

2013 ASTEN Fellowship: Professional Development

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I recently visited Questacon and Scienceworks through the ASTEN Fellowship Professional Development program. As part of my visit, I was able to explore Questacon for the first time and marvel in the many levels, exhibits, interactive shows and meet with the dynamic team of staff. I then travelled to Melbourne where I re-visited a revamped Scienceworks who had just opened their groundbreaking new exhibition, Think Ahead.

Earlier in the year, I undertook a review of Scitech's suite of shows including the science theatre, puppet theatre and planetarium. As a result, I had a keen interest in the shows presented during my time at each centre. I have tabled my observations below. *Please note however, that my experience of these two centres was restricted to a narrow exposure of shows and presenters and this is purely a snapshot representation of my experience and opinions on any given day.*

	Questacon	Scienceworks	Scitech
Science theatre shows seen	<ul style="list-style-type: none"> - Rocket Science 101 - Predator vs Prey - Astronomy show - Murray-Darling Basin show 	<ul style="list-style-type: none"> - Bolt from the Blue 	<ul style="list-style-type: none"> - Generalisation of all shows (<i>yes, that is not fair, I know</i>)
Show Presenters	<ul style="list-style-type: none"> - No name badges - Announced the show but did not always introduce themselves - One person show - Occasional use of characters and costumes - High-energy, motivational presenters, laced with humour 	<ul style="list-style-type: none"> - Name badge - Announced the show & introduced themselves & control room staff - Two person show - No characters or costumes - More reserved presenters who let the science do the talking. Little humour used. 	<ul style="list-style-type: none"> - Name badges - Announced the show & introduced themselves - One person show - No characters or costumes - Energetic, motivational presenters with minimal humour used
Visuals	<ul style="list-style-type: none"> - Title of show shown on screen - Mixture of videos and 'prezi-style' moving slides 	<ul style="list-style-type: none"> - Title of show shown on screen - Mixture of video and slides - Interactive use of space (screen retracted to use area behind) 	<ul style="list-style-type: none"> - No screen used. Would recommend utilising this medium. - Screen can retract but too slow to do during show
Lighting	<ul style="list-style-type: none"> - Use of lighting 	<ul style="list-style-type: none"> - Use of lighting via control room 	<ul style="list-style-type: none"> - Use of lights (not so much coloured lights)
Equipment	<ul style="list-style-type: none"> - Use of a 'live' cam - Advanced equipment that is presenter-operated. Very slick, very smooth. Well trained in their 	<ul style="list-style-type: none"> - Use of a 'live' cam - Staff member in the control room to navigate the screens and equipment. Disjointed at times with miscommunications between 	<ul style="list-style-type: none"> - No live cam used. Would recommend adding this element. - Presenter wears arm remote

	technology.	presenter and control room. Would like to see how this show evolved if operated by the one presenter.	to control music and lighting.
Music	- Music was incorporated into the shows I saw or at least pre-show	- No recollection of music	- Music is used pre-show and sometimes during
Dems	- Dems were clever and well-timed. The use of audience interaction, enhanced the dem and added to the experience	- Dems were well done and showcased a range of experiments and science concepts. There was great variety and all connected well to the main theme of electricity and lightening	- Wide range of dems and good audience interaction.

Questacon:

Excite at Q

Teamed with blue lights and a vibing atmosphere, this area is a haven for youth and adults alike. Geometric artwork and bright colours mark the entranceway as you enter into a cave consisting of a stomach-churning, a free-falling slide, versing a robotic arm to a game of air hockey, testing your reaction time against your mate and playing with what I like to call 'smoke clouds'. This space was impressive and has clearly been designed with a teenage/young adult audience in mind. I have taken away many ideas about how to tap into the elusive youth market.

H2O

If the Excite zone sent you into a hive of activity, thrills and spills, then this zone worked to achieve the complete opposite. Walking into this quiet, open space, you have a feeling of serenity that is simply calming. The major water attraction in the centre is just stunning and I could have watched the ebb and flow of the water cycle for hours. Although a couple of the exhibits had me standing there scratching my head, on the most part I loved the mood of the space.

Shows

Questacon are well renowned for their shows and my experience did not disappoint. The presenters were enthusiastic, passionate and interesting without being over-the-top or in-your-face. There was a terrific balance between audience interaction, experimentation and flat-out learning. The use of visuals was great and is something I will highly recommend for Scitech.

- The use of interactive 'prezi-style' visuals meant the presenter had full control of the moving visual story and allowed the audience to picture the science they were discussing. I am very much a visual person and having the diagrams and representations of the science helped me immensely.
- I would like the presenters to introduce their name (for shows that don't involve a character) at the start and end of the show as I think this personalises the experience and helps with visitor reference and conversations outside of Questacon. Failing that, wearing a name badge would be ace.
- I thought the addition of costumes and accents to some of the shows was clever and added an extra element but the shows would still be strong without them.

- The use of humour in the shows is key. There was adult humour and flat-out silliness for the kids. The image of Nash running across the stage mimicking a frilled-neck lizard is still emblazoned in my mind and makes me giggle.
- I really appreciated the presenters chatting casually to the visitors before the show. This warmed up the crowd and broke down the visitor/presenter barrier. The kids also seemed to get more involved with the back and forth banter and were forth-coming with questions at the end of the show.
- The use of live cameras to project the experiments up onto the big screen was also really nifty.
- The use of local content and relevance in regards to the Murray-Darling Basin show was really well done. It was thought-provoking, enlightening and very real without being confronting or controversial.

Q-Lab

- Although I didn't get to observe this being actively used, I could draw parallels with Scitech's Ingenious exhibition and R&D zone. I love this 'informal' form of science learning that is part lab design, part presenter-guided and part free play. It's exploring and testing in its purest form and it works. I can't wait to see how this space grows and develops.

Mini Q

- Lockers. Such a simple yet practical idea, especially as it allows parents to leave their prams there unattended and put their valuables away without having to lump them around with them. Aside from that, the design is just simply adorable. I want these at Scitech.
- A locked gate – again, it makes sense but Scitech doesn't actually have this, rather we encourage a more free-form sense of exploring and playing. But in reality, it makes a great deal of sense and gives a sigh of relief to parents who don't want to have to watch their child like a hawk – those nippers are fast!
- The wet area was adorable and the Australian outback look and feel was really well put together. The free form of play and uninhibited ability to splash, swish and interact with water and its properties was a joy to watch.
- The jungle gym area in the centre was a cool idea, and let's face it – a great way for kids to burn off some of that energy!

Outdoor areas

- Both science centres had great outdoor spaces to either sit and enjoy lunch or take a breather and soak in the science.
- I particularly like the amphitheatre and underground areas at Scienceworks that help host large school groups. Manoeuvring school groups in busy times is still troublesome for Scitech, particularly when they have their food breaks.
- I was surprised by the lack of undercover area though outside the Lightning Room though at Scienceworks with myself and a couple of families having to stand in the rain while queuing for the Bolt from the Blue show.

Marketing and Communications

- Both science centres have very different ways of promoting their centres that differ greatly from Scitech. Whilst Questacon aligns itself with the other complimentary tourist attractions and attracts a predominately tourist market, Scienceworks tends to work within their Museum Victoria family to bolster their marketing efforts. Their marketing seems to have a far greater reach into the local market as well as the tourism industry. Scitech differs greatly

from these approaches relying heavily on the local family market and little-to-no tourism marketing.

- Now that Questacon are on Facebook, it would be great to see them fully adopting this medium as a way to spread the science word to the greater online community. They have some awesome new camera equipment and equally impressive video packages as a result. The online environment would be the perfect arena to showcase some of these videos and engage people with the wonders of science.
- The Museum Victoria suite has an impressive social media following. I will be sure to continue discussions with their team about how to engage more Western Australians with this medium.

Scienceworks

Think Ahead exhibition

- This is probably the most interactive and rich exhibitions I have seen to date. From the design, the layout, the colours, the exhibits, the animations, and the set design - this exhibition is sleek. Kids love it, adults love it, even young adults spent time designing their cars, laying out their augmented reality city or adorning bionic parts.
- A lot of research and design has been poured into this exhibition and it shows. I do not envy Scienceworks the job of keeping the technology and information up-to-date and always 'in the future' but I think this continual refreshing of content will keep it innovative for years to come.

Bolt from the Blue

- Aside from entering the Lightning Room soggy (from standing in the rain – see above comment re. outdoor areas), my initial impression of the room was cool. The industrial look and feel lent to the set design which consisted of a caged collection of mannequins, wires, equipment, a huge tesla coil, and other steam-punk looking instruments.
- I would have liked the presenter to acknowledge our presence on entering by greeting the visitors. Casual conversations while we are waiting for the show to start would also have relaxed the environment a bit, especially with some disgruntled families who were wet and cold.
- The presenter introduced himself and wore a name badge which was great, he also introduced the presenter in the control room which I thought was a nice touch.
- The introduction about lightening at the beginning of the show set the scene and gave a good pace for the rest of the show. This was pulled short however, by the presenter then stopping to give the safety and emergency procedure talk. He then went into the rest of the show.
- The visual representations of the science were fantastic and the use of the live cam was neat. The mix between slides and videos was great. I did find the communication between the presenter and the control room could be disjointed at times.
- Without knowing the complexities of the control system or the limitations of the equipment in the room, I wonder if this could be streamlined to be a one-person show. Having the presenter be able to control their own equipment would help with the flow of the show and allow them to following their own cues and pace.
- The experiments and use of the Tesla coil was impressive, the sound arch was beautiful, the confetti in the hand while using the Van de Graaff generator was delightful and I also like how the presenter held up the mirror and showed the participant her hair. This enticed

giggles and laughter from them which added to the experience. And the Jacobs Ladder blew my mind. BLEW. MY. MIND.

- The show narrative was tight and there was just the right balance between information and experiments to keep the visitors engaged. Upon leaving there was lots of excitement from the kids and families who clearly had a blast.

Planetarium

- The foyer area is a great little space. I wondered why you queued up in the exhibition space and not in a snake- like fashion around the planetarium foyer.
- The shows were fantastic as usual and the presenters on both occasions were great. I thought it was strange that after watching the planetarium show, you had to sit through the credits before moving on to the night sky presentation. I would have liked to see this live presentation at the beginning of the viewing as everyone was getting restless by the end.

In conclusion

My discussions with colleagues at both Questacon and Scienceworks were hugely beneficial and I relished the opportunity to talk with like-minded individuals. Listening to them talk about (and being able to relate) to their struggles or riding the highs of a 'wow' breakthrough moment they have had with an individual or group has refocused my passion for science communication and renewed my motivation to continue spreading the science word.

I will continue my conversations with the contacts I have made and welcome and questions or discussions from the ASTEN and wider science group.

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