ACCE Study Tour 2015

Martin Levins
2015 Tour Leader

History

The Australian Council for Computers in Education began study tours in 2008 and has been led in the past by Tony Brandenburg, John Oxley, Jason Zagami, Trudi Sweeney and Karen Swift.

Typical of each tour is the camaraderie that develops between participants and the networking possibilities with other, like-minded educators.

The 2015 tour was no different: an eclectic bunch, which was wonderful, as we found we could offer alternative perspectives to one another, and gain a better understanding of one another's roles in education.

The tour officially departed Sydney June 16, but several of our group were already in the US, on tour in their roles as Hardie Scholarship awardees.

The evening of June 16 saw the whole group meet for the first time in person, sharing ideas over drinks before the next, very big day.

We were in San Jose for one day only, but made the most of it, visiting Digital Promise, Frys Electronics (for all those forgotten electronic leads and connectors), then Google, Apple and Aruba Networking.

At Digital Promise in Redwood City, we met with Karen Cator, President and CEO, and a leading voice for transforming American education through technology, innovation and research.

Karen was Director of the Office of Educational Technology at the US Department of Education in the early days of the Obama administration, where she led the development of the 2010 National Education Technology Plan and focused the Office's efforts on teacher and leader support.

Digital Promise essentially acts as a broker between industry and schools, and is developing the concept of micro-credentialing. It is, in effect, the credentialer of credentialers in this respect, working towards conformity and acceptance with universities, and very big promoters of Challenge Based Learning.

Digital Promise was the beginning policy bookend of the tour (the closer was Bonnie Bracey Sutton, who worked in the Clinton administration, more of this later)

Karen listed Obama's accomplishments as:

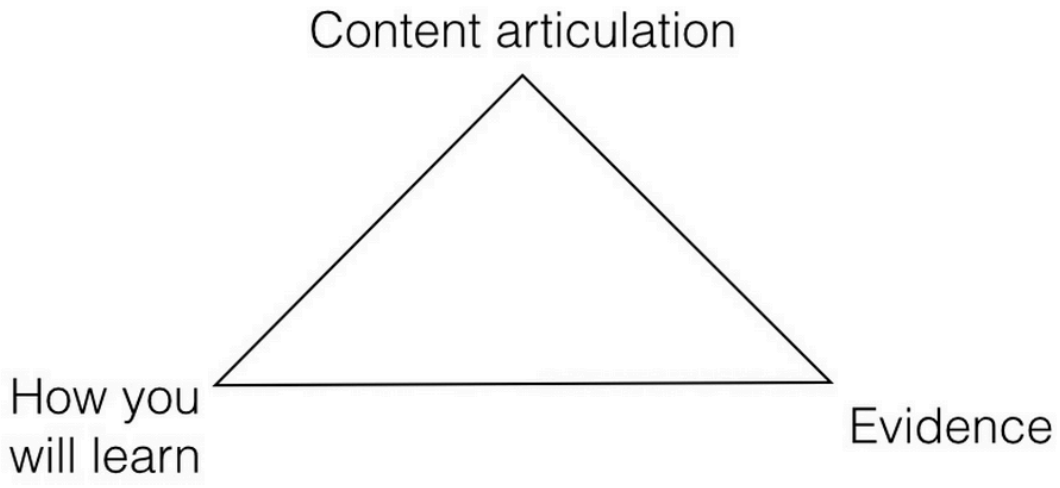
- the 2020 "North Star" goal of increasing the graduation rate to college
- an expansion of the eRate (funding for school technology) program
- building the significance of learning analytics

She also noted that the traditional model of a company setting up a foundation to assist education (essentially a US tax shelter) had changed to one of corporates recognising that they needed to be more active in assisting education if they wanted the sort of agile, flexible and collaborative staff that they needed.

She went on to describe some research where three entities could defined how assessment of learning could be better achieved.

Essentially, once the content has been articulated, the student defines how the learning will happen, and the provider and student together decide what evidence could be used to demonstrate learning.

Like all things educational, we need a diagram to describe this.



After lunch at Fry's Electronics, founded as a Silicon Valley retail electronics store in 1985 to provide a one-stop-shopping environment for the hi-tech professional, did the tourism thing with photos at Google and Apple.

At Google, Adam Eijdenberg took us on a walking tour of the campus. A Hobart boy, he had been involved in the development of the matrix flight system and was now involved in security systems at Google.

The day finished at Aruba Networks, in Sunnyvale. (Aruba has just merged with HP and will provide a much-needed boost to HP's wireless networking systems)

Our presenter, Dan Rivera, started with the idea that Radio was hallmarked as a game changer for education. It didn't happen. Then TV was to have change education. That didn't happen, then the computer was to have changed education. That didn't really happen, but now mobility will change.

In US primary schools, on average, there are 1.4 devices per student and 2.7 in secondary, with his company now referring the current cohort of schoolkids as "GenMobile".

An early start to Thursday saw us flying to Seattle and driving to the Tacoma Schools district offices

Josh Garcia, deputy superintendent of Tacoma Public Schools, a recipient of several national awards and noted as the "2015 Leader To Learn From", was our host.

Josh was a standout. His role had been to "get everything out in the open" regarding policy, and, subsequently, to lift graduation from its 55% doldrums

As I saw it, he essentially leveraged the media and parental inertia.

In the past, students (in consultation with parents) had the opportunity to "opt-in" for AP (advanced placement) courses and very few did.

So, he changed the model to "Opt out" essentially raising the bar.

He initiated and then forced the educational conversation into public sphere, leveraging the call for accountability (which traditionally involves test scores) and asked the community "What does accountability look like to you?".

He stated categorically that it was up to the stakeholders (parents, students, tertiary providers and politicians) to come to the table and if they didn't then they didn't have a voice.

By 2014, these initiatives led to graduation rates of 78%

Josh now supplies presentation tools for industry readiness and other metrics to educational and political bodies.

"It's not appropriate to measure graduation rates at college, as there are lots of variables that come into play that teachers in high school don't have control over" says Garcia. Instead he uses tertiary acceptance as a metric as this is closer to the school/ higher education interface over which the teacher has better control.

He essentially forced universities to to fess up to minimum standards and sign an MOU to the extent that, should the student reach that standard, then they were admitted.

His approach seems to boil down to

1. Tell me what is needed and how do I measure whether we've achieved
2. I'll decide how to achieve and
3. I'll report back to you and we can cycle through to iteratively improve

Tacoma School District supplies lots of backend analytics to support and publically demonstrate successes and failures.

We spoke briefly about the temptation to use collected statistics to predict student pathways and his wariness in doing so.

Later that day, at Microsoft, we were hosted by Mark Sparvell, ex South Australian principal and now Senior Education Manager for the School Leader audience.

After a visit to the obligatory company store, then signing a Non-Disclosure Agreement, we toured the Microsoft Envisioning Center, which featured lots of electronic gizmos that controlled houses and lives.

Intellectual Ventures was our next stop. These guys take ideas and meld them to produce commercial products. One of the craziest is an adaption of Ronald Reagan's

"Star Wars" project that uses lasers to shoot down female Anopheles mosquitoes (identified by wingbeat frequency sampled by a separate, low power laser) to stop them acting as vectors for malaria.

Pablos (he appears not to have a surname, but then again worked as a white hat hacker before his current posting) led this aspect of the tour and described the purpose of the lab, setup by Nathan Myhrvold, ex CTO of Microsoft.

Essentially, their maker space, probably the biggest in the world, has scientists of all kinds, backed with a warehouse of everything from paper clips to electron microscopes (mostly bought on eBay!). Need something? Go get it from the store.

Current projects include a new type of small nuclear reactor that uses existing nuclear waste, the use of a femtosecond laser to identify those infected with malaria and self disinfecting elevator buttons. A broad church to say the least.

Intellectual Ventures adopted a shift in emphasis from Venture Capitalism to funding inventions per se.

Funding comes from the Bill & Melinda Gates foundation (used for malaria and other areas of research) and also from investors who benefit from the successful patents that are filed—over 500 per year in total.

Pablos described the ideal people for this high risk environment to be "T shaped"—people who have deep knowledge in one specific area or discipline but are also broad in approach and able to converse with others about each others' expertise.

What's valuable to his organization is a good problem, well defined.

When talking about education, he got really fired up. This was clearly exciting for him.

He obliquely referred to Video games as good learning models, what we would call the gamification of educational tasks. They can't be too hard or I'll get bored, can't be too easy or I'll get bored, so we need to present a challenge that is just right. (nothing new here: Vygotsgy's zone of proximal development springs to mind)

Saturday was our first free day and Seattle sparkled (not its usual rainy self) as our group visited the Music Museum, Space Needle, Pike Place, or just relaxed on the waterfront enjoying some great salmon.

To save a night in a hotel, and a day in flight, we took the redeye from Seattle to Newark and took a limo to arrive in New York early Sunday morning.

On Monday—The Computer School took our interest, visiting with Tracy Rudzitis, Stanford FabLearn Fellow, at The Computer School in Manhattan

Tracy was Fab and we certainly learned.

Odd that the school is called the Computer School and the instruction from her principal was to essentially let the kids play games so they wouldn't be too stressed—a far cry from the school's beginnings, as a 1988 article from the computer school will attest. [http://www.papert.org/articles/ComputerAsMaterial.html]

Her timetable was punishing, yet she still gave up her lunch to have kids in her maker space. My takeaway from this was StarLogo that her year 7/8 students were using to model complex behaviours such as predator prey and infectious disease propagation.

A quick lunch, then to a teacher workshop at the Children's Workshop School in East Manhattan, where we took part in a Promethean workshop, then toured the school with teachers.

If we wanted a contrast between school districts, then Scarsdale was to Tacoma as Donald Trump to a Mexican immigrant. A high SES location where the only schools are public, and the average property taxes (similar to rates in Australia) of $40 000 per annum contribute to the district's schools. Scarsdale students all graduate to "good" (read ivy league) colleges.

Jerry Crisci, Head of Innovation in the District, told us that his School Board is risk averse (don't mess with things that are working well), but they tell him that he needs more than the 38k requested for improvements to the new Innovation Centre plans. He then asks for 100k and they tell him if some things don't fail, then they're not trying hard enough!

Besides wonderful things being done by their students— a year 5 "capstone" passion project, concentrating on asking good questions (great resonance with Pablos from Intellectual Ventures)—Scarsdale has a Teacher's Institute where teachers give courses for teachers. Each course taken of given creates a salary credit. 6 x 2 hour courses, with a 3 hour project on Friday night, then Saturday, or a 36 hour (full week) say, iLife projects. Teachers are intentionally put in the role of a learner, achieving the required 175 hours over 5 years Professional Development.

Their teachers are now concentrating on how to measure development in critical and high order thinking. They've partnered with Christchurch Perth, Toronto, Finland, and Singapore to identify who is doing well and how they are doing it.

They've learned that so much of what happens in schools is situational, and that the key variable is not time. Finland has the shortest school day, Shanghai the longest, yet each can produce quality work.

Technology was described as the "tornado coming to schools". Their School Board wants transformational change, quoting "Technology as the fulcrum, not the focus" for such change.

Philosophies used include Regio Emilia and Harvard's Project Zero [www.pz.harvard.edu] to establish criteria for documentation.

We saw one junior school project which exemplified all of this thinking: children who created short and fast rhythm dancing, then painted what this looks like, outlined in conductive paint, using Makey-Makey, to make their "Kandinsky paintings" auditory.

It took a while for our group to deconstruct the experience that was Scarsdale.

Before travelling to Washinton, DC, we visited Brainpop, who were interested in our perspectives on the Australian Education Technology scene, then visited Apple's Executive Briefing Centre in Manhattan.

Organised by Mark Nixon, Business Development Executive for Education, K-12 in Australia, we spent several hours working with Paul Facteau, Innovation Instigator at Apple, talking about educational philosophies. A refreshingly different approach for a tech company—their technology was not mentioned once in the entire meeting.

We all needed some timeout to reflect after the stimulus of the last few day so boarded Amtrak for a 3 hours journey to Washington DC, where we stayed nearby the Whitehouse (yes, that Whitehouse).

Some free time, including a visit to the Newseum, where the media's contribution to the Vietnam War and its concomitant affect on pop culture was examined, we met for dinner with Bonney Bracey Sutton and Vic Sutton at the National Press Club.

Bonnie is an American teacher and technology consultant and one of the first teachers to promote the role of the Internet in the classroom. She was the only teacher selected by the Clinton Administration for serving on the National Information Infrastructure Advisory Council, whose work in the mid 1990s led to the creation of the Erate funding program. She also served as lead educator on President Bill Clinton's 21st Century Teacher Initiative.

In 1993, Bonnie was selected as a Christa McAuliffe Educator, and subsequently worked with NASA on various education programmes. Currently she is an international educational consultant; in this capacity she conducts outreach activities for the George Lucas Education Foundation and other groups and is an active member of the Digital Divide Network.

Vic Sutton, is an associate of the Thornburg Center for Professional Development and head of the ISTE Special Interest Group for Digital Equality.

Both Bonnie and Vic gave our group an insightful view of how far we have come and how far we have yet to go in technology adoption in education.

A wonderful bookend to Karen Cator at the beginning of our journey, we gained insights into how politics plays with Educational needs, and how "Big Business" is now playing in the educational sphere.

Did we finish there? No, back to Philadelphia to join the 18 000 people at the International Society for Technology in Education annual conference.

We were treated as VIPs, met hundreds of other educators, pursued our own and shared interests, navigated the acres of the expo floor and ate far too many Philly Cheese Steaks.

I owe a huge debt of thanks to all of the educators who gave so generously of their time:

Adam Eijdenberg, Bonnie Bracey Sutton, Claudine Goldsmith, Dan Rivera, Daniel Ingvarson, Don Buckley, Gary Stager, Jerry Crisci, Josh Garcia, Karen Blumberg, Karen Cator, Katherine Mazotta, Lucy Gray, Mark Nixon, Mark Sparvell, Maya Goffer, Pablos, Paul Facteau, ylvia Libow Martinez, Tracy Rudzitis, Tristan Rajah, and Vic Sutton.

But don't take all of the above on face value. Here are some personal comments made by some of the tourers:

"it is one of the most surreal yet rewarding trips that I have taken. Meeting and travelling with people with passion and drive that have given so much to others. We have engaged in conversations with movers and visionaries who hopefully, will be creating a new education paradigm for the 21st century. Immersion in this environment allows one to also reflect on the VAL and ICT pathways that Australia has created, which in all honesty are reasonably solid. I have become more aware of what we have to offer in regard to pedagogy, curriculum and passion so that we can stand with the rest of the world with justifiable pride. Yep, there are issues in curriculum and teaching pedagogy but they pale into the background compared to some institutions. The study tour should be an ongoing event if only to verify that our practice and education systems are developing with a sense of equity and purpose."

"The ACCE 2015 US study tour was a marvellous professional experience. The company of passionate and vibrant educators, along with the itinerary of varied, thought-provoking and stimulating visits and meetings combined to make this an enjoyable, stimulating and exciting professional learning experience.

The trip has given me an insight into the nature of the US education system, and confirmed for me some of the pros and cons of the Australian system/s. I particularly appreciated the chance to hear from education leaders and practitioners about the Maker Movement, and from educators and future thinkers about ways to foster innovation and design thinking. Other areas of personal interest included the place of testing and its potential ramifications, ways to address the shortage of girls and women in STEM, and ways to develop students as globally-oriented problem solvers.

Altogether, a very rich and rewarding learning experience."

"The study tour combined the massive collection of presenters, workshops and vendor displays of the ISTE2015 conference with a range of visits to schools, school systems and companies who engage with education. ACCE's network of international professional contacts (including ISTE) assisted the tour participants to engage in

extensive discussion with recognised and influential figures in educational ICT, as well as access to some of the largest companies in the education and ICT space. These contacts were extremely generous with their time and provided tour participants with significant insight into their future directions and strategies.

Additionally, direct interaction with a wide range of practising educators enabled us to see the impact of recent policy in US and international education. Some of these insights are of direct relevance to Australia, especially in relation to the Australian Curriculum Digital Technologies implementation."

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