Optimistic superseders

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Being put on hold, waiting for service in a complex system or hastily trying to edit detailed information on a mobile device, we have all experienced the waits, tensions and downfalls of bottlenecked systems and services. We can either get confused and frustrated, or we can design more effective solutions.

Today, design plays a much more profound role in shaping our lives than just appearance, styling and interiors (Norman, 2011). Well-designed systems can shape our experiences and communications. As though invisible, good design transforms and uncomplicates our daily interactions.

Designers, like great leaders, tackle bottlenecks and confusion on a daily basis. Being a good designer involves knowledge and practical understanding of associated systems, components and processes. The ability to redesign and generate new things also requires the ability to think visually with a solution-based metacognitive aptitude to synthesise, grasp and resolve the tension and layering of the artificial and the physical. We try to inculcate in the girls this kind of design-thinking mindset.

Entrepreneurship is a form of design, and requires a similar mindset and skill set. Successful entrepreneurs — like great designers — can now evolve in an e-commerce era where small-to-medium businesses can compete in new markets and with larger rivals in ways never before possible (Grayson, 2015). As a nation, we need to be bolder in our ventures and visions and our education authorities need to listen carefully to what is being presented in the business sector. The Governor of the Reserve Bank of Australia, Glenn Stevens, suggested in April that we need to take genuine actions now to 'promote entrepreneurship, innovation, adaptation, and skill-building that rewards "real'' risk-taking' to support our future wellbeing (Stevens, 2015).

An avenue where these skills and challenges can be grown in our schools is the study of design and digital technologies. In this curriculum, students commonly design, develop and appraise real products for real industries to solve genuine design challenges and create new solutions. Project-based learning in this discipline provides the relevance and ownership their young creative minds want and is an important link in their learning engagement and in developing their design-thinking mindset.

If Australia is serious about kick-starting it's lagging productivity growth and exports, and weaning itself off the mining boom, it must ignite and amplify a genuine interest and optimism in a new generation of design thinkers by not eradicating our children's natural predisposition to experiment and create (Brown, 2009). We also need to train the best and brightest teachers to nurture a new generation of start-up entrepreneurs and innovators with much better access to specialist education and funding.

Earlier this month Queensland Premier, Annastacia Palaszczuk, launched Advance Queensland, mentioning new initiatives and government strategy aimed mostly at the post-schooling agenda. As in pronouncements by our national leaders, the initiative included a brief mention of raising emphasis on computer science, robotics and teaching students to code. These very skills are to the fore in the current draft national technologies curriculum and are necessary for employment in a digital economy — an expanded focus on them would be welcomed.

Technologies as a subject offers an authentic space for trialling scientific, mathematic hands-on logic and open-ended engineering approaches to designing physical and virtual technology systems. The fastest growing, most diverse and dynamic segments of the Australian economy exist in creative industries, with the dominant part of the segment being software development and interactive content (Crean, 2009; Green and Colley, 2014). Creative practitioners with commercial talent are now mainstream and embedded across the Australian economy (ARC Centre of Excellence for Creative Industries and Innovation, 2013), but countries other than Australia have placed much greater emphasis on this kind of 'intangible value' in the interests of long-term growth and jobs (Green and Colley, 2014). Author Jeff Selingo (2015) suggests college graduates will essentially need a greater tolerance for ambiguity to excel in things they will not be asked to do and to be able to tackle problems outside their core area of expertise, not what their text book directly suggests. Guy Holland, digital consulting partner of KPMG, proposes that there is currently a debate within organisations about how much should be invested in deep subject matter expertise versus a more generic set of skills (Sherbon, 2015). Coding, computational thinking and enterprise education need much more attention because they feed directly into the boom sectors of the post-mining economy.

We need to promote Australian entrepreneurial heroes in our schools just as we do our sporting, acting and singing stars — Australian entrepreneurial mentors like the Chief executive of Harvey Norman, Katie Page, or Steve Baxter, founder of River City Labs (RCL). Baxter recently led the *Shark Tank* series on television and is serious about cultivating and nurturing young Australian talent. RCL, based in Fortitude Valley, is an enterprise incubator serving those with new ideas and teaching startups how to pitch their ideas. For the second year in a row, Baxter is taking twenty-five young Australian entrepreneurs to the heart of global innovation, Silicon Valley.

Eagle-eyed entrepreneurial and innovative thinkers like this apply their thinking to taming overly complex, costly or confusing systems. This kind of intuitive and generative thinking is what companies like Airbnb and Uber are doing with large under-utilised assets such as cars and houses. They have envisaged and then developed better uses of well-established systems and, along the way, caused major disruption to the familiar models of current corporate systems. Roger Martin (2007) suggests we are all born with an opposable mind and we can use it to hold conflicting ideas in constructive tension to find a better approach to problems. Martin believes successful business people engage in what he calls an 'integrative thinking mindset' to ingeniously resolve the tensions in opposing models by forming entirely new and superior ones.

Better systems will always exist, they have just not been invented yet and it is much easier to predict what can be removed from a system than what will be designed next. This will challenge all of us to refine our creative capacities in preparation for an entire generation of new jobs and ways of working. We need to be sure we are truly nurturing the next generation of workers to become optimistic designers of new services and systems rather the superseded toilers of tomorrow. Glenn Stevens is right — we need to get serious about developing enterprise thinking, inventiveness, ability to adapt and take risks, and we need to start doing more of it in our schools.

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