

## Entrepreneurship: Creative Construction

Shared responsibility and opportunity for government, educators, investors and entrepreneurs



**Peter Tyree**  
President, Business/Higher  
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### President's Message

I am delighted to present to you B-HERT News 29 at the end of 2010: B-HERT's 20th anniversary year! The topic of entrepreneurship cannot be more timely as the effects of the GFC recede and as we all now look forward to further strengthening the economy. This edition importantly focuses on how government, educators and entrepreneurs can work in partnership to tap into global networks, resources and talent.

I am very encouraged that B-HERT News continues to be widely read with feedback indicating that this is because of the high quality of the contributors. We welcome your feedback and your ideas for future editions.

As my first year as President draws to an end, I am pleased to report that despite the challenges the organisation is strengthening the relationships between business and the tertiary education sector, particularly with our new focus on skills. Business is now much more engaged and with improved dialogue and action, we will make a positive difference in developing our graduates and employees.

The 2010 B-HERT Collaborative Awards dinner could not have been a better example of the growing partnerships between the tertiary sector and industry. By showcasing outstanding projects and outcomes, the long term benefits of collaboration are affirmed. In addition to the cooperative teaching and research projects, I want to also refer to the exceptional generosity demonstrated by individuals and organisations who value the national benefits of quality education and research institutions. B-HERT is proud to recognise Mr Greg Poche, winner

of the Philanthropy Award, as one such leader whose philanthropic activities to four Australian universities will benefit the Australian community as a whole, and in particular the health and well-being of Indigenous Australians. My appreciation of the judging panel led by Peter Laver AM has been noted and in this newsletter I would like to once more thank our sponsors<sup>1</sup> for making the awards possible.

Finally, I would like to issue some farewells: to Professor Liz Harman who has been an active and committed B-HERT supporter, I wish her well in her retirement as Vice-Chancellor of Victoria University; to Anne Munday who has been a part of the organisation since its inception and who resigned from B-HERT after 20 years, I wish her the best in her future endeavours. In renewal, I welcome the new B-HERT Board and look forward to working with you throughout 2011.

Finally, I wish all of you a safe and happy holiday period.



**Sharon Winocur**  
Executive Director,  
Business/Higher Education  
Round Table

## Commentary

Entrepreneurship has traditionally been defined within a business context but as is the case with almost everything these days, its application is broadening. This is not surprising if, as defined by the Curtin Business School, it is the relationship between people and organisations. In this latter context, one might ask what doesn't involve entrepreneurship?

The natural symmetry between entrepreneurship and innovation has been at the forefront of successful businesses and has been based

on accomplished skills involving problem-solving, planning, organising and interpersonal communication, among others. This effective and successful combination of capabilities is now recognised as higher order assets that benefit most, if not all, occupations.

Tertiary educators recognise the importance of a strong foundation of capabilities that are no longer confined by a solitary field of study. Embedding the capabilities identified with entrepreneurship will foster the innovation necessary to launch successful business, quality research and world class professionals.



**Chris Golis**  
is a former venture capitalist and director of some 30 companies. He holds Masters Degrees from Cambridge and London Business School

## A CRC for Entrepreneurship

On 18 January 2010 The Australian Financial Review published an article by yours truly *Entrepreneurs are innovation's essential ingredient*. I also posted the article on the Online Opinion website <http://www.onlineopinion.com.au/view.asp?article=9986> which got some interesting and useful feedback. Subsequently I was asked by B-HERT to write an article for B-HERT News 29 which is to have the theme – *Entrepreneurship: Creative Construction - shared responsibility and opportunity for government, educators, investors and entrepreneurs*. I would not say that one article in the AFR makes one an expert but I did spend 25 years as venture capitalist in Australia and did write the Australian handbook which is now in its fifth edition so here goes.

In the AFR article I argued for the creation of an Institute of Entrepreneurship. I was often asked in my time as venture capitalist why Australia, being a country that produces 3% of the world's scientific research, has not been able to build an equivalent to Silicon Valley?

My reply generally comprised two points. First, do not confuse the US with Silicon Valley: it is only four counties yet it originates over 50% of American venture capital investment. Second, Australia does have the equivalent to Silicon Valley: it is based in Perth and centred on the mining industry.

What Silicon Valley and Perth have been able to create is an entrepreneurial ecosystem. Both areas have a track record of creating successful start-ups. Besides Silicon Valley and Boston, Bangalore, Cambridge, Taipei and Tel Aviv are being quoted as successful entrepreneurial ecosystems.

The federal government has stated that one of its key policy platforms is to ensure that Australia builds a 21st century economy. Indeed on 12 May 2009 it released its blueprint for the next 10 years *Powering Ideas, Powering Ideas: an innovation agenda for the 21st century*. The government promised to increase the Commonwealth science

and innovation budget by 25% to \$8.58 billion for the 2009–10 fiscal year.

Perhaps the most famous quote in venture capital is that of Professor Ian MacMillan of Wharton Business School: *"There is no question that irrespective of the horse (the business), the race (the market) or the odds (the valuation), it is the jockey (the entrepreneur) who fundamentally determines whether the venture capitalist will place a bet at all."*

In my 25 years as a venture capitalist, I would have looked at some 5,000 business plans, invested in 50 and wished it were 25. In all cases the difference between success and failure was the entrepreneur.

When I read the 76 pages of *Powering Ideas* I was struck by the fact that although the word 'innovation' is mentioned 525 times, the word 'entrepreneur' is mentioned only once.

This is surprising to me because I always understood that if you accept innovation is defined as the commercialisation of research, then what is critical to successful innovation is the promotion of entrepreneurship. If you don't have an entrepreneurial ecosystem in place the \$8.58 billion being invested in innovation will largely be money wasted. It is the entrepreneur who drives successful innovation not the infrastructure.

Hence, what I argued that what the Labor government needed to do is not just spend \$8.58 billion on innovation but build an ecosystem for entrepreneurs — particularly in the tertiary and quaternary sector industries of the 21st Century.

What I then went on to suggest was the creation of an Institute for Entrepreneurship. As an example of the work it could do, I argued that is generally well accepted that a key determinant of entrepreneurial activity is the level of capital gains tax applied to a successful exit, both for the entrepreneur and the venture capital investors. However, this factor appears to be overlooked in Australia. If you look at various reviews of innovation and taxation carried out in the last 10 years it is rarely mentioned. There is no one doing the analysis proposing the best taxation structures for entrepreneurs. Not the entrepreneurs, they

are too busy being innovators and building their own businesses.

As a result of the article I was approached about setting up a CRC for Entrepreneurship. I must confess my knowledge of CRCs was limited. However as I did more research I realised a CRC would be an ideal structure. The Cooperative Research Centre (CRC) Programme was established by the Australian Government in 1990 and is administered by DIISR. The objective of the program is *'to enhance Australia's industrial, commercial and economic growth through the development of sustained, user-driven, cooperative public-private research centres that achieve high levels of outcomes in adoption and commercialisation.'*

The CRC Programme links researchers with industry to focus efforts on progress towards research that can be readily used and commercialised. The close interaction between researchers and the users of research is a key feature of the program. Another feature is industry contribution to CRC education programs to produce industry-ready graduates.

Over 176 CRCs have been funded and there are now 52 CRCs. In recent times the Commonwealth has increased its average grant to individual CRCs (circa \$25 million) and widened the research goals to include the Public Good.

My problem then was while the CRC is a great structure what exactly would it do? What would you do with \$50 million over seven years?

There are a number of Institutes of Entrepreneurship around the world which typically produce some mix of business planning competitions, policy papers, PhD research, annual research conferences, business planning courses, school education programs, etc. As usual this is already happening in Australia in a fragmented, uncoordinated manner. However it was only when I had a discussion with Adjunct Professor Jon Bates of the London Business School that I had the Eureka moment.

The plan would be to fund of 120 short term (3 months) post PhD positions in entrepreneurship over six years. This has worked very successfully in London and has become the basis of the London Technology Network. The concept is that PhDs who are completing leading edge research doctorates receive a further 3 month stipend to prepare a business plan to commercialise the research. Typically the participants attend a one-week course followed by a 12 week business plan preparation in conjunction with a team of 2 or 3 business school students.

According to John Bates, Adjunct Professor of Strategic and International Management and Entrepreneurship at the London Business School and creator of this concept, around 10% of the business plans so far created have been funded by investors. In this program, people completing

a successful PhD research program are given £30,000 over a 3 month period to prepare a business plan to commercialise their research. In addition they are generally matched with two MBA students, and with a university lecturer as a mentor.

The outcome stated by Professor Bates is that about 10% of the business plans produced have successfully received investor funding to commence commercialisation. The best so far has achieved £20 million VC funding. Assuming say 30 PhD Follow-on Fellowships are allocated per year (say over two rounds) that would potentially lead to 3 projects with high commercial potential receiving investor funding each year.

I must confess that this model has a lot of appeal. I have always said the most important thing you can do to create a Silicon Valley is establish a world-class school of engineering. Engineering schools beget engineers. Engineers beget ideas. And ideas beget companies. If I had to point to the single biggest reason for Silicon Valley's existence, it would be Stanford University—specifically, the School of Engineering. Similarly MIT has played a critical role in setting up the entrepreneurial ecosystem in Boston.

I never thought that business schools are not of primary importance because MBAs seldom sit around discussing how to change the world with great products. Mostly they care about how to get interviews at multi-nationals and consulting firms. I know, I graduated as an MBA from London Business School in 1973 and that is exactly what I did.

However the times they are changing. In late 1975 when I was head hunted by GEC to be its Victoria manager, which meant moving to Melbourne one of the first things I did was contact some of my LBS colleagues and one asked me what I was doing on Sunday, to which I replied nothing. He then said that several of them were going to Tony Wheeler's house in Richmond, where after a run, we would spend the next three hours sending out some book he and his wife Maureen had written to the bookshops and then we would have a barbeque. So that was what we did for the next month. And at each Sunday lunch, the three corporate executives would preach the same mantra, *"Tony you have got an MBA when are you getting a real job."* What we were actually doing was participating in the birth of Lonely Planet. What is interesting is that it is successful entrepreneurs like Tony who are now on the cover of the Alumni magazine. Increasingly MBA graduates are looking to start businesses rather than join the multinational rat race. The problem for many of them is finding a suitable technology for a business.

I believe this model of Ph.D follow-on fellowships combined with MBA students to develop a fundable business plan using the structure of the CRC has merit.

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Professor Noel Lindsay PhD FCPA  
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The University of Adelaide

## Creative Construction: Necessity Entrepreneurs Beat Poverty

This article reflects upon what was learned about teaching entrepreneurship to economically and socially disadvantaged individuals in a developing country.

... *Two roads diverged in a wood, and I -  
I took the one less travelled by,*

*And that has made all the difference*

(Extract from the 1916 published poem, *The Road Not Taken*, by Robert Frost)

Hungry, poverty stricken, and jobless – this is a way of life for many in disadvantaged communities and developing countries around the world. Often with no social security benefits to help alleviate their situations, these individuals are faced with only a limited number of options to survive ... beg, steal, or starve. Although all these scenarios are possible and real, there is another path to consider, at least for some, which may help them improve the quality of their lives and well-being . . . *entrepreneurship*. Why entrepreneurship you might ask? Because there is compelling evidence to suggest there is a strong link between entrepreneurship and economic growth.

Entrepreneurship means different things to different people - there is no one universal definition of what entrepreneurship is. In developing countries, entrepreneurship is sometimes used interchangeably with small to medium size enterprise ownership; yet, not all businesses are entrepreneurial. Regardless, any form of business activity is important for economic development – particularly in developing countries.

For our purposes here, we can think of entrepreneurship as the process of creating or seizing opportunity without regard to the resources currently owned or controlled. This explanation of entrepreneurship is insightful because it says nothing about the funds necessary to create or develop a business. Many people who set about establishing businesses become preoccupied with the money they will need ... but, while money is essential, the most important criteria for business success are the opportunity and the team. Is the opportunity exceptional and is there an exceptional team that has what it takes to develop the opportunity? These two considerations are foremost in the minds of seasoned investors. If the opportunity is right and the team is right then there is a greater likelihood that funding (and other important resources)

necessary to establish and develop the business will flow. In this regard, there is a clear message for nascent entrepreneurs – get the opportunity and the team “right”.

It may seem trite to say that aspiring entrepreneurs establish businesses because they want to ... however, not all aspiring entrepreneurs do so because they want to. Some do want to establish businesses because they perceive opportunities and want to take advantage of these. These entrepreneurs can be thought of as “opportunity-focused entrepreneurs”. In contrast, there are those who set up businesses - not necessarily because they want to - but because they have to ... to generate an income merely to survive. These entrepreneurs can be thought of as “necessity-based entrepreneurs” ... they establish businesses to rise above poverty and enhance life for themselves, their families, and potentially their community.

Although a complex issue, whether people in business are entrepreneurs or simply business owners can be simplistically evaluated in terms of whether they embrace new and innovative products, new and innovative markets, and/or new and innovative processes (Schumpeter 1947; Acs and Virgill 2010). These new and innovative “things”, however, need not be significant or historically important (Schumpeter 1947, p.151). Thus, in disadvantaged communities and/or developing countries, many business owners can be truly regarded as (necessity) entrepreneurs since, before their involvement, the business landscape was stark. Anything they introduce is therefore new and innovative.

Thus, whereas Schumpeter (1947) emphasises the importance of entrepreneurship because of its creative destruction - in helping to remove market inefficiencies and replacing these with more innovative products and options - entrepreneurship is also important in its creative construction. From this perspective, entrepreneurship is a source of positive disturbance and economic and social change. It has the potential to unlock economic wealth and enable empowerment of, and prosperity for, socially disadvantaged individuals and communities, thus reducing the dependency of some upon welfare payments and crime. In this sense, benefits may extend beyond economic profits and self-determination for individuals, to multiple social and economic advantages for entire communities.

Consider, for example, the Grameen Bank, founded by Nobel Prize recipient Professor Muhammad Yunus in 1976 to provide small, collateral-free loans for self-employment to the poverty-stricken in Bangladesh. The funds this organization provides totals in the billions of dollars and has helped millions of Bangladesh

villagers and their families find better ways of life through helping them establish micro and small businesses that provide them with an income stream where previously there was none.

Entrepreneurship, however, is not for all. Some do not want to, or are unable to, “walk the path less travelled” and become an entrepreneur. To be successful, entrepreneurs need to be alert to the discovery of opportunities as well as the exploitation of those opportunities in an innovative way. This requires development of relevant knowledge sets acquired through experience, being taught, and/or reading about or observing others. In the absence of being able to acquire this knowledge through experience (the best form of entrepreneurial learning), the next best means of acquiring entrepreneurial knowledge is to be taught by others expert in the area. Yes, entrepreneurship can be taught! If the approach is pedagogically sound, notable results can occur.

From this perspective, consider the following real life situation in South Africa where a one year entrepreneurship teaching and mentoring program was introduced to impart knowledge to young, socially disadvantaged, unemployed individuals to help them move on from the economic and social adversity that had dominated their lives. Of the over 1,000 applicants, unfortunately, just over 400 could be taken. The program involved their participation in a one year program with a view to helping them gain requisite knowledge and skills for creating new businesses (around 300 participants) and others to improve their job prospects (around 100 participants). Three and a half years after completion of the one year training and mentoring program, more than half of those wanting to start businesses and more than half of those wanting jobs had found one (others had enrolled in formal educational programs with a view to improving their job prospects).

By taking measures immediately prior to their commencement of the program, immediately after they had finished it, and three and a half years onwards to discern whether the program had an effect on their behaviour, we can say with some degree of confidence that the program did make a difference for many. Exit interviews with participants supported this conclusion.

Although this is but one study and other studies need to be undertaken to understand more about teaching entrepreneurship to the economically and socially disadvantaged, insights that we gleaned include the following:

- Entrepreneurship can be taught to economically and socially disadvantaged individuals and have a positive effect.

- However, taking what works in one cultural context and trying to indiscriminately apply this to another may not be effective ... cultural differences need to be reflected in the entrepreneurial content and delivery and an appropriate pedagogy adopted that is in sync with the local culture.

- Entrepreneurship is as much about doing as it is thinking. Not only do you need to teach economically and socially disadvantaged individuals about entrepreneurship, ideally you need to actively engage them to further embed the knowledge. For the best results, we found that the teaching component needed to be followed by mentoring whereby individuals were assisted to develop the underlying strategies for their businesses. Additional insight included the importance of providing an incubation environment for participants to further develop their businesses and that this should be removed from the (academically perceived) class room.

- Entrepreneurship training programs may not only be relevant in helping aspiring nascent entrepreneurs, they may also be valuable in aiding prospective and existing employees develop applicable enterprise skills useful to employers, thereby improving their job and career prospects.

In addition to these key points, we also learned that it is difficult to launch into teaching entrepreneurship to individuals who have low self-esteem, who are socially disadvantaged, and who have little understanding of business. We learned that first you need to help these individuals feel good about themselves. To this extent, we used psychologists at the commencement of the program to help individuals improve their self-esteem, attitude, and motivation. We also learned it was important to demonstrate the relevance of how business principles can change lives. To this extent, we introduced a competitive board game developed around participant’s culture which created an interest in basic entrepreneurial principles. As a result of their involvement and interest in the board game, when business topics were introduced into the classroom, participants had an appreciation of why these topics were significant and why they needed to know about them.

So, having completed our four and a half year study and having learned a considerable amount during the journey, where do we go next in applying our knowledge? Although there is still much to be done in gaining further understanding about teaching entrepreneurship to economically and socially disadvantaged individuals in traditional classroom settings, we now are examining the use of 3D virtual world technology (using *Second Life*) so as to make the

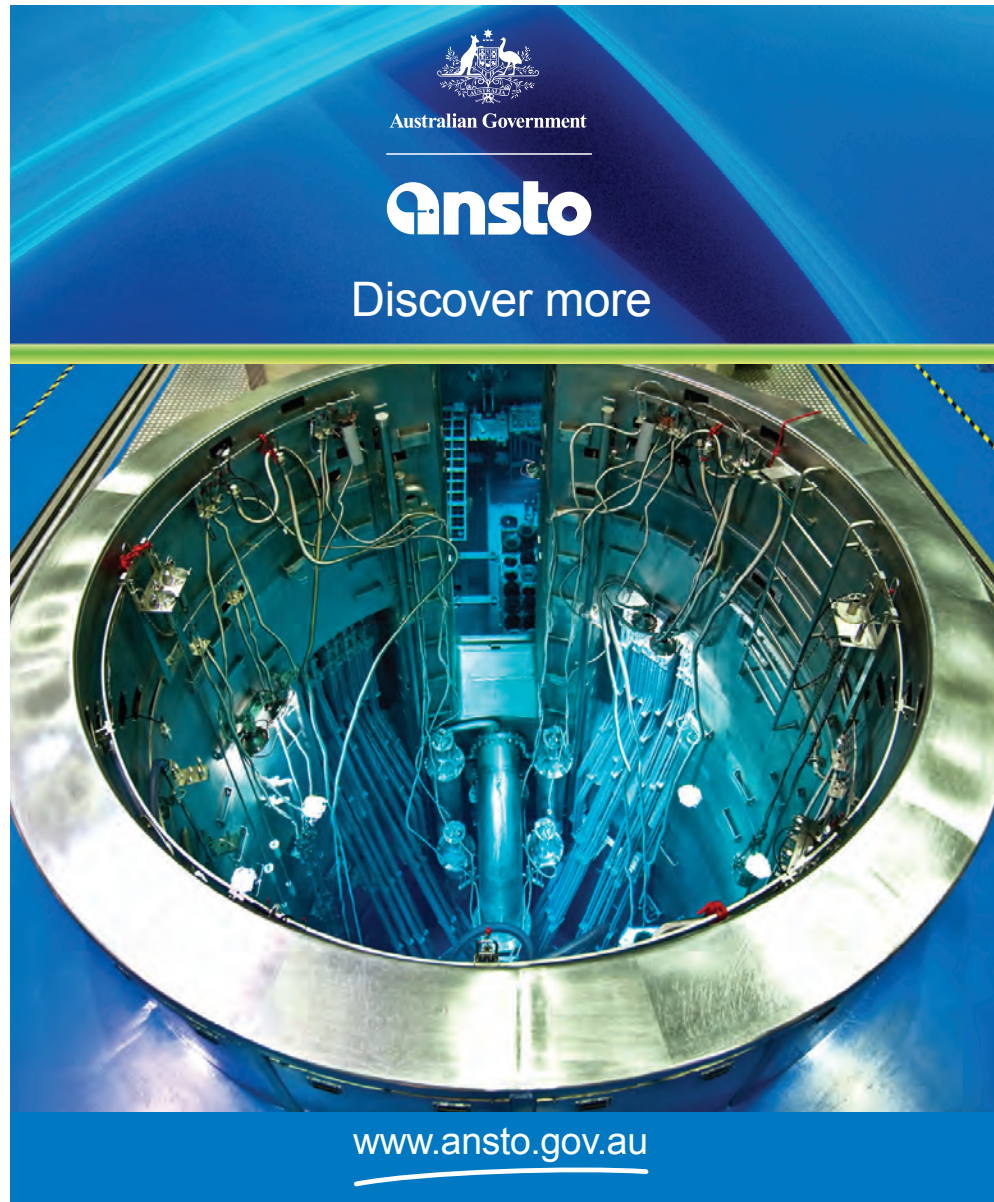
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entrepreneurship student experience more of a game thereby increasing student interest in the learning process.

Why use 3D, you say? Well, 3D virtual worlds have the potential to link individuals isolated by economic and social circumstances, disability, and/or geographical location through the establishment of virtual communities and so

enable them to transcend the limitations of real life in virtual space. Thus, underpinning our quest is a search for key pedagogical and cultural considerations that are aligned with increasing the capacity of economically and socially disadvantaged individuals to participate more fully in society and for them to derive greater satisfaction from life.



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**Associate Professor  
Chris Collet**  
ALTC Teaching Fellow,  
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& Technology,  
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## Entrepreneurship Education in Australia: More, Please!

New industries, high jobs growth and economic expansion derive from emergent technological innovations rather than small increments in existing technologies. Like many other countries, Australia has focused on innovation (e.g., Backing Australia's Ability policy) and seeks to be a knowledge economy. Implicit is that increased funding will accelerate the uptake of innovation by industry and create new industries. While innovation creates intellectual capital, it is entrepreneurship that actually drives new business ventures. With increasing competition and volatility in global markets, there is an urgent need to raise not only the entrepreneurial capacity of Australian graduates and business but also to explore new approaches to improving the innovation commercialisation pipeline. Entrepreneurship education has been largely ignored by the Australian higher education sector; however, it has an important role to play in the transition from a resource-driven to a knowledge-based economy.

Entrepreneurship education has gained recent prominence in the policy documents of world governments for two related reasons. The rise of the mega-economies of China and India sharply focussed world attention on lifting the entrepreneurial capacity of national economies, and that was before the current global financial crisis. Secondly, the need for entrepreneurial skills and enterprising behaviours was articulated as part of the employability agenda of the Organisation of Economic Cooperation and Development (OECD) in the late 1990s. Higher education is central to addressing both sides of the same coin.

Entrepreneurship education has featured prominently in policy documentation from the European Union (EU) and member states since the Lisbon Accord of 2002. One outcome of EU policy has been the foundation of the European Institute of Innovation and Technology which has education in entrepreneurship as a central pillar for funding of knowledge and innovation communities. Entrepreneurship education in the USA has witnessed an explosion of formal programs in the tertiary sector, an increase in networking activities and funding bodies focusing on entrepreneurship research including research into entrepreneurship education. The rest of the world rapidly followed suit with policy and funding in the area of innovation and entrepreneurship.

As far back as the 1980s, employers, academics and think-tank groups voiced concerns

about the applicability of graduate skills and the employability of graduates. Increased competition over the last decade, and recent instability in world markets, have seen further demands by industry and governments, worldwide, for a greater focus on the 'enterprising skills' of creativity, innovation, networking and risk-taking. A need for entrepreneurial skills in Australian science graduates was noted as far back as 2000. Employer groups were not alone in this regard as current Chair of Universities Australia, Professor Peter Coaldrake, noted in 2001 that students also recognise the role and importance of entrepreneurial skills in attaining employment and in work practices. Recognising that Europeans lack the positive cultural attitudes to entrepreneurship innate in North Americans, the European Commission has, over the last eight years, called for all levels of education to contribute to the development of an entrepreneurial mindset in students, and has promoted a number of volumes describing case studies of excellence in entrepreneurship education. The benefits of curricula that boost national entrepreneurial capacity and impart enterprising skills are also acknowledged in several reports published in 2009 by the World Economic Forum and the OECD.

Although the outcomes of entrepreneurship education programs on graduates are difficult to measure, owing to the long-term nature of the impact at the personal level and the nature of the elements under evaluation, some clear benefits have been demonstrated. Entrepreneurship education, through the traditional university business school route, does have an enabling and accelerating impact on the activities of graduates towards establishing businesses. Assessments of students based on the theory of planned behaviour demonstrate clear quantitative differences between student cohorts that have undertaken a module of entrepreneurship and those that have not. In a long-term impact study spanning 15 years, graduates who undertook entrepreneurship studies were shown to be three times more likely to start a new business, three times more likely to be self-employed, earn higher annual incomes (27% more), own more assets (62% more), be less likely to work for government than high-tech firms and have more involvement in product development and R&D than graduates who did not undertake the entrepreneurship subjects.

In 2002, Professor Allan Gibb invoked a Schumpeterian approach of creative destruction, in calling for new paradigms in entrepreneurship education in non-business schools. Gibb argued that entrepreneurship as taught to undergraduate business students is disconnected from both the process of innovation and the required

understanding of underlying technological advances. Business school programs apparently fail to harness the interdisciplinarity required for the commercialisation of complex technological innovation. Thus the challenge to build entrepreneurship education programs to address emergent technological innovations and the commercialisation of research outcomes shifted from the traditional domains of delivery (i.e., business schools) to the non-business faculties where innovation happens. A 2008 EU report on best practice notes the real challenge for teachers of entrepreneurship is to develop opportunities for fully integrated entrepreneurship education outside of business schools.

Education in entrepreneurship in the tertiary sector found additional support with the emergence, in 1998, of the concept of "Entrepreneurial Universities" where entrepreneurship is embedded in the three spheres of university activity: research, teaching and engagement. A rich, outcomes-focused literature on university patenting, licensing and spin out companies has appeared since. Entrepreneurialism in university culture and student teaching has not been documented to the same level, as it is clear that universities' engagement with the concept is variable beyond the notion of increasing direct revenue streams from intellectual capital. The example of the University of Warwick (UK), however, provides evidence of impact on university culture, student enrolments and outcomes. In 2001, the University of Warwick introduced a holistic strategy for entrepreneurship education which catered for a variety of levels of interest and active learning approaches to instilling the entrepreneurial mindset, including formal curriculum and informal activities. In 2001, at Warwick, there were no patents, no spin-out companies and no students registered in enterprise programs. By 2008, approximately 3,200 students were studying an enterprise module or were registered for an extra-curricular program. Between 2003 and 2006, the University filed 59 patents, disclosed 170 innovations, spun out 21 University and 60 student start-ups, and received €1,000,000 in licensing fees. The University considers that the education program drove a change of culture across the University, leading to better linkages in the knowledge triangle of research, education and industry.

With world-class institutes of research and higher education, Australia has a long history of innovation but a poor record of transition from the bench to the global marketplace. The culture of investment in innovative ideas that flourishes in the USA is notably absent from the Australian business environment. As a means of improving the commercialisation outcomes of research, the

need for training in entrepreneurship has long been written into innovation policies of Australian Federal and State Governments; although this has not been realised in the teaching sector, unlike in the EU and USA.

Entrepreneurship education has a lower profile in Australia than in the EU and USA, although the contexts mirror those evidenced in the Northern Hemisphere. Most Australian business schools offer mainstream generic subjects that teach the theory of entrepreneurship and innovation as components of undergraduate degrees. Theory is also the focus in the graduate sector served by Master of Business Administration and Master of Commerce degrees. For applied entrepreneurship, RMIT University and Swinburne University of Technology have dedicated Bachelor of Business degrees that allow students to learn business and entrepreneurship while building their own business venture. At the University of Tasmania, the entrepreneurship major within the Bachelor of Commerce focuses on new venture creation as well as instilling the entrepreneurial mindset, with activities built into existing curricula. The University of South Australia, on the other hand, offers a one year Honours degree in entrepreneurship, targeted at business graduates.

Where entrepreneurship education occurs outside the business school in Australia, offerings are mostly dispersed amongst faculties and courses, limited in scope and detached from other programs in the same institution. The extant situation reflects the activities of dedicated individuals rather than whole-of-school/faculty or whole-of-degree approaches to teaching innovation and entrepreneurship. There is, however, a growing realisation that many graduates in the creative industries, engineering and even the applied sciences require a level of business skills as they are more than likely to operate as self-employed professionals post-graduation. In the higher degree research student sector, universities provide short courses, workshops or on-line courses in innovation commercialisation (eg the ATNLEAP employability modules, the Graduate Certificate in Innovation and Commercialisation from The University of Newcastle and the Commercialisation Training Scheme at Swinburne). The Entrepreneurship Commercialisation and Innovation Centre (The University of Adelaide) conducts the Graduate Entrepreneurial Program, instilling entrepreneurial skills for technology commercialisation. In non-business schools, undergraduate subjects addressing innovation and entrepreneurship are *usually* limited to the introduction of business planning, management and venture-financing topics, bound together with case studies, as a one-semester subject in the final year of a

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program. The subjects achieve their aim of increasing awareness of entrepreneurship as a career choice, but there is little evidence, from overseas studies, of resultant entrepreneurial activity. Increasingly, project subjects, in IT, engineering, design and creative industries, for example, focus on creativity and innovation and include elements of entrepreneurship and new venture creation as student teams develop ideas into potential products. The emphasis is usually on the creative process with little opportunity to move the product through to development (entrepreneurship) or realistic attempts at market research and this can provide a general feeling of frustration amongst students and staff involved as the semester ends.

Absent from the Australian landscape is a broadly-targeted extracurricular model of entrepreneurship education found commonly in US higher education institutes, and increasingly adopted across the EU, especially in the UK. The extracurricular entrepreneurship clubs promote activities (e.g., seminars, networking events and business plan competitions) that serve to raise awareness of the potential of entrepreneurship. These clubs are mostly informal, often student-driven and, consequently, rely on the efforts of a few dedicated people to maintain momentum.

Queensland University of Technology (QUT) has experimented with a more holistic approach to entrepreneurship education in the science and technology sector. Implemented in 2001, the Bachelor of Biotechnology Innovation addressed the business of biotechnology science across a four year coursework degree using an action-oriented immersion-style learning framework to drive the synthesis of the disparate disciplines of business and science. The course aimed to create graduates capable of operating in the gulf between bench and global marketplace in three areas of innovation and technology entrepreneurship: (1) agents of commercialisation, operating as business development officers, venture capital associates, investment analysts, commercialisation managers, technology transfer officers; (2) entrepreneurs looking to start their own business; and (3) business-savvy scientists aware of the commercial imperative who focus on the research and developmental cycle of applied research. Only by catering for all three levels of entrepreneurship can sustainable innovation ecologies be created. The course created a new career pathway into the exciting world of commercialisation and technology transfer and graduates compete successfully against PhD/MBA graduates for jobs in all sectors of innovation commercialisation. The degree instilled high-level entrepreneurial skills in graduates who generally serve in the innovation commercialisation support framework rather

than act as innovators/inventors, although they are highly inclined to behave in an enterprising fashion.

The life sciences arena is but one area of innovation. Sustainability, renewable energy, space, environmental and natural resource management, creative industries, multimedia, information and communication technology, health and education are all areas generating innovation that could benefit from the development of integrated entrepreneurship education programs. Along with a recent name change to the Bachelor of Technology Innovation, the QUT degree has expanded its disciplinary coverage to include ICT, multimedia, chemistry, physics, environmental science and sustainability, with the intent to transfer the teaching approach and skills training to other innovation contexts. *The new degree will target the business of innovation, and it is envisaged that the graduate outcomes will be commensurate with those witnessed for the biotechnology-focused degree.*

A curricular framework serves as one avenue of addressing innovation and entrepreneurship in the tertiary education sector but other opportunities to develop entrepreneurial skills need to be available to students. The QUT Innovation Space (QIS) has recently been launched as an initiative complementary to, and progressive of, the undergraduate student efforts in creativity and innovation developed within individual project subjects in different degrees across the University. The QIS framework serves as a University-wide platform of entrepreneurship education where student innovators and entrepreneurs can learn the skills required to transition intellectual capital to the marketplace. For example, student teams may wish to continue development of their potential product beyond the design-led innovation subjects. These students can draw on the resources of the QIS to progress the idea through the initial stages of product development, business planning and market research. Entrepreneurially-inclined students from other Faculties, such as Science & Technology, Creative Industries and Law, may provide disciplinary-specific or even general support to the process under the mentorship of entrepreneurs, business, industry, and academic staff. Training and skills development activities within the QIS will come mostly from entrepreneurs and industry partners such as the Australian Institute of Commercialisation; a foundation sponsor of the QIS. While some students may seek to progress their ideas, other students may seek entrepreneurial skills training to further their careers in industry or government, and thus the emphasis of the QIS is on entrepreneurship training, rather than just new venture creation.

The extracurricular entrepreneurship clubs promote activities (e.g., seminars, networking events and business plan competitions) that serve to raise a awareness of the potential of entrepreneurship.

A key element behind the design of the curricular and extra-curricular entrepreneurship education frameworks at QUT is transferability to other tertiary institutes.

In building a University-wide extra-curricular platform, the QIS experiment aims to unite, resource and progress the fragmented entrepreneurship activity across QUT courses and thus add another dimension to the entrepreneurial learning activities of the University. While serving the needs of the entrepreneurially-inclined students, the needs of business for high-quality, industry-ready graduates capable of driving the innovation agenda are also addressed. If overseas experiences are indicative, the QIS will also add to the creation of new ventures to bolster the regional economy.

The challenges of developing sustainable entrepreneurship education programs in higher education institutes relate not to attracting students or engaging external parties in the process, but rather to building functional

frameworks that are integrated within monolithic University systems and attract the long-term support of Chancellery. A key element behind the design of the curricular and extra-curricular entrepreneurship education frameworks at QUT is transferability to other tertiary institutes. Uptake by other institutes will be driven not just by the learning outcomes of the QUT experiments but also by their ease of integration, implementation and delivery in other institutes. Industry considers the QUT Bachelor of Biotechnology Innovation to have impacted significantly on the landscape of the biotechnology sector in the Brisbane region. It is anticipated that the expanded degree and the QUT Innovation Space, as complementary models of entrepreneurship education, will also contribute to an evolving Australian innovation ecology.



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**Martin Bliemel & Linda Glave**  
Centre for Innovation & Entrepreneurship  
School of Strategy & Entrepreneurship  
Australian School of Business, UNSW



**Greg Logue**  
Oceania Entrepreneur of the Year Leader  
Ernst & Young

## Learning the art of entrepreneurship

Popular belief has it that entrepreneurship may be hereditary, and that young entrepreneurs spring fully formed, armed with wisdom, creativity, and sheer energy, ready to launch their lemonade stand on an unsuspecting neighbourhood.

Not so, says noted researcher Vivek Wadhwa<sup>1</sup>. In a study of 549 successful entrepreneurs, Wadhwa and his colleagues (2009) found the following:

1. 52% were the first in their family to start a business.
2. 39%, 7%, and 15%, respectively, had a father, mother, or siblings who had previously started a business.
3. 71.5% came from middle-class backgrounds, and another 21.8% said they came from upper-lower-class ("blue-collar") backgrounds.
4. 95% had earned bachelor's degrees, and 47% had advanced degrees.
5. While in college, 48% had little or no interest in, or didn't even think about, becoming an entrepreneur.

Wadhwa (2010) concludes that these entrepreneurs, "...simply got tired of working for others, had a great idea they wanted to commercialize, or woke up one day with an urgent desire to build wealth before they retired. So they took the big leap."

So what does this mean? It means that, against the prevailing myth, entrepreneurship is not something determined by lineage, but that it can be developed.

### Starting Early

Over the past decade or more, courses in commercialisation, innovation, and entrepreneurship have become more popular at both the graduate and undergraduate levels, and there has been a proliferation of endowed chairs in entrepreneurship (Castrogiovanni, Vozikis and Mescon, 2006). Meanwhile, popular sentiment has taken up the issue that students do not need to wait until university to start getting the education, exposure and experience that will develop their entrepreneurial skills. Advocates propose entrepreneurship can be taught much earlier, and that conventional curriculum design may even be stifling potential entrepreneurs (See TED.com talks by Ken Robinson (2006, 2010) and Cameron Herald (2010)).

Chris McGuire, National Convenor of the School Entrepreneur Program, adds that "Entrepreneurship education is too important, and is currently being left to chance at a Secondary School level. In the crowded lives

of young people, entrepreneurship needs to be supported, elevated and valued," (2010a). This philosophy led Chris to establish the School Entrepreneur Program.

### The School Entrepreneur Program

The School Entrepreneur Program was founded in 2005 by McGuire at Prince Alfred College in Adelaide, and has been supported by Ernst & Young from the outset. It now runs in 30 schools around the country and targets students aged 13 to 15 years old since these middle years allow for much more experiential learning than the prescribed curriculum of the Senior Secondary years. The Program requirement is simple but powerful – students undertake an entrepreneurial initiative of their own design in the family or close community with a target of making \$20.

All funds raised by the students' projects are donated to Opportunity Australia, an organisation focused on promoting entrepreneurship to break the cycle of poverty and improve lives by providing education and finance. David Bussau, founder of Opportunity Australia, 2004 Australian Ernst & Young Entrepreneur Of The Year and the 2008 Senior Australian of the Year, believes that there are many creative and talented poor people and all they need is an opportunity. "Rather than a hand-out, we provide people with a small loan to help them start or grow their own small business. We also provide them with education and training to strengthen their businesses and develop their communities."

The program is a natural fit with the National Declaration on Educational Goals for Young Australians (2008, p. 10), which identifies important general capabilities to be developed in students: "planning and organising, the ability to think flexibly, to communicate well and to work in teams...the capacity to think creatively, innovate, solve problems and engage with new disciplines." As McGuire explains (2010b) "The key elements of entrepreneurship for the 'Middle Years' age group are innovation, creativity, and personal integrity. These three elements allow for exploration of the power of entrepreneurship, growth in financial literacy and a capacity for students to discern valid examples of entrepreneurship displayed by their peers."

However, despite this fit, challenges remain for McGuire's program due to many teachers' perception of entrepreneurs as 'risk-takers', and due to there being few pathways by which to learn about entrepreneurship and establish coordinated mentorship from their adult contemporaries. McGuire adds that "Secondary students that show capacity to be entrepreneurs have little formal chance to collaborate with their like-minded peers."

The benefits of the program to the students is

<sup>1</sup> ... students do not need to wait until university to start getting the education, exposure and experience that will develop their entrepreneurial skills.

revealed by students who may not fit traditional book learning methods are given the opportunity to learn leadership and time management skills through experiential learning. While McGuire believes that students of all academic ability benefit from the program, he adds that “the practical focus of the program allows students the chance to be creative and often unearths true entrepreneurial talent within students who may not be shining academically.”

This sentiment is echoed by the sponsors of the program. “While we often see similar personality traits in the entrepreneurs who participate in the Ernst & Young Entrepreneur Of The Year program, evidence continues to emerge that entrepreneurial skill can be developed. Proper application of these skills can lead to better management execution, more focused risk management and increased operational effectiveness,” says Greg Logue, Partner and Oceania leader for the Entrepreneur Of The Year program and the Strategic Growth Markets division. “That is why we have sponsored a national secondary schooling program for several years, the Schools Entrepreneur Program, and also affiliated ourselves with the Centre for Innovation & Entrepreneurship through the University of New South Wales.”

### **The next level**

After the “Middle Years” are the Higher School Certificate (HSC) and university years, during which learning is highly structured, academic, and competitive. At this level, too, there is an imperative requirement of universities to ‘reawaken’ entrepreneurial interests and aptitudes with a mix of advanced knowledge and practical application outside of the conventional lecture hall format (Hindle, 2007).

While research from Wadhwa and his colleagues (2009) found that, “Entrepreneurs typically are well-educated and experienced,” he also writes that, “The key is to provide education at ‘teachable moments’ – when the entrepreneur is thinking about starting a venture or ready to scale it. What entrepreneurs need isn’t the type of abstract course they teach at business schools, but practical, relevant knowledge.”

The Centre for Innovation & Entrepreneurship (CIE) at the University of NSW does just that: it provides experiential learning opportunities and practical, relevant knowledge. Founded in 2007 and located in the Australian School of Business’ School of Strategy and Entrepreneurship, the CIE helps innovators prepare to face the challenges of an increasingly dynamic commercial world by offering targeted coursework, internships, competitions, and networking events that provide experiential learning and real-world interaction.

“The CIE’s goals are to improve the quality of innovative thinking and stimulate entrepreneurial skills in Australia,” says Dr Martin Bliemel, Director of the CIE. The two great areas of emphasis for CIE initiatives are interdisciplinary learning and experiential learning. “It’s important to work with students of all academic disciplines, as well as to also involve faculty members across disciplines, UNSW alumni and the general entrepreneurial public. We’ve received an amazing level of support from Sydney’s entrepreneurial community. We have world-class innovators eager to be involved in what we do and they provide invaluable advice and information by acting as mentors, competition judges, and guest speakers.” These innovators include members of CIE’s advisory board as well as generation-Y entrepreneurs, such as Bart Jellema, who co-founded Tjoos, StartupCamp, Silicon Beach, and the brand new StartMate venture fund, targeted at student ventures. As a frequent guest speaker, judge, and mentor with CIE, Bart is known to comment on the enthusiasm and drive that the students demonstrate: “It’s very inspiring to see people pitch their ideas and exciting to see what they come up with.”

Key events in the CIE calendar include competitions such as PitchFe\$t and the Peter Farrell Cup, as well as the Meet the Entrepreneur series, each of which provide opportunities for participants to network and articulate their business ideas, and learn from their peers. PitchFe\$t is a ‘quick and dirty’ competition where entrants pitch their business idea in three minutes or less to an audience and panel of industry judges. The Peter Farrell Cup ([www.pfcup.com.au](http://www.pfcup.com.au)) provides an opportunity to experience first-hand the process of developing a business model around an idea, and then present the business plan both in writing and verbally to real judges from the venture capital community. The Peter Farrell Cup competition runs over a two-month period and has evolved from a 50-page written submission to a pitching/business presentation competition. This evolution of placing more emphasis on interaction than documentation was well received among the entrants. “I’m glad the Peter Farrell Cup is now more of a start-up competition than old school business planning. I think this will make it a lot more accessible to uni students,” says Adam Brimo, an entrant in this year’s Cup competition.

### **Graduation**

Each of the initiatives mentioned above goes beyond teaching about entrepreneurship, to actually teaching it; a critical distinction (Hindle, 2007). What comes next is actually being an entrepreneur, and proactively networking with other like-minded people facing similar challenges to learn from. As Wadhwa (2010)

Key events in the CIE calendar include competitions such as PitchFe\$t and the Peter Farrell Cup, as well as the Meet the Entrepreneur series

Entrepreneurs from around Sydney participate in the networking, panel discussions and subsequent Q&A, tailored to specific themes, such as clean technology (Sept 2010) and open innovation (Feb 2011).

posits, "It is probably education, exposure to entrepreneurship, and networks that lead these people to pursue the entrepreneurial path."

For those who have 'graduated' to the level of entrepreneur, further networking and learning opportunities are presented by another key event in the CIE's calendar, the Meet the Entrepreneur evenings. These moderated 3-person panel discussion events are held twice a year, and hosted at the Ernst & Young Sydney office. Entrepreneurs from around Sydney participate in the networking, panel discussions and subsequent Q&A, tailored to specific themes,

such as clean technology (Sept 2010) and open innovation (Feb 2011).

As the recent 2010 Entrepreneurs' Confidence Barometer (Ernst & Young) indicates, the average alumni from the Ernst & Young Entrepreneur Of The Year Award founded their first company at the age of 25 after having completed their undergraduate or postgraduate degree. Through the introduction of programs like the School Entrepreneur and CIE's initiatives, we can't help but hope to plant the seed earlier, and develop an even stronger cohort of entrepreneurs.

### References:

- Castrogiovanni, G., Vozikis, G., & Mescon, T. (2006). Roles of chairs in entrepreneurship: What deans expect. *International Entrepreneurship and Management Journal*, 2(1), 9-20.
- Ernst & Young (2010) Entrepreneurs' Confidence Barometer. Standing tall - Entrepreneurs lead the way back to growth. (retrieved Aug 18, 2010 from <http://www.ey.com/AU/en/About-us/Entrepreneur-Of-The-Year/2010-Entrepreneurs-Confidence-Barometer-page>)
- Herold, C. (2010) Let's raise kids to be entrepreneurs (retrieved Sept 10, 2010 from [http://www.ted.com/talks/lang/eng/cameron\\_herold\\_let\\_s\\_raise\\_kids\\_to\\_be\\_entrepreneurs.html](http://www.ted.com/talks/lang/eng/cameron_herold_let_s_raise_kids_to_be_entrepreneurs.html))
- Hindle, K., (2007) Teaching entrepreneurship at university: From the wrong building to the right philosophy, In A. Fayolle (Ed.), *Handbook of Research in Entrepreneurship Education, Volume 1: A General Perspective*. Cheltenham, UK: Edward Elgar.
- McGuire, C., Personal communication, Oct 1, 2010
- McGuire, C., Personal communication, Oct 10, 2010
- National Declaration on Educational Goals for Young Australians (2008) (retrieved Oct, 10, 2010 from [http://www.curriculum.edu.au/verve/\\_resources/Draft\\_National\\_Declaration\\_on\\_Educational\\_Goals\\_for\\_Young\\_Australians.pdf](http://www.curriculum.edu.au/verve/_resources/Draft_National_Declaration_on_Educational_Goals_for_Young_Australians.pdf))
- Robinson, K. (2006) Ken Robinson says schools kill creativity (retrieved Sept 10, 2010 from [http://www.ted.com/talks/ken\\_robinson\\_says\\_schools\\_kill\\_creativity.html](http://www.ted.com/talks/ken_robinson_says_schools_kill_creativity.html))
- Robinson, K. (2010) Bring on the learning revolution! (retrieved Sept 10, 2010 from [http://www.ted.com/talks/sir\\_ken\\_robinson\\_bring\\_on\\_the\\_revolution.html](http://www.ted.com/talks/sir_ken_robinson_bring_on_the_revolution.html))
- Wadhwa, V., Holly, K., Aggarwal, R., & Salkever, A. (2009). Anatomy of an Entrepreneur: Family Background and Motivation. SSRN eLibrary.. Available at SSRN: <http://ssrn.com/abstract=1431263>
- Wadhwa, V., (2010) Can Entrepreneurs Be Made? TechCrunch (retrieved Feb 27, 2010 from <http://techcrunch.com/2010/02/27/can-entrepreneurs-be-made/>)



**Tracey Hodgkins**  
Director  
Australian Experiential  
Learning Centre

## The Role of University in Developing Entrepreneurial Capabilities

Business education in Australia has always been focused on managing and leading, with very little devoted to entrepreneurship and the accompanying capabilities needed to run new ventures both in and outside companies. But without these skills, how are we to drive our business growth in the future to broaden our income base from natural resources to created sources?

Entrepreneurship as a discipline is an extremely complex major to teach. It must incorporate hard skills, soft skills and thought processes that deliver a mix of leadership, management and creative process rolled into a diverse package which is relevant to each and every student. Motivations for attending such courses are diverse and expectations are unclear. In a survey my company the Australian Experiential Learning Centre did last year of students studying in this discipline, many thought of it as a "how to start your own business" or as an easy option that "sounded good". Others did it as an adjunct to hard skill degrees such as science or engineering with the intention of developing up new technologies for market. Almost all of those surveyed indicated their dissatisfaction with what was being taught and in particular were disappointed at the lack of hands on approach to the discipline. It seems that in Australia we are mostly teaching entrepreneurship with a pathway to academia and not a pathway to becoming an entrepreneur. I believe Universities have a responsibility to produce the thought leaders and entrepreneurs of the future and not just more academics. Entrepreneurial companies lead the world economy and we in Australia need that thinking in every echelon of business to compete on the world stage.

In the US, Universities such as Massachusetts Institute of Technology (MIT) have incubators and other support resources to help the budding entrepreneur. In many cases it has produced some mighty fine technologies, but more than that, students are set up with networks that increase the likelihood of success in the field.

Earlier this year, I had the privilege of speaking with Mary Furlong the Dean's Executive Professor of Entrepreneurship at Santa Clara University's Leavey School of Business, a University based in Silicon Valley with a long history of entrepreneurial success. In 2001, Fortune Small Business named Mary one of its "Top 25 Women

Entrepreneurs", and Time honored her in 1999 as one of its "Digital 50". Mary is of the belief that entrepreneurship is an immersion process. Her suggested approach is to match students with successful entrepreneurs both in the field and the classroom, and those who hold critical support resources such as banks and lawyers, whilst they work on developing up their own ideas on site. The process takes the student on a journey from idea to market. Many start their own companies but just as many enter other companies and work their ideas up from within. Failures are treated as learning along the way and post course support mechanisms are in place to help beyond the course itself. The question is, can we in Australia truly set up a structure like this or are we doomed for failure? It seems that even our technology parks struggle to act as anything other than real estate so what hope do we really have without a Silicon Valley on our doorstep?

It appears that Australian Universities cannot see the importance of support structures beyond the classroom. Even Career Centres are badly under-resourced compared to our international counterparts. For example, I was amazed to see on my tour of UK Universities (funded by BHERT for winning the 2003 Entrepreneurial Educator of the Year in 2003) 40 people employed in Careers at Strathclyde University in Scotland for just 5000 students whilst the average centre in Australia has on average seven advisors for up to eight times the number of students. The relevance of this under resourcing of non-core services is linked indelibly to students of entrepreneurship. It seems that Universities in general will only provide minor resourcing outside of classroom activity. Entrepreneurship is a career choice that is not seen as something that goes beyond the lecture theatre and therefore will need a high level of extracurricular support. As Mary Furlong pointed out, immersion is the key to success.

For an immersion process to begin we must understand what is needed for this to work.

Imagine an Australian University that has an entrepreneurship centre on site that goes beyond incubation. Imagine bringing companies onsite to propose entrepreneurial tasks for students to model solutions as an integrated part of the course curricula. This could be a 'user pays' model that actively solves immediate problems in ways that bring dollars and cents to the companies and provide an income stream for the centre and the students involved.

What if entrepreneurial internships were integrated into the courses? Imagine the student centric learning associated with this activity. Hands on learning is the ultimate for an entrepreneur in the making.

Imagine a virtual entrepreneurial network linking diverse companies and entrepreneurs with the budding entrepreneurs within the courses. The network would be global and could link the likes of Silicon Valley to our doorstep, creating an immediate community for support. Santa Clara is open to partnerships world-wide.

What about tying in design-thinking and psychology to encourage broader thinking and access to creativity courses that demand right brain engagement and develop those skills we need to deliver innovation? Experts like Peter Drucker talk about the importance of innovation as a core part of building great companies<sup>1</sup>. Only it isn't embedded in business courses including entrepreneurship which logically would seem to be it's natural home. Drucker suggests that entrepreneurship is a skill and not a talent and should be taught as a discipline process<sup>2</sup>.

What if the government sets up a loan scheme that helps University educated entrepreneurs get started with a pay back through the taxation system just like HECS and PELS? This would help in offsetting start-up costs associated with driving a project or a company. Surely education mixed with the right support and resources is the key to start-up success?

The Australian Experiential Learning Centre (AELC) has had great success delivering successful entrepreneurial leaders through our experiential immersion programs. Using business tasks with outcomes in a competitive setting, those involved are more likely to take away real learning's that can be applied immediately in the business context. These programs create shifts in paradigm thinking. The experiences are designed using educational neuroscience<sup>3</sup> and participants describe their involvement as life changing. Research shows that through multifaceted and concentrated activities, participants absorb complex topics, solve problems and develop coping skills very quickly. The intensity of the experience causes the brain to create a network of new neural pathways, allowing participants to make great shifts in learning in short periods

of time. Results are impressive and have shown that students' marks increase dramatically through their participation and almost all go on to highly successful careers as entrepreneurs and leaders. Graduates include BRW Fast Company awardees, a Young West Australian of the Year, CEO's of high growth companies and not-for-profit leaders changing the face of charity in countries throughout the world. Ethics is core to the program producing a high quality ethical graduate much in demand by industry.

The possibilities are endless once you start down the road of focusing on real change in the University system. It seems that for entrepreneurial education to really succeed we must engage the hearts and the minds of the students because of all the business disciplines, this one is fuelled by passion.

However for all or even any of this to happen there needs to be a will for cultural change. For that industry can pave the way by demanding more entrepreneurial graduates from the system. At the 2010 World Economic Forum at Davos, Queen Rania Al Abdullah spoke about the importance of education in solving the world's problems and the lack of immediacy in allocating resources to what she calls an education crisis.<sup>4</sup> In her view education can solve all the world's problems – poverty, global warming and HIV just to name a few. Her reasoning for the lack of response is that the rewards of education take a long time to reap and do not fit into the short political cycle. Priority is then lowered and resources are just not committed. In the same vein, I believe Universities do not prioritize student resources outside the theatre as teaching in classrooms is simply easier and more cost effective with no immediate cost benefit thereby sacrificing long term gain for short term profit.

The benefits of creating a great entrepreneurial program may take years to realize. I believe however it is the one key discipline we need to build Australia's economic growth and sustainability and as such our Universities have an obligation to get it right!

- 1 Drucker 2002, 95.
- 2 Drucker 2002, 95.
- 3 Knowles, Holton III and Swanson 1998.
- 4 World Economic Forum 2010.

#### Reference List

Drucker, P. 2002. The Discipline of Innovation. In *The Innovative Enterprise*. Harvard Business Review. 95 – 1 03. Scribd. <http://www.scribd.com> (accessed 17/10/2010).

Knowles, M., Holton III, E., and R. Swanson. 1998. *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*. USA: Butterworth-Heinemann.

World Economic Forum. 2010. *Davos Annual Meeting 2010 – Rebuilding Education for the 21st Century*. Video file. [http://www.youtube.com/watch?v=3g5M\\_9LmaX0](http://www.youtube.com/watch?v=3g5M_9LmaX0)

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