



# Innovation in teaching and learning in vocational education and training: International perspectives *by Yvonne Hillier*

## Introduction

Vocational education and training (VET) helps prepare people for work, develops their skills while at work and changes what they are doing so that they can work in new or different occupations. Across the world in recent years, VET has been expected to meet the demands of the rapidly changing global environment. This means that we have to find different ways to support the vocational learning of people already in the workplace, as well as those who are about to join it. My report attempted to capture innovative ways that VET practitioners practise their profession in response to the changing face of vocational learning. It is an overview of provision across many countries, but particularly those within the European Union (EU) and with specific reference to the United Kingdom.

This summary identifies a number of themes germane to the topic of innovations in teaching and learning and illustrates these with relevant examples of practice, some of which may be worth considering for an Australian context. My aim is to assist practitioners to take a step back from the 'daily grind' to consider what they could do differently, to be tempted by ideas that seem to be working elsewhere—and therefore try them out, adapt them and add them to the growing repertoire of teaching and learning practices in VET.

## Identifying innovative practice

How can we know what VET practitioners are doing in other countries? Often people who are finding new and different ways to teach and help people learn do not publish what they are doing. However, a large number of relevant web-based networks exist and I was able to interrogate these for examples of current innovative practice. These websites provide resources for

practitioners, including downloadable learning resources, examples of innovation in sector-specific occupations and opportunities for practitioners to share their practice in formal ways through conferencing, and informally through wikis and blogs.<sup>1</sup>

The literature (what there was) and web search identified four dominant trends in current teaching and learning practice, each reflecting the current international imperative for highly skilled and highly motivated expert workforces with the inherent capacity to meet the challenges of global competition, an ageing population and evolving technology. The examples that comprise the innovative practices described in this report fall into four categories: closer engagement in work-based learning; new technology facilitating learning; networks, centres of excellence and resource banks; and networks in professional practice.

## 1. Closer employer engagement in work-based learning

Over the years the involvement of employers and stakeholders has been crucial to the successful operation of the VET system. Four aspects of employer engagement in work-based learning exemplify how innovative practices in VET are being fostered.

### *New institutions to build skills differently: The role of partnerships*

Close cooperation between providers of VET and employers is a key factor in successful development and transfer of learning for and in the workplace. This learning is based on the 'real world' and needs

<sup>1</sup> The web addresses of many of the example organisations listed in this summary are given in the appendix.

the engagement of employers. Brokerage is being used by governments to help employers find appropriate training for their employees and in some instances even fund such training, as the following examples show.

*In England the Train to Gain initiative aims to ensure that employers are put in touch with training providers through the use of brokers who carry out skills needs analysis for organisations.*

*In Finland, a workplace development program, TYKES, focuses on enhancing productivity and the quality of life of employees.*

*The national skills academies (NSA) were established in 2007 in England to provide employers with a much stronger voice in shaping the supply of vocational education and training.*

*The role of the unions has been increasingly important in supporting workplace learning. U-Net is a union learning network which operates with learndirect, the government-sponsored learning provision for adults.*

### **Collaboration between sectors**

In England the first example of collaboration between sectors was through the creation of the 'foundation degree', the equivalent of the first two years of a three-year bachelor degree designed to provide higher-level technical and professional qualifications. It will be delivered mainly in further education colleges in partnership with higher education institutions. Foundation Degree Forward (fdf) has a remit to work with employers and is the national body that supports the development and validation of high-quality foundation degrees.

*Belgium has attempted to remove barriers between general education and vocational provision through a project, Accent op talent.*

*In the Netherlands, regulations which penalised students transferring from courses have been abolished to help create flexible pathways from secondary vocational to higher professional education.*

*France and the Netherlands have school-based and apprentice routes to the same qualification.*

### **New teachers: Mentors in the workplace**

There is a new breed of teachers in VET drawn from employees whose primary role in the workplace is mentoring. Mentoring can involve experienced employees working with newer/less experienced employees and can be auspiced by the VET provider or the employer.

*An electrical equipment firm in Latvia with 700 employees arranges for senior staff to mentor and train newcomers over a three-month period. The mentors receive additional remuneration of up to 25% of their regular salary.*

### **Motivating the workforce: Competitions, quizzes and games**

Yes, but is the learning fun? The following are specific examples of innovative teaching practices in companies.

*An Austrian cable manufacturer with ten staff uses a firm-specific questionnaire game that covers organisational issues, work procedures, products, customers and competitors.*

*National skills competitions particularly suit certain sectors. For example, Skillbuild is a national competition in the United Kingdom for young people training in the construction industry. The winners are sometimes able to participate in the World Skills Olympics held bi-annually.*

*Prizes can also go to providers. The Austrian KnewLEDGE prize rewards innovative training concepts and the annual prize also awards events which are organised to foster exchange of good practice.*

### **What are the issues for Australia here?**

These examples demonstrate how people are trying to link the content of their VET programs more effectively to employer needs. The most fruitful paths to innovation are revealed to be through contact with employers, and by collaboration and networking and establishing initiatives such as brokerage services that reflect the changing work environment. These call for the help of government and industry partners—including the unions. Innovations also include new ways of looking at old practices.

## **2. New technology facilitating learning**

If there is one factor which has fostered innovation in new teaching and learning practices more than any other, it is technological development. Globally, the use of e-learning through virtual learning environments (VLEs), multimedia hardware and software, and through social networking has helped people learn at times previously impossible. Virtual learning environments provide opportunities for people to download resources, follow links to websites, discuss their work and ideas through discussion boards, add to their ideas through wikis, and socialise through chat rooms and blogs.

*An aircraft manufacturing industry in England is working collaboratively with the organisers of a foundation degree. The industry software used in airline cabins is being used in simulated learning experiences to enable students to experience the actual industry software.*

*The University of Brighton has a simulated court environment with a Bench of actual magistrates who operate the proceedings as a real court. This learning environment is utilised by students studying law, journalism, media and the foundation degree for police.*

How do you capture the learning taking place? Once again, technology has helped here by logging learning electronically. These 'e-portfolios' have become a significant development in Europe because of their potential for accreditation.

*Equipment such as mobile phones, personal digital assistants (PDAs), ultra-mobile personal computers, mini notebooks, Sony PSP and Nintendo DS games machines, handheld voting and GPS devices, MP3/MP4 and multimedia players are being used to engage hard-to-reach learners. For example MoLeNET has introduced mobile learning into 89 colleges in England and in one college Nintendo DS with Brain Training has helped students to improve their writing skills.*

### **What are the issues for Australia here?**

The implication here is that we need to look at the new information and communication technologies (ICTs) and decide whether they also have the potential to help trainees learn. However, the clear lesson from using technology is that it needs to be tested: see the new technology in practice, experiment with it (before going 'live' with learners) and evaluate what works.

## **3. Networks, centres of excellence and resource banks**

### **Networks**

There has been a huge increase in the number of networks in the VET system, ranging from the very informal, between practitioners, through to large international networks. Some networks focus on the subject specialist content and share resources online. Others provide opportunities for practitioners to meet and discuss their work. Still others provide case studies of innovation along with opportunities to test out activities in different contexts.

*The National Learning Network (NLN) provides an online database of interactive resources free to the education and training sector and can be used by existing virtual learning environments.*

*Netskills produces training materials which can be accessed online by most universities and further education colleges. The website shows sample pages from modules and also demonstrates how training activities could be transferred to an online mode.*

### **Centres of Vocational Excellence (CoVEs)**

The CoVE program was launched in England in 2001 with the aim of radically improving the capacity of the further education sector to deliver specialist work-based learning, and by 2006 there were nearly 4000 centres, covering a range of sectors. The next stage, introduced in 2006, was a 'quality mark' for employers, whereby CoVEs established a new standard for employer responsiveness and vocational excellence.

*Sussex Hospitality CoVE commissioned the conversion of a 7.5-ton lorry to a site for workplace learning. The lorry visits areas not well served by public transport and as a result there has been an increase in take-up of short theory courses.*

### **Resource banks and specialist resources and facilities, dissemination of good practice**

The construction industry in particular has used resource banks of high-quality resource materials from the CoVEs to help foster good practice in teaching and training. Other specialist resources include skills competitions, with prizes sponsored by employers and manufacturers to help motivate learners. Equipment supplied by enterprises is a key factor in enabling learners to gain industry experience. Some companies sponsor rooms or workshops and even provide occasional visits by their engineer. Even materials left over from completed contracts (bricks, paint and timber) are useful donations to enhance the learning experience.

### **What are the issues for Australia here?**

Not all the networks described above will have resources appropriate for Australia; many of them are so highly contextualised that they will need considerable adaptation if they are to be useful. However, the key is to experiment and change what is not relevant. A second suggestion might be to undertake a careful web search and concentrate on one or two networks that appear most promising in terms of the learning resources they offer.

## 4. Networks in professional practice

### *The VET practitioner and professional development*

The changing workplace environment offers many opportunities for innovative teaching. The problem is keeping abreast of all of these exciting initiatives. The rapid technological advances are placing demands on VET teachers. Resources need to be made available to help VET practitioners benefit from these advances. Assessing teaching performance is also an increasing worldwide trend and the most likely scenario for VET is that trainers will need to prove the quality of their teaching more frequently.

### *Status of VET practitioners and their professional development*

The status and position of VET practitioners varies across countries and is reflected in the level of qualifications that are required for teachers to practise. The esteem in which academic and general education teachers are held is another indicator of parity.

*A recent workforce strategy in the United Kingdom has been facilitated by the Lifelong Learning UK Sector Skills Council. The council looks at the skills development needs of trainers, tutors and learning support staff as well as those of human resources and business support professionals. Its aim is to develop a framework for workforce development needs common to providers across the sector.*

### *Networks for practitioners*

The challenges of keeping up to date and also gaining the appropriate qualifications to enable practice suggest the need for innovative networks for practitioners which focus on *their* practice and on *their* learning needs.

*Networks to support professional training in England include SCEPTRE, a project funded by the Teaching and Learning Research Programme (TLRP), which focuses on 'learning as work'.*

*In England, Centres for Excellence in Teacher Training (CETTs) have been established to help foster good practice in post-compulsory education. CETTs provide an important source of information for guidance in the choice of professional development activity.*

### *What are the issues for Australia here?*

Again, some of the European networks will be too context-specific for Australian application, but the need

for practitioners to access opportunities to develop their own practice is substantial. The Institute for Learning website may be a useful resource in this regard.

### Challenges ahead

Innovation does not arise in a vacuum. There is a tendency for policy-makers to assume that, by upgrading the qualifications of vocational teachers, the pedagogical quality required in the 'knowledge-based economy and society' will follow and then ICT will do the rest. Despite ongoing day-to-day challenges, practitioners are being innovative in a variety of ways. What is clear is that they need spaces to enable testing of new ideas and then to share these with their peers. There needs to be a culture where experimentation is possible, in a context of learning from experiences—including failure—without fear of reproach.

Networking, including sharing practice through conferences and workshops, has a huge potential for cross-fertilisation of ideas and active experimentation. A range of bodies in Australia are well placed to foster such networking by helping practitioners answer the 'what works?' questions. To assist practitioners to fully engage in innovation in their professional practice, systemic support and recognition for formal networks and partnerships must be forthcoming. And, crucially, the cooperative involvement of practitioners, managers, employers, industry, business and government is key to successful learning.

The frenetic pace of change and the current economic uncertainties only add to the challenges, but with an ongoing commitment to seeking 'what works', VET practice will be able to be proactive in its aim of helping people acquire skills and knowledge to ensure their successful participation in society.

To be alerted when the full report, *Innovation in teaching and learning in vocational education and training: International perspectives* by Yvonne Hillier, is available, subscribe to NCVER News at <<http://www.ncver.edu.au/newsevents/news.html>>



## Annotated list of useful websites

Austrian KnewLEDGE prize: rewards innovative training concepts; the annual prize also awards events which are organised to foster exchange of good practice.

<<http://www.knowledge.at>>

British Educational Communications and Technology Agency (BECTA): provides events, awards, newsletters and funding for research to help develop educational and instructional design.

<<http://www.becta.org.uk/>>

Cedefop: European network undertaking research, promoting dissemination of practice and hosting conferences, all of which activities can be accessed through its website.

<<http://www.britishcouncil.org/learning-edefop>>

Centres for Excellence in Teacher Training (CETTs): established to help foster good practice in post-compulsory education.

<<http://excellence.qia.org.uk/nationalcetts>>

Centres for Excellence in Teaching and Learning (CETLs): established to share and develop good practice.

<<http://www.hefce.ac.uk/Learning/TInits/cetl/>>

City and Guilds Centre for Skills Development: an independent, not-for-profit centre which works with organisations internationally to share knowledge and good practice.

<<http://www.skillsdevelopment.org>>

Community College Research Centre: conducts considerable research on community colleges in the United States.

<<http://ccrc.tc.columbia.edu/>>

Department for Innovation, Universities and Skills (DIUS): United Kingdom government department responsible for further and higher education, innovation, science and technology.

<<http://www.dius.gov.uk/>>

Education Resources Information Centre (ERIC) Clearinghouse on Adult, Career and Vocational Education: closed at the end of 2003, but it contains a good archive of material up until that date.

<<http://www.eric.ed.gov>>

Eurostat: European Union statistics.

<<http://epp.eurostat.ec.europa.eu/>>

Foundation Degree Forward (fdf): has a remit to work with employers and is a national body that supports the development and validation of high-quality foundation degrees.

<<http://www.fdf.ac.uk/>>

Grundtvig Programme: Grundtvig is part of the European Commission's Lifelong Learning Programme and aims to strengthen the European dimension in adult education and lifelong learning.

<<http://www.grundtvig.org.uk/>>

*The future of higher (lifelong) education*: an online book promoting the vision of job training and education for everyone on the planet during this century, with links to hundreds of useful sites.

<<http://ecolecon.missouri.edu/globalresearch/>>

Higher Education Academy: supports the sector in the provision of the best possible learning experience for all students.

<<http://www.heacademy.ac.uk/>>

Institute for Learning (IfL): has responsibility for registering all newly qualified practitioners in the learning and skills sector, along with maintaining the continuing professional development database.

<<http://www.ifl.ac.uk/services/>>

International Centre for Vocational Education and Training (ICVET): Australian centre with information on pedagogy, with related resources on topics ranging from the practical, such as using quizzes and games, to the more theoretical, such as learning styles and action research.

<[http://www.icvet.tafensw.edu.au/resources/vet\\_pedagogy.htm](http://www.icvet.tafensw.edu.au/resources/vet_pedagogy.htm)>

Joint Information Systems Committee (JISC) Intute: a virtual training suite supported by the Joint Information Systems Committee and two research funding councils. It provides tutorials written and updated by a national team of subject specialists based in universities.

<<http://www.vts.intute.ac.uk>>

Learndirect: government-sponsored learning provision for adults.

<<http://www.learndirect.co.uk/>>

Learning and Skills Network (LSN): set up to foster and share practice in the learning and skills sector in England.

<<http://www.lsneducation.org.uk>>

Leonardo Programme: part of the European Commission's Lifelong Learning Programme and aims to build a skilled workforce across Europe.

<<http://www.leonardo.org.uk/>>

Lifelong Learning UK (LLUK): looks at the skills development needs of trainers, tutors and learning support staff as well as those of human resources and business support professionals. Its aim is to develop a framework for workforce development needs common to providers across the sector.

<<http://www.lluk.org/>>

National Center for Research on Vocational Education: North American network for research and development used by practitioners, but closed in 1999.

[<http://www.vocserve.berkeley.edu/>](http://www.vocserve.berkeley.edu/)

National Construction College: promotes tailor-made training and designs courses for the construction industry, including apprenticeship training, and health and safety and management training.

[<http://www.nationalconstructioncollege.co.uk>](http://www.nationalconstructioncollege.co.uk)

National Learning Network (NLN): funded by the Learning and Skills Council in England and provides an online database of interactive resources free to the education and training sector. The materials can be used by existing virtual learning environments.

[<http://www.nln.ac.uk>](http://www.nln.ac.uk)

National Skills Academies (NSA): established in England to provide employers with a much stronger voice in shaping the supply of vocational education and training.

[<http://www.nationalskillsacademy.co.uk/>](http://www.nationalskillsacademy.co.uk)

Office for Standards in Education (Ofsted): inspect and regulate to achieve excellence in the care of children and young people, and in education and skills for learners of all ages. The new Ofsted brings together the wide experience of four inspectorates to make a greater difference for every child, and for all young people and adult learners, in England.

[<http://www.ofsted.gov.uk/>](http://www.ofsted.gov.uk)

Organisation for Economic Co-operation and Development (OECD): brings together the governments of countries committed to democracy and the market economy from around the world to support sustainable economic growth, boost employment, raise living standards, maintain financial stability, assist other countries' economic development and contribute to growth in world trade.

[<http://www.oecd.org/>](http://www.oecd.org)

Quality Improvement Agency: set up to promote quality enhancement in the further education sector in England. It has an excellence gateway with a vocational learning support program aimed at promoting and supporting teaching excellence in schools and colleges. It provides case studies of good practice and a series of problems and scenarios with suggested solutions for practitioners to test.

[<http://www.excellence.qia.org.uk>](http://www.excellence.qia.org.uk)

Quality Improvement Agency Diploma Support program: provides made-to-order training for the new 14–19 diplomas currently being introduced in England. These provide vocational training and qualifications for young people in schools and colleges.

[<http://www.diploma-support.com>](http://www.diploma-support.com)

SCEPTrE: a networks to support professional training in England and funded by the Teaching and Learning Research Programme (TLRP), which focuses on 'learning as work'.

[<http://www.surrey.ac.uk/sceptre/ResourcesandlinkstosupportPT.htm>](http://www.surrey.ac.uk/sceptre/ResourcesandlinkstosupportPT.htm)

Skillsnet: formed by industry stakeholders, with funding from the National Training Fund of the Department of Enterprise, Trade and Employment. This enterprise-led approach to VET supports flexible and effective training methods for enterprises which experience difficulties in accessing training.

[<http://www.skillnets.com>](http://www.skillnets.com)

Teaching and Learning Change Programme (formerly the Subject Learning Coaches Programme): hosted by the Learning and Skills Network, comprises subject-specific teaching and e-learning resources, subject coaching networks organised to facilitate networking, and professional training for subject learning coaches.

[<http://www.subjectlearningcoach.net>](http://www.subjectlearningcoach.net)

The Training Village Europrof – New Forms of Education and Professionals in VET (Europrof): project involving partners from research institutes and universities in 14 European countries initiated to develop a community of researchers and practitioners and aims to gain recognition of VET as a discipline and profession in its own right.

[<http://www.trainingvillage.gr/etv/default.asp>](http://www.trainingvillage.gr/etv/default.asp)

TYKES: a workplace development program in Finland, focusing on enhancing productivity and the quality of life of employees. Its learning networks enable researchers and workplace practitioners to work together through consultancies and external exports to create new knowledge about and expertise in sustainable productivity growth.

[<http://www.mol.fi/mol/en/01\\_ministry/05\\_tykes/index.jsp>](http://www.mol.fi/mol/en/01_ministry/05_tykes/index.jsp).

Universities Vocational Awards Council: primarily responsible for accrediting vocational awards and is particularly concerned with employer partnerships in foundation degrees.

[<http://www.uvac.ac.uk>](http://www.uvac.ac.uk)

University for Industry (Ufi): has a mission to use technology to transform the skills and employability of the working population, in order to improve the UK's productivity.

[<http://www.ufi.com/>](http://www.ufi.com)