



VET and entrepreneurship: research overview

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INTRODUCTION

Entrepreneurship is an important component of the Australian economy, given its capacity to generate significant employment opportunities. While the role of education in developing skills for entrepreneurship has attracted an increased focus internationally, how the vocational education and training (VET) system contributes to entrepreneurship in Australia has received very limited research attention. This overview, drawing largely on Scott-Kemmis (2017), looks at the role VET currently plays in developing the skills of entrepreneurs, and how this may be further developed in the future.

ENTERPRISE AND ENTREPRENEURSHIP

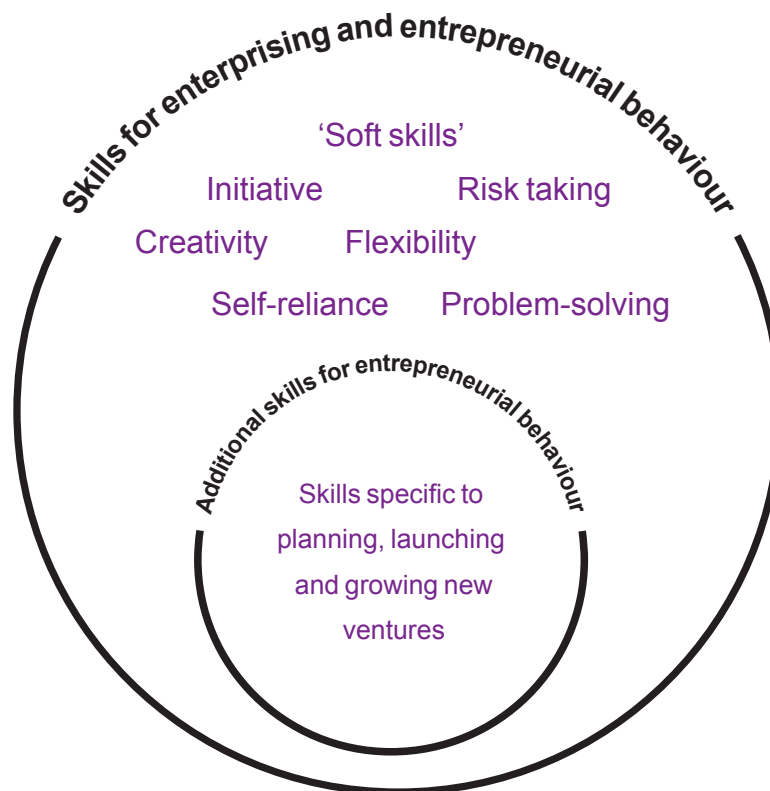
The terms 'entrepreneurship' and 'enterprise' are two related, yet distinct, concepts, with definitions not always universally agreed. Enterprising behaviour can be characterised as an active approach to problem-solving, learning and professional development and such behaviour can be applied broadly, such as in the workplace or in self-employment. Entrepreneurship, in this research, is defined as the establishment of firms through the use of innovative products or services, or the organisation of work, and can occur in any industry.

While enterprise and entrepreneurship require an overlapping set of skills (figure 1), additional skills – those specific to establishing an innovative venture – are required for entrepreneurship, as defined here. Given that new enterprises and self-employment are becoming increasingly valuable to the national economy and labour market respectively, education and training to address these skills at a national systemic level is vital, and should include VET.

ENTERPRISE AND ENTREPRENEURSHIP

Enterprise skills are useful for entrepreneurship, but additional skills are also required.

Figure 1 Examples of skills required for enterprise and entrepreneurship



It is also useful to differentiate between the different types of enterprise and business models that might be associated with enterprise skills and entrepreneurship. While a continuum, the extremes can be described as:

- *Replicative business: a business created using well-established business models.* The aim of these firms may be self-employment. They often remain small and service a local market, with their founders having a limited intention to expand, given the ongoing investment, risk and challenges involved. These businesses are valuable to regional economies and may include owners with foundational VET skills such as in the trades (electricians, plumbers etc.), hairdressers, personal trainers, chefs and other VET graduates with similar service skills.
- *Innovative business: a business whose establishment is based on novel or innovative products, technologies, services, processes, or the organisation of work.* These businesses are more usually created with the intention of high-growth and expansion, nationally or internationally, and may have a greater initial risk of failure, although a greater reward if successful. They may be more demanding of entrepreneurial capability.

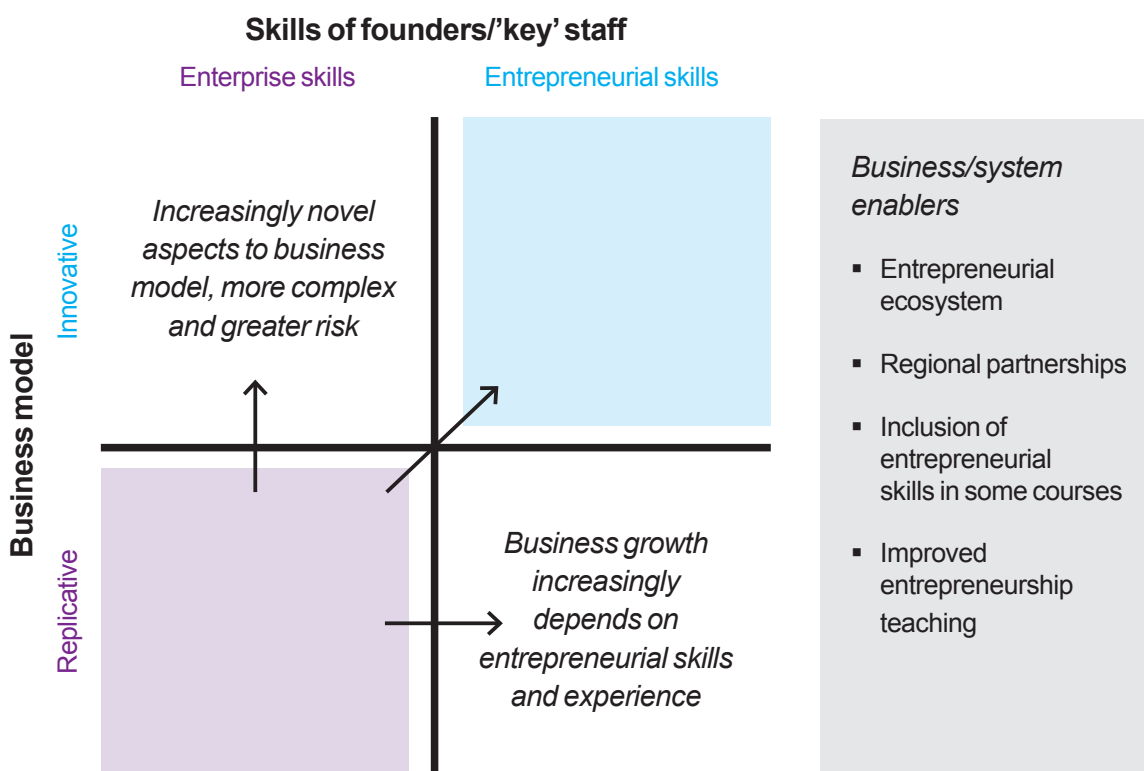
The enterprise skills listed in figure 1 are useful for founders of either 'replicative' or 'innovative' businesses, although the latter, if high-growth and expansion are the aim, will require higher levels of entrepreneurship skills. Both sets of skills are relevant to all industries.

THE CONTRIBUTORY ROLE OF VET

In Australia, VET contributes to innovation in both the products and processes of business and technology (Toner 2011), especially through the adaptive ideas and capabilities of its employees (Fowler 2016). But where and how is VET assisting with business creation? Figure 2 illustrates that VET currently contributes to the development of enterprise skills, particularly in the context of replicative businesses (as indicated by the purple shading). VET does not currently make a large contribution to the development of entrepreneurial skills, particularly those associated with innovative business models (as shown in blue).

There is opportunity for VET to support both enterprise skills and entrepreneurship.

Figure 2 The contribution of VET to the skills of business founders



One aspect of the Scott-Kemmis (2017) research was an investigation of entrepreneurial start-ups geared for high growth (as opposed to for self-employment purposes) in a single jurisdiction. The Australian Capital Territory (ACT), a discrete ecosystem, was chosen as the case study. The investigation indicated that around 20% of founders hold a VET qualification. Interviews with a small number of these founders suggested that, while some valued the technical skills they had gained through VET, their VET qualification provided few of the skills necessary to initiate the start-up. This raises the question: should VET training programs place greater emphasis on enterprise skills and especially 'entrepreneurship' skills and, if so, then how?

Debate continues around what skills to develop, for which groups of students and how best to teach them.

What skills could VET help to develop?

The international literature shows that other countries have progressed further than Australia in their thinking about skills for entrepreneurship, with many examples of programs and initiatives aimed to teach entrepreneurship skills to vocational education students. However, debate continues around what skills to develop, for which groups of students and how best to teach them. The potential skills for inclusion in entrepreneurship training fall along a spectrum from broadly applicable employability skills (which can be considered as enterprise skills), through to skills more specifically applicable to starting an innovative business.

The Australian Chamber of Commerce and Industry and the Business Council of Australia (2002) identified eight main employability skills: communication, planning and organisation; teamwork; self-management; problem-solving; learning; technology; and initiative and enterprise. Employability skills have been embedded into training packages, ensuring that VET plays a role in developing these skills, although uncertainty about how to teach and assess them remains (Wibrow 2011).

Further along the spectrum of enterprise/employability and entrepreneurial skills, the Eurydice report of 2012 on entrepreneurship education provides a broad framework for designing entrepreneurial education. The framework includes some of the employability skills listed above, as well as knowledge and skills more specific to the business element of entrepreneurship. These include economic and financial literacy, knowledge of business organisation and processes, and the practical exploration of entrepreneurial opportunities.

Focused more squarely on entrepreneurship, the OECD (2014) distinguished between two levels of entrepreneurship training; the first focused on ‘awareness’, the second for those with entrepreneurial intent (table 1). Other researchers have identified the specific skills required to undertake the various entrepreneurial activities involved in creating an innovative business, as shown in table 2.

Table 1 Levels of entrepreneurship training

Level 1: Basic entrepreneurship training	
Objective	Develop an awareness about entrepreneurship and its potential as a career path.
Delivered by	Trainers and entrepreneurs.
Method	Classroom training, experiential learning, apprenticeships.
Outcome	Students may develop an interest in starting a business; increased employability.
Level 2: Skills and support for business creation and growth	
Objective	Deliver skills to start and develop a business.
Delivered by	Entrepreneurs, professional coaches, and mentors, trainers, incubation, start-up support services.
Method	In-depth training, experiential learning, coaching, mentoring, incubation, start-up support services.
Outcome	Students create their own businesses and increase their employability.

Source: OECD (2014).

Table 2 Key skills for enterprise formation and development

Types of entrepreneurial skills	Specific elements
Competencies to recognise and analyse market opportunities	Handling risk, managing technical dimensions and understanding the market.
Competencies to communicate and persuade	The ability to relate to, communicate with, and persuade customers, clients, suppliers, competitors, service providers and other stakeholders in the business environment in order to understand their needs, expectations, apprehensions and requirements.
Networking	The ability to build linkages with businesses and other organisations for collaboration to achieve shared objectives and mutual learning – developing a ‘community of practice’.
Personal management skills/ personal entrepreneurial behaviour	The ability to ‘live with daily insecurity’, learning effectively from business interactions, developing an effective learning organisation that remains entrepreneurial, maintaining a flexible strategic orientation, appropriate delegation.

ENTREPRENEURIAL ECOSYSTEMS

Some regions contain environments with sustained high levels of new-enterprise formation and growth, and this has led to research into the specific characteristics that enable these regions to ‘out-perform’ in this regard. The concept of ‘entrepreneurial ecosystems’ has consequently been identified and defined. Here the term ‘entrepreneurial ecosystem’ means the formal and informal institutions and relationships that facilitate access to entrepreneurship-relevant resources such as information, finance, reputation and specific knowledge (Carvalho, Costa & Dominginhos 2010; Isenberg 2011; Krueger 2012).

A number of frameworks have been developed to guide the characterisation and assessment of entrepreneurial ecosystems. Figure 3 reproduces a framework developed by Isenberg (2010, 2011), which takes a wide systems perspective and illustrates the various elements that play a role in the functioning of the ecosystem.

Educational institutions are important elements of the entrepreneurial ecosystem, providing skills to both entrepreneurs and the workers they employ. While the VET sector is certainly active in the latter, the case study of the ACT (Scott-Kemmis 2017) demonstrates that it could further immerse itself in the ecosystem to foster entrepreneurship, at least in some industries (such as in areas related to information technology). While not all VET (or higher education) should include content on how to start a firm, providing awareness of the option, what it might involve and the support opportunities available could be incorporated into all tertiary education.

FUTURE POLICY ENABLERS RELEVANT TO VET

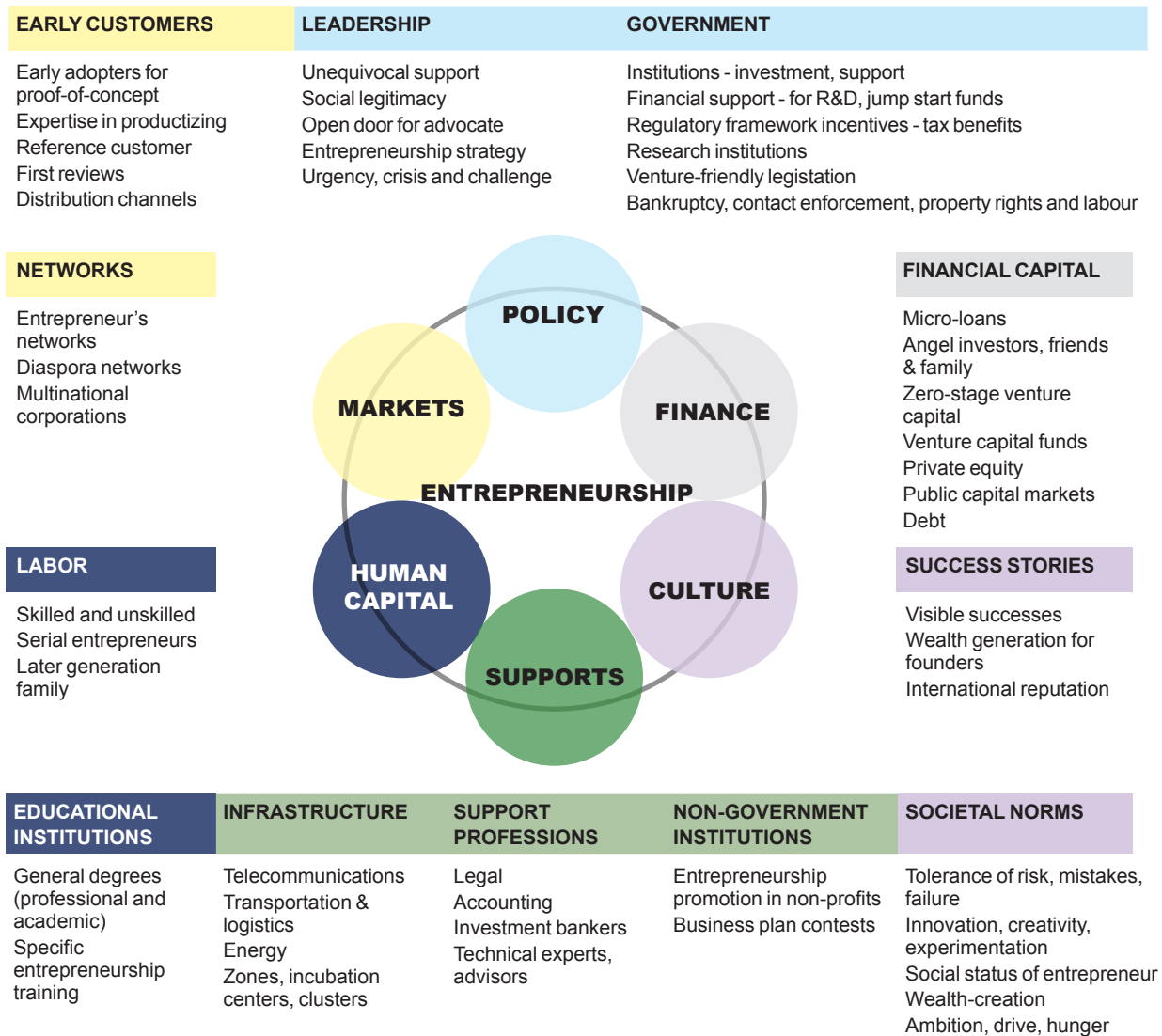
Lessons from the ACT case study and international literature (Scott-Kemmis 2017) could inform the development of a national strategy for entrepreneurship in Australia. Such a strategy could take account of the following issues, enabling VET to play a significant role in the development of entrepreneurship capacity:

- The VET sector needs to increase its participation in the entrepreneurial ecosystem. Registered training organisations could actively position themselves as education and training partners in the ecosystem.
- The national strategy needs to support bottom-up initiatives, many of which will have a regional dimension. Participation in local area initiatives through regional partnerships is important.
- Enterprise skills should be a key component of most VET courses, and entrepreneurship skills and knowledge should be included in at least some courses, the obvious example being IT-related qualifications.
- The entrepreneurial knowledge and skill of VET educators and trainers needs to be nurtured, at least to the extent that VET students are made aware of other entrepreneurial support resources.

On this last point, the articles compiled and published by Mitchell (2007) provide practical examples within a professional development guide aimed at helping those working in the VET sector to become more innovative and entrepreneurial.



Figure 3 Domains of an entrepreneurial ecosystem



Source: Adapted from Isenberg (2010, 2011).

REFERENCES

- Australian Chamber of Commerce and Industry & Business Council of Australia 2002, *Employability skills for the future*, Department of Education, Science and Training, Canberra.
- Carvalho, L, Costa, T & Dominginhos, P 2010, *Creating an entrepreneurship ecosystem in higher education*, INTECH Open Access Publisher, Portugal.
- Eurydice 2012, *Entrepreneurship education at school in Europe: national strategies, curricula and learning outcomes*, Education, Audio-visual and Culture Executive Agency, Brussels.
- Fowler, C 2016, 'What the National Innovation and Science Agenda (NISA) didn't say about skills and jobs', opinion piece, NCVER, Adelaide, viewed April 2017, <<https://www.ncver.edu.au/about/news-and-events/opinion-pieces/what-the-national-innovation-and-science-agenda-nisa-didnt-say-about-skills-and-jobs>>.
- Gibb, A 1998, *Entrepreneurial core capacities, competitiveness and management development in the 21st century*, Durham University Business School, Durham.
- Gielen, P, Hoeve, A & Nieuwenhuis, L 2003, 'Learning Entrepreneurs: learning and innovation in small companies', *European Educational Research Journal*, vol.2, no.1, pp.90–106.
- Isenberg, D 2010, 'How to start an entrepreneurial revolution', *Harvard Business Review*, vol.88, no.6, pp.40–50.
- 2011, 'The entrepreneurship ecosystem strategy as a new paradigm for economic policy: principles for cultivating entrepreneurship: the Babson Entrepreneurship Ecosystem Project', presentation at the Institute of International and European Affairs, Dublin, 12 May 2011.
- Krueger, N 2012, 'Markers of a healthy entrepreneurial ecosystem', Max Planck Institute for Economics, viewed April 2017, <<https://ssrn.com/abstract=2056182>>.
- Mitchell, J, 2007, *Innovation and entrepreneurship in VET: a professional development guide for the Australian vocational and training sector*, John Mitchell & Associates, Pyrmont.
- OECD (Organisation for Economic Co-operation and Development) 2014, *Supporting entrepreneurship in the vocational training system in Tunisia*, Reviews on skills and competences for entrepreneurship, OECD, Paris.
- Onstenk, J 2003, 'Entrepreneurship in vocational and higher education', *European Educational Research Journal*, vol.2, no.1, pp.74–89.
- Scott-Kemmis, D 2017, *The role of VET in the entrepreneurial ecosystem*, NCVER, Adelaide.
- Tolentino, A 1998, *Training and development of entrepreneurs-managers of small enterprises: pointers and lessons learned*, International Labour Organization, Geneva.
- Toner, P 2011, 'Tradespeople and technicians in innovation', in P Curtin, J Stanwick & F Beddie (eds), *Fostering enterprise: the innovation and skills nexus – research readings*, NCVER, Adelaide.
- Wibrow, B 2011, *Employability skills: at a glance*, NCVER, Adelaide.

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