperation and creative idea development amongst participants; and the Science & Technology Centre, Indonesia's various methods of increasing awareness of Avian Influenza in the Indonesian Community.

Present in the audience for the ASTEN/ASPAC session was President of Informal Learning Experiences, Mac West. He publishes the *Informal Learning Review* and invited me to write an article for the publication, based upon my paper. The article was later published in the No. 101. March – April 2010 edition, where given its international distribution and recognition for presenting case studies and initiatives within informal learning, this was an invaluable professional development opportunity made possible through receiving the ASTEN Fellowship.

2. Being an active learner

A number of sessions and events throughout the conference were relevant to me in my current capacity as Manager, Education Programs at the Powerhouse Museum. They included:

- The *Science Communicator's Demo Day* and the *Otago Community Concert* on Sunday 21 March. Here I was able to see fantastic examples of innovative science shows ranging from interactive theatre and performance by The Roadshow, New Zealand to liquid nitrogen ice-cream making from Creative Science International, Singapore. The Otago Community Concert, hosted annually, highlighted the central role that the Otago Museum plays within the Otago region, where their reach and level of engagement with the community is far and beyond the walls of their Museum. This was reflected in the words of Helen Horner, Director Programs at Otago Museum who said it was "not a Museum 'out there' but in the community". Further initiatives from the Museum that reinforce its engagement with the community included coordinating the Cancer Relay for Life.
- Keynote by Dr Goery Delacote, Chief Executive of At-Bristol, UK – 'The 3 Es of Science Centres: Empower, Educate, Entertain!'. This session highlighted the importance of managing a 'culture of learning' not an organisation and ensuring that this culture is shared amongst everyone in the organisation. In particular he talked here about the importance of 'openness' in managing a culture of learning and 'explicitness' in making learning transparent to the public through

communicating this message. For example at his former workplace, the Exploratorium in San Francisco, they put the workshop on the floor so people could see the process of artefacts being made first-hand. He talked about ensuring that visitors have a level of involvement and creative capacity that personalises their visit as they are hungry to create and be involved. Relevant to my role was the importance of 'explicitness' and articulating to the public what it is you are aiming to do so that they are in a position to understand and respond.

- Tomoko Yuzuriha, from Mirakain, National Museum of Emerging Science and Innovation, Japan, discussed the importance of talking with others in an exhibition space for learning and the role science communicators have in facilitating this unique value. Particularly relevant here was the use of technology by communicators such as laptops and smart phones as the Powerhouse Museum is currently exploring the possibility of providing iPads to support visitors to explore the collection. Important in Tomoko's presentation was the use of communicators in this role as facilitators in contrast to visitors utilising this technology independently.
- Andrew Beale, Manager of The Roadshow, New Zealand, provided various initiatives that they were undertaking to enhance the student on-floor exhibit experience. Their "Big Questions" and "Extra for Experts", were two techniques that they use to focus students on the learning experience and provide an opportunity for their to share their knowledge and being awarded for their success. The former providing direction for learning, reiterating to both students and teachers the educative purpose of the themed exhibitions. The latter puts the students in the position of 'experts' in explaining the science underpinning the exhibits to others, where they are awarded prizes for their explanations.
- Cassie Dong, Science Centre Singapore, talked about their extensive outreach program, *Science on the Go*. The key message from this was the service they were providing in schools was aimed at making a strong impressions with students and teachers, almost as a taster, to later encourage their visit to the Centre for follow-up enrichment classes and visit the science exhibits. They incentive scheme *Science Centre Learning Passport* was a great initiative that rewarded teachers who brought 1,000 students to the Centre with a free outreach visit. Susan Chang, also from the Science Centre, highlighted the initiative *Science Busking*, where the winner of science demonstrations had the opportunity to present their shows in the centre as guest performers.
- Genevieve Fahey, Manager, Scienceworks at Museum Victoria, Australia, talked about the important role that Museums and Science Centres have in engaging the public in dialogue around controversial global issues such as Climate Change. She highlighted the study, '*Hot Science, Global Citizens*', undertaken in Australia and the US, in which Science Centres and Museums are recognised as agents of change as they are able to provide important gaps in expert information for the public and provide access to a range of resources including connections with scientists and helping people think critically. This reflected recent programming at the Powerhouse Museum with *Ask me I'm an expert* in December 2009, which provided the public with the opportunity to outline what they felt were the appropriate levels of action the Australian government should take in reducing emissions as well as gauging peoples interest and willingness to 'participate' in discussion and debate around climate change. This session reinforced programming priorities for me in relation to upcoming exhibitions at the Museum.

- Andrew Hannah, Scitech, Australia discussed the way in great science experiences can occur in 'the details' of the visit, which I could see easily adapted to other centres. For example, 10 second science shows – mini experiences, PA announcements limited to 5 words, utilising Segways for novel travel around the centre and providing visitors with surprising science facts when they visit bathrooms.

3. Developing networks with key stakeholders in science communication

The Museum as part of its Strategic Plan, aims 'To be a collaborative and connected institution', with collaboration being a key theme and underpinning of the conference.

Science Centres and Museums do not exist in isolation but instead share the common goal of enhancing our respective communities. Fostering greater collaboration between cultural organisations in the Asia Pacific region has significant benefits for enhancing the collective capacity of its members. The opportunity to attend the ASPAC Conference meant that I was able to meet key stakeholders in science communication amongst the ASPAC and ASTEN members. In particular I was able to foster professional relationships with colleagues from other Science Centres and Museums in Australasia through the ASTEN network, who I now regularly communicate with in my role at the Powerhouse Museum.

4. Exploring visitor evaluation

The pre-conference evaluation workshop was highly participatory and expertly facilitated by Daniel Loy, Head of Learning Research at Petrosains, Malaysia, where the session investigated three phases of evaluation - starting, doing and strengthening evaluation.

Starting Evaluation

Daniel asked participants to share those more and less effective evaluation initiatives being undertaken at each respective organisation. In terms of our own professional development we were asked to create a wish-list of what we hoped to gain from the session and identify one short-term and one long-term goal you'd like to see achieved for your organisation.

This session served as a great introduction and consolidation of key concepts in conceptualising evaluation including: Defining the purpose, identifying methodologies, sampling strategies, adopting frameworks to measure outcomes and goal alignment to determine whether these outcomes are aligned with the established goals.

The most common evaluation methodologies identified by the group were questionnaires, interviews and observation. There were however, some novel initiatives shared from science centres including 'Piggybanks', where visitors were able to comment on their experience using tokens, where their responses and subsequent evaluation were presented in a very visual manner through their voting in piggybanks. Various user generated online initiatives were also discussed, gauging customer feedback including Net Promoter Score, Museum Victoria's 'Advocacy Zone' and their 'Voice of the Customer'.

Doing Evaluation

The session started with the group sharing common data collection challenges and factors that effect 'doing evaluation' including logistics, internal communication, protocols, ethics and incentives.

The topic of data analysis was discussed, in terms of how to make it easier to understand data through possessing a good analysis plan and through effective reduction and coding techniques.

Amongst a number of case studies, Daniel provided one particularly impressive case study showing how drawing was used as a tool at Petrosains to evaluate young children's experiences at the Centre. The study investigated the visit recall of young children through asking them to "draw what you remember seeing and doing in Petrosains", demonstrating their level of engagement through their visual interpretation.

This case study is particularly relevant to my work at the Powerhouse Museum where a significantly large number of our audience base is made up of children and families. We engage students quite often in drawing within the museum through various programs including writing object labels and drawing workbooks, however it is not commonly used as an evaluation tool to gauge visitor engagement which I am now interested in investigating at the Museum. Particularly relevant here is how it can be utilised for the Marvellous Machines program at the Museum which has students investigate the collection through drawing.

Strengthening Evaluation

The third session focused on five ways in which evaluation can be strengthened including establishing the goal of the particular type of evaluation that you are carrying out, recognising where there is help and resources in your organisation, the importance of support across the organisation for evaluation and effective data management

Daniel provided kits with all the content from the workshop including further reading, which was available online rather than in hard-copy which was a great initiative to reduce environmental impact.

Through participating in the workshop we now are also able to access the 'Visitor Studies Support Group', enabling sharing of evaluation methods and advice amongst ASPAC delegates, which was one of the three key objectives of the Conference.

Acknowledgements

I would like to express my sincere gratitude to the ASTEN Committee for awarding me the ASTEN Fellowship, which enabled me to attend the ASPAC 2010 Conference. It was an invaluable experience that has informed my professional practice greatly and has an ongoing impact today. I look forward to further utilising and developing the relationships that I obtained while attending this conference.

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Websites for reference

ASTEN – Australasian Science and Technology Exhibitors Network
<http://www.astenetwork.net/>

ASPAC/ ASTEN Fellows presentations
<http://www.aspac2010.com/presentations-aspac-asten-fellows.aspx>

Otago Museum
<http://www.otagomuseum.govt.nz/>

Museum Victoria
<http://museumvictoria.com.au/>

Powerhouse Museum
<http://www.powerhousemuseum.com/>

The Informal Learning Review
<http://www.informallearning.com/ilr-about.htm>

Exploratorium. The museum of science, art and human perception
<http://www.exploratorium.edu/>

The Roadshow
<http://www.roadshow.org/>

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<http://www.at-bristol.org.uk/>

Scitech
<http://www.scitech.org.au/>

National Science Museum, Thailand
<http://www.nsm.or.th/>

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<http://www.miraikan.jst.go.jp/en/>

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<http://www.science.edu.sg/ssc/index.jsp>

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<http://www.petrosains.com.my/>

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<http://www.otagomuseum.govt.nz/>

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<http://www.hotscienceglobalcitizens.net/>

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