Transformational leadership is essential in education as it empowers us and others to make positive changes to the way we think, feel and act in improving learning for all. Reflection is a vital element of leading the change process. In relation to participating in the ACCE study tour experience, reflection allows you to sit and think about the places visited, the experiences shared and the conversations that took place. For the 24 educators that attended this year’s 17 day ACCE study tour, there were countless opportunities to learn and reflect. This article has been co-authored by participants enthusiastic to share their reflections on how their experience has impacted on them as educators. Their perspectives originate from a diverse range of contexts across the country which include primary and secondary, public and private schools, education consultants and university lecturers.

The importance of professional learning networks

The study tour offered immense opportunities for developing and sustaining professional learning networks both in person and using social media. For example, Dominic Hearne was re-energised by re-establishing when he was able to re-connect to people in his network in person. Whereas Sarah Prestridge discovered the power of Twitter for developing her professional learning network. She commented: “I learnt to tweet and tweeted all the time. I became an obsessive twitterer whilst on the study tour. It was a tool that provided us with a dynamic level of interaction for stimulating and extending our thinking”. As an educator Sarah is intrigued at the learning potential of particular tools. Having had this experience using Twitter she is now applying this tool to her academic work to support pre-service teachers during lectures and throughout their course-work. Sarah discovered that many educators on the tour were new to Twitter. “Luckily we had Lauren Sayer, a Twitter expert who was able to show us how it was done. Once we got the hang of it we were tweeting our thoughts, critiquing each other, and enabling shared learning opportunities” says Sarah.

Two examples stand out to Sarah as good demonstrations of the learning potential of this Twitter. The first example took place during the Google workshop. “We were in a conference room all sitting around a boardroom table each with a device such as a laptop, iPad, iPhone etc. Two google instructors were taking us through some google tools. At the same time we were playing with these tools and tweeting the educational advantages in relation to our own learning contexts. It gave us a level of discourse that existed above the face-to-face and instructional dialogue”. For Sarah the use of the ‘back channel’ made people’s thinking explicit and facilitated reflection and discussion about the learning advantages of the Google tools. The other example for Sarah that shows the strength of this tool is the recording of the session as well as a critical interpretation”. Sarah believes that we used Twitter as a professional learning tool that extended and stimulated and extended our thinking”. As an educator Sarah is intrigued by the learning potential of particular tools. Having had this experience using Twitter she is now applying this tool to her academic work to support pre-service teachers during lectures and throughout their course-work. Sarah discovered that many educators on the tour were new to Twitter. “Luckily we had Lauren Sayer, a Twitter expert who was able to show us how it was done. Once we got the hang of it we were tweeting our thoughts, critiquing each other, and enabling shared learning opportunities” says Sarah.

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For Kim Martin the study tour provided a mix of face-to-face connections with dedicated educators from around Australia as well as valuable opportunities for professional dialogue with peers about the changing landscape of education. Kim was already an avid Twitter user and the tour enabled her to extend her network.

Di Clements highlighted the value of using Twitter during ‘down time’ (such as late at night, waiting for workshops at ISTE, sitting on the bus or plane, or walking to and from destinations) as it provided opportunities to objectively reflect on her learning. She commented: “These ad hoc moments helped me to connect with like-minded educators who are supportive of my efforts to lead change related to the use of technology in my school. My engagement with other educators about the ISTE’s NETS for students has helped me to realise that it is insufficient to just be knowledgeable about the use of technology”. In particular, Di emphasises that the encouragement she received from colleagues both face-to-face and using Twitter has given her confidence and determination as a principal of a South Australian primary school to lead change at her school to increase learning outcomes for students.

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The negative impact of testing and the lack of support for IT as a subject

David Grover was surprised that among the hundreds of workshops offered for 18,000 educators at the 2012 ISTE Conference in San Diego, the dominant theme was the integration of ICT across the curriculum (as opposed to IT as a subject discipline). Furthermore, many USA, Canadian and UK teachers appeared pre-occupied in finding escape routes from mundane lessons and the imperative for them to teach to standardised tests. In these countries, project-based learning, collaborative learning and group work were innovative concepts about which they were eager to learn. It was widely recognised among the delegates that Australian schools have engaged with these themes for years.

During the conference, a great deal was made of the concept of ‘flipping the classroom’, an overused expression which David learned to distrust as he felt that in practice, this signified no more than the watching of teacher-made video lectures at home in preparation for work in class.

The current parlous numbers of pre-service computer teachers and courses in Canada and the United States is greatly disturbing to David. He believes we need to offer dedicated computing courses much earlier, taught by specialist teachers at a much higher skill level. He states that we need skilled teachers of digital media whose attitude must be that of Paula Landry, “I teach the business of media, but what I am doing is preparing the next generation of media innovators.” Exposing teachers to industry standard practice and providing opportunities to update skills via university and vocational courses is vital. In the three continents which David recently visited teachers of computing were impeded by the assumption on the part of educational leaders and the general public, that adolescents are all ‘digital natives’ now, and so specialist IT courses are no longer of such importance. David felt that it was distressing to witness how little the need for computer science and specialist computing skills for emerging engineers, programmers and researchers was appreciated. In the creative domain, emerging technologies demand high-end digital media authoring, a set of skills increasingly required across a range of professions. This is a specialist area which needs its own highly trained teachers, rather than merely seeing it as an adjunct to visual arts courses.

The problematic tensions between creativity and testing were further addressed by Dr Yong Zhao in a separate keynote address. As Zhao stated: “Test scores do not lead to real education and what we need”. Zhao presented China’s standardised system as a system that has “killed off entrepreneurs”. In particular, Zhao argued that whilst politicians boast about the results of their country in the worldwide PISA and TIMSS assessments, it is most unlikely that the next Steve Jobs or Sir Richard Branson would emerge from their country given the intense focus on teaching to the test and not attending to the personal needs, gifts and strengths of the individual students in our care. It was more likely the next generation of entrepreneurs would develop from a school or classroom that allowed students to find their own path to learning outcomes, express their understanding and knowledge in a way that suits their learning style and value students’ voices in the learning process.

Meaningful learning with ICT

Despite the tensions associated with standardised testing, an equally strong theme evident throughout the study tour related to the focus on using ICT to support inquiry learning. This was particularly evident when visiting schools such as Johnson Heights Secondary College and Hillcrest Elementary in British Columbia, Canada.

For example, in Johnson Heights Secondary, it was decided to redesign the Year 11 curriculum ‘without a box’ by using ICT as a transparent tool for learning shaped by field trips, problem solving and critical thinking. Specifically, the ALIVE (Action, Leadership, Innovation, Voice and Engagement) approach was embraced which incorporates open-ended, authentic and collaborative pedagogical approaches. The tour group had the opportunity to hear from eight students from this class who spoke enthusiastically and honestly about how their learning had been challenged, extended and shared in ways that were not possible without the technology.

Similarly, Hillcrest Elementary focused strongly on student-directed and authentic learning experiences with iPads. In particular, assessment for learning was a strong focus underpinned by the belief in the value of opportunities a balance between formative and summative assessment methods. What was of particular interest was

Students at Johnson Heights Secondary School share their perspectives about learning with ICT
how the change to not formally marking all pieces of students’ work had changed the perceptions of parents about learning and assessment. Parent communication and support increased with online access to their child’s website and parents are no longer asking about assessments and scores as their child’s learning and progress is evident.

**Leading change with a focus on pedagogy**

From a principal’s perspective, Di Clements was interested in learning about how the Surrey District had achieved systemic change by focusing on the relationship between pedagogy and technology. Specifically, the district supported teachers to design and implement personalised learning environments (PLEs) involving game-based learning, personal learning and apps, tablets and mobiles. Di noted that this approach stood in stark contrast to the traditional change approach focused on merely providing financial support for the purchase of technology and the employment of ‘experts’.

Through classroom observations and dialogue with local educators and school and district leaders, Di noted that leading staff through this change process was possible with limited financial support and that the key was to facilitate staff with varying degrees of expertise to learn from each other.

As a direct result of her observations of Pride Academy in San Diego, Di had engaged staff in her own school with readings from the new books launched at the ISTE conference by the keynotes Michael Fullan (‘Stratosphere’) and Marc Prensky (‘From Digital Natives to Digital Wisdom’). These readings had been the catapult for dialogue and exploration of the use of technology related to the South Australian Teaching for Effective Learning Framework (TfEL).

Di explained that: “Designing learning through sound pedagogical practice and including technology when and where it enhances learning is our aim. Sharing what I observed at Pride Academy has led to rigorous conversations about whether we are utilising technology for learning or to increase our test scores”. Di’s participation on the tour has given her the credence amongst her staff to be the lead learner and instructional leader for pedagogical change through collaborative technology learning by both staff and students in her primary school.

Christine Haynes agrees with Di about the important relationship between pedagogy, technology and change management described in Michael Fullan’s new book “Stratosphere”. In particular, Christine highlights the value of Fullan’s four essential ingredients for successful technology implementation being to ensure that technology use is:

- irresistibly engaging for all stakeholders;
- elegantly efficient and easy to use;
- ubiquitous 24/7; and
- steeped in real-life problem solving.

There are complimentary connections between Fullan’s change management approach for leaders and the Technological Pedagogical Content Knowledge (TPACK) model focused on the essential elements of teachers’ knowledge development by Mishra and Koehler (2006).

**Current trends in devices and resources**

The availability of powerful and innovative software tools offers our students unparalleled opportunities for self expression while confronting curriculum developers, teachers and teacher-educators with major challenges. Current trends in devices and resources and their learning opportunities for creativity and challenges were discussed during the exclusive Australian Study Tour ‘Best of the Best’ session at ISTE with researcher Larry Johnson. The author of the infamous Horizon Reports, Larry identified emerging technologies categorised into three adoption horizons:

- Adoption within one year will involve mobiles and apps, tablets
- Adoption within two to three years will involve game-based learning, personal learning environments (PLEs)
- Adoption within four to five years will involve augmented reality (AR) and natural user.

Sarah Prestridge commented on the use of devices for learning she observed during the school observation visits whilst on the study tour:

“In the classrooms that we visited in Canada and the United States we saw many, many iPads. Children were eager to show us how they were using them as learning tools. Common practices were the use of many skill and drill apps, the reading of ebooks and access to the Internet. This wo highlighted two main issues. Firstly that iPads are mobile devices and not just smaller laptops. This provides opportunities for mobile data collection and sharing beyond the classroom for collaborative projects. For example, it is possible to work like a scientist and working scientifically to collect field notes rather than researching science content on the Internet for a PowerPoint and this creates opportunities for better pedagogical applications.

Secondly, open-ended apps where children create movies and presentations using a range of apps empowers the learner rather than making them respond to prompts and applause in spelling or maths drills. Fundamentally a new device such as the iPad won’t necessarily result in better learning as the pedagogical approach adopted is the key”.

**Contributed Paper (Non - Reviewed)***

*The ACCE 2012 Study Tour: Reflections on Reoccurring Themes**

*Students at Hillcrest Elementary share their learning with iPads*

*Students using iPads for drill and practice*
For Georgina Pazzi, the ‘Stages of using Digital Learning’ by Tamara Ranard and Lisa Cutshell’s that was shared during the ISTE Affiliates Day, was a valuable continuum with which to evaluate the use of digital devices observed during the study tour and within Australian classrooms.

This continuum highlights that the initial stages of using digital devices often involves teachers in substituting digital technology in learning activities in ways that could be done without the technology. Teachers do this because it is a logical starting point that connects with what they already know and done. For example, in the United States, using a device as a digital textbook as a substitute for the printed textbook isn’t a difficult skill. What makes it more challenging is understanding how learning can be enhanced by using a device to redefine learning. For Georgina, it is clear that professional learning plays a major role in supporting educators to understand the importance of effective pedagogies and practices to transform the use of these new devices.

Georgina is quick to point out that although having a level of technological proficiency does give teachers more confidence in using devices, they don’t all have to be expert users. Technology changes far too quickly for all teachers to become experts. The expertise must be educators’ pedagogical understandings about what can be done with these devices to improve learning and creativity using student-directed pedagogies. “The device is ever-changing. However, the pedagogy is ever-lasting” says Georgina.

Teachers don’t have to be ‘expert’ users of the technology but be prepared to give students the opportunity to explore what is on the devices themselves and teach each other the skills needed to create and shape their learning. This was evident at Johnson Heights Secondary where the teachers were not experts in using the technology and instead students used devices such as iPads and netbooks to support and share their learning. Another valuable strategy for facilitating teachers to move to the highest Redefinition Stage of digital learning is for teachers to observe ‘redefinition’ in action and deepen their understanding of the devices that support learning. In addition, Georgina believes that all teachers should be eLearning explorers, where they navigate their own path to finding and sharing new eLearning tools through the development of their professional learning networks (PLN), attending workshops and being a co-learner in the classroom.

The value of corporate partnerships

Steven Knipe valued the corporate visits during the study tour. He commented: “Schools were not the only places that were visited while we were away. We had chances to participate in a 1 day Google Workshop for Educators and attend briefings from Microsoft, Oracle, Cisco and Intel. What we took away from these was the belief that major companies in the Information Technology sector understand the needs of having 21st Century skilled employees and that education is where efforts need to be made. Most of the companies visited are concerned about the future and thinking about where the next creative, problem solving individuals will come from.”

Microsoft have undertaken global research into the school’s of today and are providing its surveys and analysis tools to assist leaders to identify areas of concern and provide resources to assist leaders and teachers change their thinking about assessing of student work and providing authentic learning tasks. Oracle is working on the need to develop problem solvers through the use of computer programming, in the development of resources and programming software like Alice and Greenfoot. Intel has been developing teaching tools and resources for a number of years but has expanded it to just-in-time, free X-module courses in a range of areas including science in the classroom, students using data and even a short course for leaders.

As well as the professional learning that occurred related to the corporate visits, the study tour group enjoyed the hospitality of our corporate hosts with a hot breakfast at Oracle, dinner and a learning activity at the San Diego zoo sponsored by Promethean and a dinner cruise sponsored by Atomic Learning. Thank you to these sponsors.

The 'Stages of using Digital Learning' by Ranard & Cutshell

Thought provoking conversations

Eddie Pollard highlighted that personalised learning was raised as an aspiration for teachers during the tour. “Our goal in the digital age is to awaken the creativity and passion within each individual student in our class and provide them with a digital avenue through which to express themselves”. The new tools we are provided with lend themselves to new horizons of creative opportunity. The social network and the ability to share with an audience beyond the classroom is an exciting development which classrooms can tap into.

For Dominic Hearne, the most valuable learning related to the symposia we attended and the private workshops that were exclusive to the study tour group. He commented: “The “Best of the Best” day that we had; the private audiences with Kathy Schrock; Gary Stager and the symposium with Alan November rattled my pedagogical cage. As a result, I’ve just been comparing Johnson High in Vancouver with one of the programs we offer at Waverley and asking questions about which is better and why”. I’ve come back questioning just about everything that I do and how I do it in my classroom and in my colleagues’ classrooms. The experience has been a catalyst for significant pedagogical change for me”.

One of the most valuable events at ISTE for Christine was a short conversation with innovative leader, George Couros as he inspired her to begin a continuous learning blog as a professional learning strategy. Specifically, he encouraged her to build evidence against the National Professional Standards for Learning by way of connecting with ideas and collecting evidence from professional learning networks.
Some final thoughts

Sarah Prestridge, shared some key thoughts that emerged during the tour that reflect the deep thinking that took place as we investigated the use of ICT as a tool for students to create, collaborate and communicate. These were that:

- Having children share their work in progress and redesign it in response to feedback is powerful. The learning occurs in comments, redirections and reflection. Peer feedback can be more powerful than teacher feedback.
- Paper and pen can be a block to learning.
- Leading with ICT should focus on putting the technology in children’s hands and not in the teacher’s.
- Complex questions for inquiry learning need to be refined through the learning process by the students.
- Assessment methods need to provide pathways for diverse learners and technology can provide opportunities for students to demonstrate what they know.
- Let’s celebrate play, being wrong, not knowing ... as that’s learning.

Steve states that “what was observed during the tour highlighted that in many ways Australia is leading the way in the use of technology in education. In some instances the places we visited were lighthouse schools, which were challenging the way teachers are thinking about technology integration and delivering curriculum to engage their students. It’s these schools where change was most evident. As educators it is important to keep up with current trends, so that we don’t fall behind. Many of the schools we visited were grappling with the influx of technology appearing in their classrooms and have shifted from simply substituting old technology with the new, towards a transformation of learning. A fact that many school leaders must start to do here in Australia”.

To Steve, the experience of discovering new people, new ideas and different points of view make his participation on the ACCE Study Tour a valuable endeavour. The professional learning and networking opportunities that occurred did not happen by chance but facilitated by people who are passionate about education technologies. On behalf of the inspiring educators who participated in this journey, we would like to thank Dr. Trudy Sweeney for her efforts, leadership and commitment to an activity we would encourage many other educators to experience. It transformed many of us as individual and we continue to draw on this experience to lead transformative learning with technology with colleagues in our diverse roles and contexts.

This article has been collaboratively written by the following authors in alphabetical order:

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Photos provided : Bronwyn White, Pam Grover, Ben Gallagher