

The double helix of vocational education and training and regional development

Peter Kearns

Kaye Bowman

Steve Garlick

Global Learning Services





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The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER

Publisher's note

Additional information relating to this research is available in *The double helix of vocational education and training and regional development: Support document*. It can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1989.html>>.

To find other material of interest, search VOCED (the UNESCO/NCVER international database <<http://www.voced.edu.au>>) using the following keywords: community development; community resources; development planning; partnership in education; regional development; regional planning; skill development; skill shortage; strategic planning.

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Level 11, 33 King William Street, Adelaide SA 5000
PO Box 8288 Station Arcade, Adelaide SA 5000, Australia

ph +61 8 8230 8400 fax +61 8 8212 3436

email ncver@ncver.edu.au

<<http://www.ncver.edu.au>>

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About the research



The double helix of vocational education and training and regional development
by Peter Kearns, Kaye Bowman and Steve Garlick

Australia has a mix of metropolitan, outer-metropolitan, rural and remote regions. In the recent past, economic growth has been biased towards knowledge-intensive industries and occupations, which take place mainly in metropolitan areas. While some non-metropolitan parts of Australia are doing very well, many rural and remote regions are in decline or are stagnating.

We know that human resources will be one of the most important factors in encouraging regional development. We also know that vocational education and training (VET) institutions have a significant presence in the regions and are usually integrated with the local economy. In order to find out more about the role VET can play in regional development, the National Centre for Vocational Education Research (NCVER) commissioned a suite of research.

This study, *The double helix of vocational education and training and regional development*, is part of that suite. It looked at five regions across Australia to assess how well VET is meeting the skills needs of those regions, such that these communities achieve sustainable development.

Key messages

- To enable communities and regions to be strengthened through learning and education, VET needs to become integrated with regional development in all key dimensions—economic, social, cultural and environmental.
- The VET role should not be seen in terms of matching VET supply to a given demand. Rather it needs to respond to a complex set of local needs and relationships, as well as to national and state policy settings.
- VET organisations require strategies which look outwards and engage with the local community and other agencies.
- To support sustainable regional development VET organisations need to move from bilateral partnerships towards arrangements that aspire to whole-of-region development.

Tom Karmel
Managing Director, NCVER

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- ✧ Northern Adelaide region and Playford/Salisbury, South Australia
- ✧ Sunshine Coast region and Noosa, Queensland
- ✧ Riverina region and Griffith, New South Wales
- ✧ Cooloola region and Gympie, Queensland
- ✧ South-eastern region and Bega Valley, New South Wales

Executive summary

In 2006 the Council of Australian Governments agreed on a new national reform agenda with a strong focus on education and training reform and with new initiatives to boost opportunities for Australians to participate and be productive in the workforce. This study considered how well vocational education and training (VET) is meeting this challenge in regional Australia.

The research questions underpinning this research focused on matching VET provision to regional development skill needs, the flexibility of VET responses to these needs, and the role of local community frameworks in fostering innovation and building social and human capital.

The analysis in the study involved both quantitative and qualitative data derived from a study of five regions across Australia. These regions were Cooloola (Queensland), Northern Adelaide, Riverina, south-eastern New South Wales, and the Sunshine Coast.

The case studies involved consultations and analysis at both regional and community levels. The initial analysis at the regional level identified issues which were subsequently taken up in a further process of consultation and analysis in a selected community in each region. These communities were Gympie, Playford/Salisbury, Griffith, Bega and Noosa.

Findings

We found a mixed picture in each of our research questions. While VET undoubtedly plays an important social and economic role in regional development, its full potential is not being achieved and a range of barriers remain to be addressed.

The barriers identified included unresolved tensions between national, state and community/ regional priorities and between competition and cooperation in meeting skill needs; cultural barriers which inhibit enterprise and entrepreneurial initiatives; and a tendency in some cases to focus on short-term skill needs rather than promotion of a more strategic orientation of VET to support sustainable regional development.

Not all these tensions were observed in all regions. We found locations where local skill needs were receiving priority, where there was cooperation in the provision of skills training and where longer-term development planning was taking place. We highlight these positive instances, as well as instances where unresolved tensions remain.

We found two regions where the concept of sustainable regional development was incorporated into regional plans and VET providers were seeking to respond, as advocated by international agencies such as the United Nations Educational, Scientific and Cultural Organization (UNESCO). However, a re-orientation of VET's role towards the achievement of sustainable development is an ambitious goal, one which would take some time to implement. It will be a considerable time before the VET sector in Australia is fully oriented to such an approach.

Balancing and aligning VET supply to demand

The case studies demonstrated the substantial diversity in the socioeconomic context of the regions studied, which emphasises the importance of VET being enabled, through funding and other policies, to be responsive to local needs and conditions. At the same time, these regions were subject, to varying extents, to the ongoing impact of demographic change, globalisation, new technologies, and changes in work and labour markets.

This complex pattern of community and regional development influenced our conclusion that the VET role should not be seen in terms of matching VET supply to a given demand, but rather that the relationship should be seen as a dynamic two-way interaction between VET and regional development. A number of issues need to be considered when attempting to balance and align VET offerings to the skills needed. These include: national/state versus local skills development priorities; local industry versus community members' skills needs; and short-term skills needs versus long-term skills for sustainable development.

The VET sector, by being more flexible and building partnerships, is in the process of adapting to this situation.

Flexibility

In terms of timing, location and mode of delivery, the VET sector has undoubtedly become more flexible and responsive. In this study, flexibility was most evident in partnership arrangements for workplace delivery with medium and large firms, but was less evident in provision for small businesses and small underserved communities.

Limited evidence was found of VET organisations contributing to enterprising human capital¹—of adopting new approaches to enrich the learning experience of the general student body through action-based learning linked to workplaces and employment and future goals. However, one positive and nationally recognised example was the Northern Advanced Manufacturing Group's 'Concept 2 Creation' program in the Northern Adelaide region.

Internal cultures of compliance rather than innovation remain a key barrier within VET organisations, although there were signs of change in all regions studied. This was summed up in a few of the consultations where the view was expressed that there is a dichotomy between the 'old' and 'new' TAFE.

VET partnerships and regional frameworks

We found that VET partnerships were well developed in all regions, but were usually bilateral or single sector. There were VET relationships of many sorts: VET in Schools partnerships; VET and single enterprise or single industry partnerships; and some VET for social inclusion partnerships.

There was less evidence of overarching whole-of-region frameworks that foster interaction between the different partnerships, although two of the five regions had experience and some exemplars to share (Northern Adelaide and the Sunshine Coast). Barriers to a broader partnership-building process for the achievement of comprehensive social and economic regional development included unresolved issues between competition and cooperation in some regions, including between the various types of VET providers—public, private and community-based—and sometimes also between economic and social groups. A series of narrow partnerships may not by themselves address the complex challenges a region or community faces and may compete for scarce resources.

¹ Defined by Garlick, Taylor and Plummer (2007) as a process whereby individuals take responsibility for action.

Enterprising human capital goes beyond simply generating a good idea or being skilled to embrace the knowledge that enables on-the-ground achievements.

Conclusions

Overall, we have concluded that the role of the VET sector in contributing to sustainable regional development should be strengthened in ways that foster a more dynamic two-way interaction between VET and regional development. This will require broadening VET's role in serving communities and regions in the light of shifts in the socioeconomic context of VET.

This rethinking of the VET paradigm and its role in serving communities and regions will require:

- ✧ enhancing flexibility in the sector's response to the full range of learning and skill needs in community and regional development, including the small business sector and small and underserved communities
- ✧ encouraging innovation and enterprise in VET institutions, especially in the technical and further education (TAFE) sector as the public provider
- ✧ encouraging and supporting community and regional frameworks that connect and extend VET partnerships in strategic ways and which foster ongoing dialogue and interaction.

The double helix of VET and regional development

We have used the image of the double helix of VET and regional development to convey key ideas from our conclusions about VET and regional development.

- ✧ The spiral of the helix image reminds us that regional development is complex and is characterised by a range of interacting influences.
- ✧ Both VET and regional development involve dynamic processes, so that effective relationships between VET and regional development require ongoing alignment both ways.
- ✧ Collaborative frameworks have major value in facilitating ongoing processes of interaction and alignment.
- ✧ These relationships should be seen as a regional system of innovation and learning, and be actively promoted.

We have concluded that this double helix process is best facilitated through a comprehensive regional framework, such as a learning region, which encourages and facilitates ongoing interaction and learning and the application of learning strategies to drive VET and regional development.

The way forward

We suggest a number of requirements to progress a strengthened VET role in regional development. These include the establishment of pilot projects that develop models for a strengthened interaction between VET and regional development; the development and testing of a 'VET in the regions' evaluation framework; an assessment of the role of regional innovation blueprints in encouraging innovation in VET institutions; and the clarification of the relationship between innovation skills and the employability skills included in VET training packages.

We suggest that state and national funding bodies consider a discrete 'VET in the regions' program, which has both an implementation and a research arm. We also suggest that VET providers review their internal structures, cultures and processes, with the aim of achieving greater flexibility and, furthermore, that providers promote and nurture their relations with external agencies to develop innovative solutions to local skills and development opportunities and challenges.

VET in regional contexts

Introduction

A new national reform agenda was agreed by the Council of Australian Governments in 2006. The agenda has a strong focus on building the capability and contribution of the Australian people, the nation's human capital, through education and training reform and new initiatives that boost workforce participation and productivity. Nowhere is this more necessary than in the regions of Australia. Green has stressed the urgency of the issue for Australian regions:

Australia's regions must be encouraged to develop as sites for regional innovation since it is becoming clearer that traditional activities and markets will fail to sustain local populations, businesses and infrastructure. (Green 2004, p.1)

A focus on vocational education and training (VET) in local development contexts, whereby region-specific resources, know-how, and location advantages are encouraged, was earlier suggested by Objective 3 of the national VET strategy 2004–10:

Communities and regions will be strengthened economically and socially through learning and employment. Integrated learning and employment solutions will support regional economic, social and cultural and environmental development and sustainability. VET will stimulate interest in learning. It will strengthen the capacity of TAFE and other providers and brokers to partner with local government and non-government agencies, businesses and industry clusters. It will encourage local planning and innovation and help communities deal with changes and take advantage of opportunities. (ANTA 2003)

This study considered how well VET is meeting the challenge of contributing to sustainable community and regional development.

A three-part literature review was conducted as background to our case studies, conducted in five regions of Australia. We investigated the various approaches to regional development and identified factors for success. We reviewed selected Australian VET literature, seeking views on the three questions our project posed:

- ✧ How well is VET supply tailored to business and individual skills needs, particularly at the regional (below state) level?
- ✧ What strategies have been suggested to make VET more flexible to obtain a better match between regional-level VET skills demand and supply?
- ✧ What contribution can local community development frameworks and VET partnerships make to fostering innovation and building social and human capital skills?

We also looked briefly at what universities are doing in regional development in Australia. The themes of localisation, sustainable development, partnership, integration and coordination, and the learning region and learning economy concepts were also examined in the international literature. The literature review formed the basis of the questions we would ask in our case studies. A summary of the review follows (for full details, see the support document *The double helix of VET and regional development: Support document* available from the NCVET website).

We have used the image of a double helix of VET and regional development to convey the notion of the dynamic interaction between the VET sector and regional development, which we have concluded is necessary. We have adopted this concept from a 1992 report by Berryman and Bailey on education, titled *The double helix of education and the economy*. The reasons why we regard this as an appropriate analogy for the necessary relationships between VET and regional development form the conclusions of this report.

Regional development success factors

Three broad approaches have been argued in the literature as drivers of regional growth and competitiveness. The first approach is structural. The determinants of regional growth and competitiveness are considered to be the proximate presence of competitive business firms and supportive institutions. The best performing regions will be those with: a critical mass of businesses perhaps clustered around an existing globally competitive enterprise; active R&D programs; a highly skilled workforce; and supportive institutional interventions, for example, technology diffusion programs, new business start-ups and networking building initiatives and supportive regulatory frameworks.

The second approach adds a cultural dimension. The mere presence of business and institutional entities is argued to be insufficient. Regions will be successful in their growth and competitiveness only if adequate numbers of firms and institutions have the requisite culture of collaboration. The right kind of ‘social capital’ is required, that built on ‘trust and reciprocity’, ‘loyalty’ and ‘social and environmental responsibility’, and which facilitates learning and knowledge exchange.

The third approach stresses the importance of human capital above the role of the business and institutional entity. Proponents of the third approach, including the research team of this project, argue that human capital is the main driver of regional development success, not embedded businesses and institutional entities, as argued in the other two approaches. The most successful regions will be those where education brings a capacity for the population to put in place practical solutions to problems and to pursue opportunities in their regional communities. The third approach recognises that each region is a unique mix of attributes—economic, social, cultural, natural and historic—all of which are important in determining a region’s growth and competitiveness, and that cooperative planning is required (as argued in the second approach), or as the Australian Chamber of Commerce and Industry has suggested:

It is also important to plan strategically for regional development, and to strengthen the productive linkages: the economic, social and environmental infrastructure that will enable communities to grow and compete in a rapidly changing global environment.

(Australian Chamber of Commerce and Industry 2000)

Australian VET in regions research

Recent research on the VET sector in Australia’s regions takes up the ‘human capital’ approach to regional development as the vision in the national strategy for VET suggests. A focus on human capital formation in regions is a relatively new strategic direction for Australian VET research. Since 2004 research on VET in a localised context has expanded. Themes of relevant Australian research reviewed for this project include: tailoring VET supply to demand; flexible and responsive VET; VET partnerships; and roles for VET in regional development.

Tailoring VET skills supply to demand

A report on Australian regions and skills shortages by the Bureau of Transport and Regional Economics (2006) provides a framework for considering skills demand and supply. The framework identifies drivers of skill needs at two levels—the macro or national level, and the regional or

proximal level. The framework also includes key factors that influence where people choose to live and work.

The four key drivers of demand for skills at the macroeconomic or national level of the framework are:

- ✧ technology change
- ✧ globalisation
- ✧ national economy
- ✧ regulatory framework.

Research on forecasting VET skills demand that incorporates these macro drivers has been undertaken by Richardson and Tan (2007). These researchers demonstrate that the complexity of the national economy and related factors is such that it is not possible to make accurate projections of future skill needs in any detail. It is extremely difficult to forecast how demand is going to evolve, based on the macro-level drivers outlined above. Given all the factors involved in determining demand for skills, inaccuracy is not surprising. Richardson and Tan suggest refining the broad picture of the demand for VET skills, derived from national industry/occupational statistical forecasts, with information from local sources to identify realistic demands and possible solutions to any skills mismatches.

The quantitative approach to VET demand–supply matching at the regional or sub-state level has been tested by Walstab and Lamb (2008). These researchers compared VET participation data for Australian regions (that is, the number of people in training) provided by the National Centre for Vocational Education Research (NCVER) with apparent regional demand for VET, as predicted by the region’s industry and population bases. The results of their regression analysis showed participation in VET is influenced to a large degree by local economic or industry factors. An important but less influential factor was regional demographics; this was influential only at higher levels of VET qualifications—diploma and above. However, Walstab and Lamb also found several instances where a region’s industry and population profile did not explain VET participation levels.

More training is often put forward as a solution to an apparent unmet demand for VET skills or skills shortages. However, Richardson (2007) points out that it is misleading to assume that determined demand for skills, based on the number of people employed in occupations that require such skills, equates to the number of new VET graduates required. There are many ways whereby the labour market matches skills supply to demand. New VET graduates play only a modest part in filling skilled vacancies. Other sources of VET supply are people who learn the required skills on the job and people who already have the required skills, but who are working in other jobs (wastage), people who are out of the labour force (workforce exits), unemployed people (wastage) or migrants. In other words, we need to take into account the proximal factors at the regional level of the Bureau of Transport and Regional Economics framework:

- ✧ training—the number of people entering training
- ✧ wastage—the number of people trained in a skill, but not working in that occupation
- ✧ migration—the impacts of the global labour market
- ✧ workforce exits—the number of people permanently leaving the workforce.

The Bureau of Transport and Regional Economics suggests that it is these proximal factors which regional communities can potentially influence, rather than the macro or national drivers.

Lowry, Molloy and McGlennon (2008) caution us against relying entirely on numbers employed by occupational level and VET qualifications obtained as indicators of skills demand and skills supply, respectively. These researchers have observed that the way skills are defined has important consequences. There are other types of skills required for jobs, in addition to technical or motor skills. These include interactive or people skills and cognitive or problem-solving skills. Lowry,

Molloy and McGlennon interviewed employers, who unanimously agreed that interactive skills, followed by cognitive skills, would be the skill dimensions in highest demand over the coming decade, for all workers. How best to teach these skills surfaced as a key challenge for the VET sector.

The Business Council of Australia (2006) supports the view that businesses are concerned that education and training systems are not meeting their need for skills relating to creativity, initiative, oral business communication, problem-solving, and entrepreneurial skills. The Howard report (2006) also concluded the need for change in innovation paradigms and the need to rethink policies, practices, and programs to include creating a culture of innovation (Howard Partners 2006, p.33). It was suggested that VET should be part of this rethinking and the new innovation paradigm.

There are also a range of factors based on location that affect patterns of skills demand and supply. The Bureau of Transport and Regional Economics found that many regions are experiencing difficulties in recruiting and retaining professionals (particularly in health and allied services) and some tradespeople (including in electrical trades, transport and logistics and trained drivers, automotive workers and builders). Some communities are unable to obtain the services of these tradespeople and professionals, regardless of incentives offered. These locations are not meeting skilled workers' requirements in relation to where they choose to live and work. A number of factors that influence choice of residence have been identified by the Bureau of Transport and Regional Economics and include: the availability of health services, education and training and housing; jobs and career opportunities; infrastructure; and the person's perceptions of lifestyle and community.

Flexible and responsive VET

To try and determine what factors either promote or constrain VET responsiveness, a number of case studies were carried out as part of the Walstab and Lamb (2008) study noted earlier. The case studies were carried out in three regions with unusual or not-predicted levels of their population participating in VET. The case studies concluded that the activities of VET providers have an effect. Regional VET providers with high numbers of students:

- ✧ understand skills needs through information from the community to identify potential learners and their training needs, and business to identify training needs, skills gaps and changing skills demand
- ✧ respond to need through flexibility in course design, multiple delivery modes and locations, and staffing arrangements
- ✧ work in partnership to maximise the value of resources across the community, between sectors, within and between providers
- ✧ improve through evaluation, by assessing outcomes, understanding destinations and seeking feedback.

To achieve these capabilities a research consortium identified the required future capabilities of the VET industry and suggests that the critical success factors for individual VET practitioners include adopting new work roles, such as a learning manager, facilitator, mediator broker or strategist. For VET organisations, the critical success factors include developing an agile, creative and innovative culture, balanced, but not dominated, by the need to comply with systemic quality requirements (refer to <www.consortiumresearchprogram.net.au>).

VET partnerships

Partnerships involving VET in Australian regions have been well researched in recent years. There have been two streams of research in this area. One stream has focused on particular types of partnerships, for example, investigating partnerships between VET and industry, VET and social agencies, and VET and other education providers. The other stream has focused on whole-of-region partnerships or community development frameworks and the roles that VET providers of various kinds have played in them. The key findings of each of these streams of research are discussed below.

VET and industry

VET partnerships with industry dominate, as would be expected, given that the primary purpose of VET is to skill Australians for work. Until recently VET providers have been quite effective in partnering one-on-one with a firm or an industry (Callan & Ashworth 2004). Recently, however, there has been a shift to partnerships involving multiple enterprises and to VET providers becoming more involved in a holistic approach to workforce development.

The ‘skills ecosystem’ approach, pioneered in New South Wales and now taken up across the nation, involves interlocking networks of firms working with VET institutions and others to solve workforce problems. The responses include reshaping work and labour markets to solve the key cause of a skill shortage, or achieving a customised multi-employer response to particular skills shortages. Other responses involve VET institutions working as an innovation partner with leading research institutes and/or businesses to develop new products and processes, or VET institutions working to improve quality arrangements, especially across supply chains or networks of production and service provision (Windsor 2006; Buchanan 2006).

VET and social agencies

Apparently many of the public VET providers or technical and further education (TAFE) institutes are not entrepreneurial in relation to working with other social services agencies. The self-reported approaches to social inclusiveness of 58 TAFE institutes across Australia were examined by Volkoff, Clarke and Walstab (2008), who found that only 18 exhibited an ‘community obligation approach’, whereby inclusiveness was embedded in the whole college and its culture and partnerships were apparent with social services agencies. A further 32 TAFE institutes had ‘an existing cohort approach’, whereby they respond to the needs of those who walk through their doors. The remaining eight TAFE institutes had a ‘compliance approach’, where their effort went into whatever was measured.

VET and other education providers

There are exemplary partnerships between schools, TAFE institutes and local communities for the purpose of VET in Schools (for example, see Stokes, Stacey & Lake 2006). Some adult and community education providers (ACE) and TAFE institutes also work together with the aim of extending each other’s programs to new markets and improving client numbers through articulation (Gelade, Stehlik & Willis 2006). However, it has been suggested that the competitive funding model that operates in the national VET system hinders collaboration between the different education providers (Anderson 2005).

VET and whole-of-community/ regions development organisations

Waterhouse, Virgona and Brown (2006) studied four local community learning partnerships in Victoria being led by local government, of which there are many examples throughout Australia. These researchers concluded that VET did not play a leadership role in the four learning regions they examined, even though VET had a great deal to offer:

We saw how each of the stakeholder groups, education providers, local government and business/industry reflected a concern for the locality—a sense that the issues (including the problems) needed to be addressed locally as much as possible with the people and resources in place. This is not to suggest that external resources were not welcomed. However, in each case, the focus was on local initiatives and the potential for prosperity to grow through the development of skills, knowledge, resources, networks and socio-commercial relationships rooted in the local community. Hence local socioeconomic problems and skills shortages were dominant drivers for these projects—VET has a great deal to offer in these endeavours.

(Waterhouse, Virgona & Brown 2006)

Allison, Gorringer and Lacey (2004) in their study of 11 regions across Australia found ‘a plethora of good stories illustrating how VET and VET partnerships have developed relevant and innovative learning environments ... literally, hundreds of inspiring “learning fires” have been lit across regional Australia.’ However, these authors concluded the individual ‘learning fires’ need to be consolidated to have a more fulsome impact on a region. Allison, Gorringer and Lacey (2004) suggest that a shift towards VET whole-of-region partnerships represents a pragmatic and creative response to the needs of regional Australia:

The concept of learning communities is pragmatic, because it involves both people and institutions with the knowledge and skills necessary for effective regional development in a knowledge economy and learning society. It thus provides a fundamental and sound approach for regional development in the current global context. Yet the concept also affords opportunities for creative associations and ways of responding to change. It suggests that the VET sector and VET partnerships can play a critical role in the development of these kinds of learning infrastructures and processes. (Allison, Gorringer & Lacey 2004, p.5)

Australian universities and regional development

Australian research on the role of universities in regional development is growing, but it too is relatively new and patchy. Australian universities have also been slow to develop their role as a tool in regional development (Garlick 2000, 2002, 2003; Garlick & Pryor 2002) but there are some encouraging recent developments which are indicative of similar ways that VET might enhance its role. Many Australian universities now have regional and community engagement strategic plans, agreements in place with their regional communities, senior officers with coordinating roles, and initiatives of recognition and reward to encourage greater staff involvement. A peak group has also been established, the Australian Universities Communities Engagement Alliance (AUCEA), which has 35 member universities. This group has launched a major initiative on benchmarking regional and community engagement among its member organisations.

An issue for communities in relation to the efforts of universities is that they are mainly directed to the top end of the human capital pyramid. Reaching out and down to ensure breadth and connectivity with all aspects of the community’s human capital still needs to occur. This is where VET could play a role through a teaching and learning approach, to encourage students to think and behave in an enterprising way. VET also could play a role through leadership in regional strategic direction-setting and combined education and training with workforce and economic development initiatives and social and community development initiatives.

Roles for VET in regional development

Many researchers point to the role of education as a key mechanism for social change and the desire of regions for locally determined solutions to their challenges. They suggest there is a need for a shift and broadening of the concept of VET, which has yet to be fully articulated and realised, so that VET works for communities. They offer suggestions on roles VET could play.

Allison, Gorringer and Lacey (2006) suggest that the roles (and related impact indicators) for VET in regional Australia encompass:

- ✧ knowledge and skills transfer (which seeks to identify and map the ways in which VET contributes to the learning and education within the region)
- ✧ enterprise development (which seeks to identify how the VET sector has either supported, enabled or spawned enterprise development)
- ✧ value-adding to local supply chains (which seeks to identify the ways in which the VET sector is aware of, contributes to, and adds value to local industry supply chains)
- ✧ mobilising social and other forms of capital (which can be defined as the results of the generation of capacity)

- ✧ civic engagement (which includes working parties, committees and leadership roles in the community)
- ✧ innovation and creativity (which seeks to identify ways in which VET has contributed to access to, and use of technology, and changing technology).

Garlick, Taylor and Plummer (2007) elaborate on the education role for VET, which they consider underdeveloped, based on their study of VET in eleven regions. They see that the critical education role for VET is to develop enterprising skills in individuals and the community as a whole through forming regional coalitions of expertise to address local issues.

Fostering and building innovation skills, especially problem-solving, creativity, entrepreneurship, initiative and drive in its students, is also one of five roles identified in a book of research readings on the role of VET in innovation (Dawe [ed.] 2004). The other four roles are:

- ✧ monitoring innovations and assessing their impact and relevance for VET programs
- ✧ developing appropriate relationships with suppliers of new equipment and technology and customising programs to meet the specific training needs of their customers
- ✧ assisting, through skills development, the successful transfer and adoption of new innovations in industries, companies etc.
- ✧ working collaboratively with industry or research and development organisations, particularly focusing on processes and development rather than conducting pure research, and supporting small and medium-sized enterprises.

Allison, Gorringe and Lacey agree that the greatest need for enterprising community facilitation lies in smaller communities and among small and medium-sized enterprises.

Selected international research

While a focus on regions is a relatively new strategic direction for Australian education research, this is not the case internationally. The findings in the research cited above are reflected in international work on technical and vocational education and training (TVET) over the past decade and more. The need for a holistic approach to local development, which integrates social and economic objectives and which builds social, human and identity capital, is the overarching theme in much development, including the work of the Organisation for Economic Co-operation and Development (OECD) and UNESCO.

The renewed significance of place, due to the impact of globalisation, is somewhat paradoxically illustrated in the phrase, ‘thriving locally in the global economy’ (Kanter 1995). Kanter describes the characteristics which make a region world class in the global economy as ‘the three Cs’ (concepts, competence, and connections) and ‘magnets and glue’ to attract resources to a region and to bond resources for economic success.

A variant on this theme of a world-class region is the ‘creative class’ concept of Florida (2002). He argues the holistic case, that ‘every aspect and every manifestation of creativity—technological, cultural, and economic—is interlinked and inseparable (Florida 2002, p.8). His analysis of ‘the geography of creativity’ points to the significance of diversity in fostering creativity (‘creative places are multidimensional and diverse’, [p.7]). This analysis suggests a particular challenge for many rural communities that are not multidimensional and diverse in responding to changing conditions in creative and innovative ways.

A report of the High Level Meeting of the Group of the OECD Council on Rural Development provides information on policies adopted in a range of OECD countries. Themes emerging from this work include:

- ✧ the diversity of rural contexts—a typology of types of region was developed (1996, p.98) which distinguished between predominantly rural and significantly rural
- ✧ the need for a strategic vision to ensure concerted partnership action
- ✧ the impact of globalisation, which introduces a continuous process of adjustment
- ✧ the requirement for multi-sectoral policy in rural development (OECD 1996).

In 1999 UNESCO's Second International Congress on Technical and Vocational Education concluded that a new development paradigm for technical and vocational education and training was required. Since then the 'learning region' concept has been applied as a framework to enable regions to better help themselves. The concept of a learning region reflects ideas developed in theoretical writings on the so-called learning economy developed in the work of Lundvall and Johnson (1994) and Lundvall (1992).

The perspective of a regional learning economy was adopted by the OECD in its 2001 report, *Cities and regions in the new learning economy*, following empirical analysis and case studies in five regions across Europe. This study concluded that learning does influence regional economic performance but that organisational learning mattered more than individual learning. Learning was seen as an interactive organic process, with learning regions seen as regional systems of innovation. The report argued for coordination at individual, firm, and regional levels. The importance of social capital was also recognised (p.119).

The European Union's VET research agency, CEDEFOP, has also taken up the concept of the learning region. CEDEFOP in 2001 convened a conference on the learning region approach. The following were some key points from the resulting 2003 report.

- ✧ Region and locality should be seen as a focal point for the renewal and sustaining of social and economic life.
- ✧ Social capital is best developed at a local or regional level to drive collaboration and partnership.
- ✧ Interactive learning is a non-linear process.
- ✧ Open dialogue is a generative mechanism that is required.
- ✧ Local networks need to be brought together to build regional structures (CEDEFOP 2003).

Mechanisms to build learning and training cultures in communities were examined in a 2000 report by Kearns and Papadopoulos. This study, investigating five OECD countries (Sweden, Germany, United Kingdom, the United States, and the Netherlands), emphasised the importance of building a learning culture (best seen in the Nordic countries) and the significance of local frameworks for partnership and collaboration in this process. The need to link learning and skill strategies, as in developments in the United Kingdom, was a key conclusion, along with a demand-side orientation in policy and strengthened incentives for stakeholders. The study concluded that comprehensive local frameworks for partnership were less well developed in Australia than in the countries studied.

Another significant theme in international discussion of VET since the late 1990s has been the relationship of VET activity to sustainable development. This theme has been developed in the work of the UNESCO–UNEVOC Centre and is reflected in the 2001 Joint UNESCO–ILO Recommendation on TVET.

Given the necessity for new relationships between education, the world of work and the community as a whole, technical and further education should exist as part of a system of lifelong learning adapted to the needs of each particular country and to worldwide technological development. (UNESCO & International Labour Organization 2001, p.9)

The sustainable development theme has been noted in Seoul and Bonn UNESCO meetings as requiring a broadened concept of VET, beyond its traditional role of producing human and economic capital, to enable the incorporation of other forms of capital. These were seen as the natural capital of the earth's resources, and the social capital that builds strong communities (UNESCO 2004, p.99). The theme has been given prominence by the United Nations Decade of Education for Sustainable Development inaugurated in 2005.

In summary

In summary, our literature review led to the emergence of the following important messages:

- ✧ Human capital is a major driver of regional development. The most successful regions will be those where education brings a capacity for the population to put in place practical solutions to problems and to pursue opportunities.
- ✧ Determining demand for VET skills is a complex undertaking. It is likely to require gaining access to unconventional or local sources of data and knowledge and information. It involves a consideration of types of occupations and qualifications and also types of skills, including cognitive, interactive and motor skills. Overall, it can be said that matching VET skills offerings to demand is not a science, it requires judgement.
- ✧ Each region is a unique mix of attributes—economic, social, cultural, natural and historic—all of which are important in determining a region's growth and competitiveness. Cooperative planning is required.
- ✧ Not all identified demand for VET skills requires new VET skills supply solutions. Other responses may include improving workforce planning, workforce conditions and/or local services and infrastructure, and so changing perceptions of place and lifestyle.
- ✧ The local context also matters in how VET institutions operate—in isolation or through partnerships with other education providers and other economic and social agencies in the community.
- ✧ VET partnering is happening in Australian regions, but VET is still not a full participant in regional development. Broader roles for the VET sector, more than as skills developers, have been identified.
- ✧ The work of international agencies provides a strong case to rethink the VET paradigm and the ways in which VET works or might work in serving communities, regions and their citizens, as well as industry.

The case studies

Research design

The research involved case studies in five regions and five particular communities within each region. Both quantitative and qualitative data were collected and analysed. Two visits were made to each case study area.

The first visit involved regional consultations. Conversations were held and data collected from key stakeholder organisations such as regional area consultative committees, regional officers of VET departments and regional development boards, regional TAFE institutes and other adult education providers, regional business associations or support services, and local governments or their regional organisations of councils. The themes raised in the regional consultations covered the regional development context and success factors, and regional development skill needs and how they were being met.

The second visit was to the chosen localities. Facilitated conversations were held and data collected from local VET providers, governments and businesses. Our conversations investigated the local community context, local VET offerings compared with VET skills in demand, VET flexibility and innovativeness, and VET community partnerships and frameworks.

The guiding questions that were provided in advance to our participants for each of the regional and local consultations are included in appendix A. We were seeking answers overall to three questions:

- Q1 How well does the range of VET offerings meet local skills needs based on realistic economic opportunities?
- Q2 In what ways can VET become more mobile/flexible to meet local and regional needs?
- Q3 What contribution can local community frameworks make to meeting skill needs, fostering innovation and building social and human capital?

Case studies sites

The case studies were undertaken in the following five regions and local communities:

- ✧ Northern Adelaide region and Playford /Salisbury, South Australia
- ✧ Sunshine Coast region and Noosa, Queensland
- ✧ Riverina region and Griffith, New South Wales
- ✧ Cooloola region and Gympie, Queensland
- ✧ South-eastern region and Bega Valley, New South Wales.

The reports on each case study were validated with case study participants and are available in the support document. The five case studies illustrate a diversity of contexts and a range of approaches to VET and regional and local development issues, as outlined in table 1, and explained in this report.

Table 1 Contextual issues by region and local community

	Nth Adelaide/ Playford/Salisbury	Sunshine Coast/ Noosa	Riverina/Griffith	Coolooloa/Gympie	SE NSW/ Bega Valley
Regional planning and mechanisms for dialogue	Yes, developed vision & plans. Some overarching groups for dialogue. Experienced in leading locally	Yes SUNROC role significant in developed vision/ plan and new dialogue mechanisms	Yes, but not futuristic. Has regional development officers network. Some demonstrated successes	No, but range of ad hoc local initiatives	No, but ad hoc local initiatives and some sectoral mechanisms
Economy—primary drivers	Advanced manufacturing, science and technology firms	Tourism/lifestyle Emerging knowledge firms	Mixed horticulture, affected by drought, irrigation water restrictions	Manufacturing Tourism/retail Proposed new dam	Farming and fishing Tourism
International connections	Economy strongly influenced	Medium for tourism component	Strong	Medium	Weak, except for regional cheese factory
Demography	Concentrated, relatively young, many socio-economically disadvantaged	Concentrated, ageing, relatively high numbers with university degrees	Dispersed, growing families but young leave & insufficient newcomers	Ageing and socio-economically disadvantaged	Dispersed populations and ageing
Sociocultural	Desire not to leave locals behind as the economy develops	Lifestyle important in well-educated community (Noosa)	Outsiders negative perceptions of local lifestyle	At the crossroads in development Which scenario for the future?	Focus on present needs rather than future requirements
Community networks	Wide range, well organised. Attempts at cross coordination not fully successful	Wide range of networks with coordination increasing	Some successful but need more local enterprise support and coordination	Many exist but not coordinated	Many exist but not coordinated in regional frameworks
Built environment issues	Public transport Urban renewal	There are environmental limits to development in Noosa	Housing good but expensive Public transport	Public transport	Public transport Broadband access
Overall VET supply—demand issue	Mismatch industry vs residents' skills needs. Tackling full spectrum of demands	Articulation of industry skills needs/dominance of small businesses	Persistent labour shortages—overall workforce planning	Transition to addressing local needs. Small business issues	Adapting to change, emerging industries, thin markets

The regional planning context

We observed that the strength and coherence of regional planning influenced VET providers' understanding of local needs. VET efforts in matching short-term and longer-term learning and skill needs in regional development are influenced by the strength, form, and coherence of regional planning and development. VET provision is not always integrated with regional development plans and local demands for VET are not always well understood. This may be seen in terms of the following typology vis-a-vis the form of regional development in each of the case study sites.

Table 2 Typology of forms of regional development in the five case study regions

Fragmented	Intermediate	Focused
SE NSW Coolooloa	Riverina	North Adelaide Sunshine Coast

Fragmented regional planning

In both south-eastern New South Wales and the Coolooloa region in Queensland there is considerable fragmentation in the regional planning context; however, some partnership networks

exist in each. Both of the local communities studied in these regions, Bega and Gympie have a dual orientation to regional issues, that is, they face two directions. The resultant dispersion of effort in planning has a deleterious impact on the quality and comprehensive nature of data available for regional planning, although diversity may also bring certain benefits.

South-eastern New South Wales is a region with no clear boundaries or identity: it is defined in several different ways for different purposes. The Bega Valley looks two ways in its development—towards Canberra for certain regional services and the role of the Capital Region Development Board, and towards Wollongong and the south coast in relation to education and training development and a range of other services. Analysis of the regional development framework involves consideration of the work of a number of separate organisations.

A distinctive feature is provided by the role of the Capital Region Development Board, established under an agreement between the New South Wales and Australian Capital Territory governments and which serves the 14 councils surrounding Canberra, including the five councils that comprise the Southern Regional Organisation of Councils and the South-Eastern Area Consultative Committee. For the purpose of this study we interpreted the region as the five shires of the South-Eastern Area Consultative Committee from Bega Valley to Wollongong, a mix of five coastal/tablelands rural shires. While there is no comprehensive regional development plan for the whole of south-eastern New South Wales, the South-Eastern Area Consultative Committee has a strategic plan.

In Cooloola, the dual orientation is towards the Sunshine Coast for some areas of development such as tourism, and towards Wide Bay-Burnett for other aspects of development, such as administrative and educational services. Wide Bay-Burnett is a large and diverse region that a National Institute of Economic and Industry Research report (2006) separated into four sub-regions. Cooloola is located in the South Coast sub-region. Gympie is the centre of the Cooloola Shire.

The differences between the coastal communities, such as Cooloola, and the rural inland communities, such as Kingaroy, are substantial and present a particular challenge for strategic regional development that as yet has not been met. Cooloola has a dispersed planning and development model that ranges over communities with little in common. Moreover, recent administrative changes, involving the transfer of responsibility for Cooloola TAFE from the former Cooloola/Sunshine Coast TAFE Institute to the Wide Bay TAFE Institute, add to the sense of a region in transition.

Intermediate regional planning

The Riverina is a large, geographically diverse region and includes three sub-regions differentiated by primary economic drivers. Despite this differentiation, the Riverina has a strategic development plan for 2004–10 that covers all of the region's nine interdependent economic sectors, albeit in a generalised way, and which emphasises partnership development among the many stakeholder organisations. There is not a clear overarching development vision, except to ensure that this inland region grows. Regional development organisations work well together on overall infrastructure building, such as for telecommunications and in-migration.

On the other hand, there is a lack of underpinning strategic plans for particular sub-regions or local communities, which is the reason this region was given an 'intermediate' status in our typology. The City of Griffith, for example, the focal point of our case study in the Riverina, does not have a local economic plan to match its social and community development plan and give direction to its further development. This is an issue, especially because Griffith has water restriction issues that could greatly affect its primary economic base.

Focused regional planning

In both the Sunshine Coast and Northern Adelaide, regional planning to meet the skill and development needs of the region involves a cascade of planning levels with attempts to coordinate activity; hence, these regions were considered to have a ‘focused’ approach. The cascade involves:

- ✧ state-level planning (the Queensland Smart State Plan, including a 2006 Queensland Skills Plan and the South Australian State Strategic plan and associated workforce development strategies)
- ✧ state–regional level planning (the South East Queensland Plan 2005–26)
- ✧ regional development planning (Sunshine Coast economic planning and development through the Sunshine Coast Regional Organisation of Councils [SUNROC]; and a Northern Adelaide draft strategy that was not released before the Office of the North was decommissioned in 2006)
- ✧ regional-level skill and employment planning (for the Sunshine coast region, as one of the six regions of the Department of Education, Training, and the Arts; in Northern Adelaide, for many purposes such as a regional TAFE plan, a regional plan focused on the disadvantaged in VET and VET in Schools planning)
- ✧ Local economic and social planning (by each of the three councils in Sunshine Coast-Noosa, Maroochydore and Caloundra; and the Playford and Salisbury local governments in Northern Adelaide).

Such cascades provide a framework to link state, regional, and local community needs and priorities.

Indeed, in relation to Northern Adelaide, links between local, regional and state planning are extensive for sustainable (economic, social and environmental) development. There are many active development networks with a strong experimentation culture and years of experience working together to solve issues of disadvantage combined with considerable economic growth opportunities. The role of VET is strong in some of the networks and they have demonstrated successes, some nationally recognised. However, more still needs to be done to bring VET into all networks and to ensure coordination of effort across the various networks. The latter has been attempted in the past and lessons have been learned on which to build. Overall, VET and other regions can learn from Northern Adelaide and Playford/Salisbury. How well the cascade approach works depends on relationships and processes, as discussed in the community frameworks section at the end of this chapter.

The Sunshine Coast also illustrates a focused approach to regional development, with considerable partnership-building and strategic regional development, in a region that has experienced rapid population growth in recent years. In this context, the role of the Sunshine Coast Regional Organisation of Councils has been particularly significant in coordinating the economic development activities of the three local government councils that comprise the Sunshine Coast (Caloundra, Maroochy and Noosa). The Sunshine Coast Regional Organisation of Councils has been proactive in facilitating cooperation between the three councils. Economic development and knowledge economy plans have been developed, while a diversification strategy is currently under development. A high-level education executive has also been established at chief executive officer level to ensure concerted development of all the education sectors. However, much of this development has been recent and the full impact on the development of the region and on the work of the education sectors has yet to be experienced.

Consultations were undertaken in the Noosa Shire. Noosa has comprehensive planning for sustainable development, covering social, economic, and environmental aspects of development.

Overall, the Sunshine Coast is of considerable interest in terms of its regional development arrangements and the approach taken by the Noosa Council to sustainable development. While the full impact of planning arrangements has yet to be experienced, their impact on the VET role and contribution to regional development are worthy of ongoing monitoring. So also are the relationships between Brisbane, the more dominant neighbouring region, and the Sunshine coast, in

terms of Brisbane influencing human capital flows, as occurs in Playford and Salisbury in Northern Adelaide vis-a-vis Adelaide.

Although a cascade approach is not well developed in the other three case study regions of south-east New South Wales, the Riverina and Cooloola, it should be noted that a cascade approach is emerging in New South Wales. A state plan for New South Wales was released in late 2006; this elevated the role of education in regional development and there is a New South Wales Department of Education and Training Strategic plan for 2007–08 based on six objectives and includes reference to skills development priorities by geographical location in the state. In Cooloola, it is at the regional level that the cascade approach is weak.

Balancing and aligning VET offerings to skills needed

Our findings support the notion that VET supply-to-demand matching is not straightforward; it is not a scientific, statistical exercise but, due to the many impacting factors, is an art requiring judgement. We found VET organisations confronted by a number of demand dilemmas or tensions. They include: national/state versus local skills development priorities; local industry versus community members' skills needs; and short-term skills needs versus long-term skills for sustainable development. All five regions were confronted by immediate skills shortages not dissimilar to those identified in the Bureau of Transport and Regional Economics 2006 report on Australian regions and skills shortages, but few were also focused on the longer-term local economic directions.

'Matching' dilemmas illustrated

National/ state versus local skills development priorities

This dilemma is well illustrated in the two regions that exhibited fragmented regional planning and no clear boundaries or identity (south-east New South Wales and Cooloola).

There was a persistent theme in Cooloola that local and regional needs had not been sufficiently taken into account in VET provision, which was seen as too much 'top down' and driven by state priorities. However, this was beginning to change with the transfer of Cooloola TAFE campus to the Wide Bay Institute of TAFE. The transfer had served as a stimulus to more intensive consultations with industry.

Wide Bay-Burnett is one of the poorest regions in Queensland on a range of social and economic indicators. A recent study by the National Institute of Economic and Industry Research on demographic and industry change in the region demonstrated the extent of disadvantage across a range of economic and social indicators and proposed four alternative scenarios for the future of the region. A point of particular interest was the link between population ageing and increases in unemployment levels.

Cooloola and Gympie illustrate well the issues to be addressed in aligning and balancing VET offerings with regional development needs in a region faced by a broad spectrum of demographic, economic, educational, and social challenges. Our consultations demonstrated a number of interesting innovations that have been undertaken in strengthening the fit between the VET role and community and regional development needs, while also exposing issues that the area shares with much of regional Australia.

The traditional agricultural, pastoral, and fishing industries of the region have been joined in recent years by the development of tourism and industries serving an ageing population. Employment remains focused on retail, accommodation, cafés and restaurants and there has been little development of newer knowledge-based industries. Post-school education facilities are fairly limited in the region. A scattered population in small communities adds to the problem of serving thin markets associated with emerging industries in a region with poor public transport. The VET sector

has mainly focused its effort on serving the immediate and lower-level educational needs of its community members.

In 2005 more students at the Cooloola Sunshine Institute—Gympie College were studying at certificate I and II levels (32.5%) than the national average (20.8 %) and fewer at the higher level (certificate IV level and above)—13.3% compared with 21.4%. The proportion at the certificate III level (29.5%) was slightly above the national average (26.7%). Almost double the national average proportions of students at Gympie College were involved in mixed-field or general education programs (20.2%) and in society and culture studies (18.9%). Health was also a highly popular area of study (13.0%), as might be expected, given the ageing local population. Proportions studying food, hospitality and personal services (12.5%) were also above the national average (9.2%). By comparison with the national average, the proportion of students in Gympie was much lower in information technology (1.4%), management and commerce (12.9%) and also in the national skills shortage area of engineering and related technologies (7.5%) (see table 5 in the support document).

In the Bega Valley there has been no significant change in the industry and employment base in recent years and no change in patterns of VET provision, even though a shortage of aged care skills was reported to the research team. In 2005, the proportion of students in health-related studies at the Bega campus of the Illawarra Institute of TAFE was low at 1.7%, compared with the national average of 4.7% (see table 6 in the support document). Also of particular note is that nearly half of all the students in the Bega campus are not studying full VET qualifications. They are enrolled in statements of attainment or subjects only, suggesting that individuals are doing only particular job skills set studies. The most popular statements of attainment by far were in food, hospitality and personal services, followed by information technology and management and commerce.

The consultations in the Bega Valley Shire confirmed that the absence of a regional development plan for south-east New South Wales makes the task of VET providers, in particular TAFE, more difficult to be responsive to changing and emerging skill needs in the region. This situation is exacerbated, as Bega Shire Council does not have an economic development plan to give guidance to the TAFE, whose head office is in another location and in a completely different local socioeconomic context. In this situation it is not surprising that there has been little change in the courses provided by the Bega campus of the Illawarra TAFE Institute over the past five or six years, with a continuing focus on the traditional skill needs of the Bega Shire.

The consultations illustrated the issues to be addressed in strengthening the fit between VET offerings and sustainable regional development in communities with the characteristics discussed in the case study report. A recent skills audit conducted by the South-Eastern Area Consultative Committee documented skill shortages identified by employers and posed the question of how follow-up on the audit might best be undertaken. There is a strong case to strengthen partnership action in addressing the identified needs, perhaps through a regional learning, employment and skill strategy.

Local industry versus community members' skills needs

This dilemma is well illustrated in Northern Adelaide. The region is working across the full spectrum of education provision and issues, from the community client perspective, which involves engaging many in learning for the first time or as 'another chance' opportunity, through to the industry client perspective, which demands leading-edge mathematics, science and engineering skills education and training.

The case study of Northern Adelaide illustrates a region with a paradox when it comes to demand and supply of workforce skills. Playford and Salisbury, the core local government areas of Northern Adelaide, have a general mismatch between the skills sets of the local people and the skills required by the region's growth industries. On a range of social indicators, including education, Northern Adelaide residents are well behind those in most other regions in Australia. This contrasts with the local economic situation.

The primary driver industries in Northern Adelaide include: manufacturing and advanced manufacturing; transport and logistics; defence industries and electronics; information and communications technology; food produce and processing; and environmental products and services. Most of these industries require high-level advanced science and technology skills. As a result, there are large numbers of locals who leave the region for work and non-locals who come into the region to work.

The case study illustrates a region that is part of a larger ‘natural’ labour market (the Adelaide CBD is 25–50 km away) but one which is concerned not to leave local residents behind, as its modern economy develops. The region is also heavily dependent on international circumstances; for example, current values of the Australian dollar affect its substantial automotive vehicle industry.

The client-driven education and training challenge is substantial in Northern Adelaide. A major strategic human capital goal here is to redirect and balance education and training to both local community needs and emerging industry needs to ensure that there are more locals in local jobs without moving out any existing residents.

The student enrolment profile for 2005 for the TAFE Northern Adelaide Playford and Salisbury campuses illustrates the broad cross section of current VET provision. The student profile by qualification level is similar to that of the nation as a whole, but with fewer at the highest qualification levels (17.8% compared with 21.4%) and somewhat more at the lowest levels (9.1% compared with 5.8% for non-award courses). There are students in all fields of education, as in the national profile. These are high and comparable with the national average percentage of students in engineering and related technologies (15.8% for Northern Adelaide, 16% for national) and management and commerce (16.3% for Northern Adelaide, 19.1% for national), and more than the national average proportions in architecture and building (10.9% compared with 6.3%) and agriculture, environmental and resources studies (10.1% compared with 4.9%). See table 2 in the support document.

Short-term skills needs versus long-term skills for sustainable development

This dilemma is well illustrated in the Sunshine Coast. With its rapid population growth, the Sunshine Coast region is experiencing the major employment challenge of creating enough new jobs. The region has experienced rapid population growth from 223 868 in 1998 to 284 402 in 2005, with an annual growth rate of 3.6% between 2001 and 2005, and an estimated total population of 482 780 by the year 2027. This population growth, along with an increase in tourism, has fuelled economic development and brought considerable change to the region. However, its current tourism/retail industry base is not likely to be able to continue to meet this challenge. Attempts are being made to diversify the industry and employment base into knowledge-based industries and creative industries that require VET provision different from the traditional ‘people services’ offerings. Yet there also remain some critical skills shortages in these areas, for example, in community health and allied services and building and construction.

Noosa is dependent on non-local VET provision to meet many of its skill needs. The VET student profile of the TAFE Cooloola Sunshine Coast Institute—Noosa Centre is narrow, in terms of fields of education. The centre’s small numbers of students (531) study mostly in four fields—management and commerce (36.7%), creative arts (20.5%), mixed field programs (22.6%) and education (10%). A higher proportion are studying at certificate III level than the national average (47.1% compared with 26.7%). See table 4 in the support document.

VET offerings versus other workforce and place-related issues needing attention

This dilemma is well illustrated in the Riverina/Griffith case study, a region with long-term labour shortages, which well-established regional development networks have persistently sought to overcome. The core issue in the Riverina is retaining young locals and/or attracting migrants into the available VET related jobs.

Griffith, the local community chosen for more detailed study within the Riverina, illustrates well the points made above. Griffith, in the western part of the region, has a diversity of irrigated and dry agricultural and horticulture produce and related food processing, manufacturing and research and development facilities. VET offerings are growing in Griffith and there is a reasonable alignment between them and VET skills locally in demand, despite such issues as ‘thin’ markets. Of particular interest to our study were the many efforts by the Griffith community, sometimes in concert with Riverina regional initiatives, to address local skills shortages by improving the perception of VET to young locals and the perception of the local community to outsiders.

Griffith is a multicultural, family- and faith-oriented community of hard workers who have made their unique and generally solid local economy themselves, as well as their quality housing and quality urban-based services and facilities. Despite these positive factors, there is a lack of labour in general and skilled labour in particular. Reasons put forward for these shortages in the facilitated conversations were high residential costs, low amounts of affordable rental accommodation, and outsiders’ negative perceptions of inland Australia as a place to live and work.

In Griffith there is a need for a broader workforce planning approach. More local employers need to: engage with the many initiatives in place in relation to education and training; promote their industries; and offer attractive work conditions and career opportunities.

Since the drought and water restrictions are affecting the economic base of Griffith, the local government is considering developing a local economic plan. This would provide an opportunity to tackle skills needs in an integrated way.

VET flexibility and innovation

VET institutions in regional contexts are subject to pressures to be flexible and innovative in response to change, new competitive challenges, and overall emerging requirements in sustainable community and regional development. While we found good examples of increased flexibility and innovation in all of the regions we studied, it was also evident that barriers remained to be addressed in aligning VET provision in flexible and innovative ways with the full range of learning and skill needs for sustainable regional development, including the needs of small businesses and smaller communities in particular. The VET contribution to building entrepreneurship and a learning and innovation culture in communities and regions in general was also found lacking. This conclusion supports the recent work of Garlick, Taylor and Plummer (2007) in arguing for VET to support building enterprising human capital in communities.

Positive examples

We found that VET has made considerable progress in more flexible provision, in terms of the timing, delivery location and mode, in all regions studied. We also found some examples of innovation, or doing things differently, to extend the opportunities available to individuals and which meet industry needs. All of the examples involved partnerships.

Flexibility in VET in Schools

In both Riverina/Griffith and Northern Adelaide, the VET choices—and their quality—for school students are maximised through creative cross-collaboration between all secondary schools and the local TAFEs.

- ✧ The Griffith Link Day Program is one day a week set aside by all high schools in the area and the Griffith campus of TAFENSW Riverina Institute for students to attend a chosen VET course that might be at the TAFE campus, or another school, or in a local workplace. It involves coordinated timetabling and travel options, which are supported by promotional visits to schools and invitations for schools to visit TAFE to raise interest. The Link Day has been

running since 1999 and was recognised as good practice in a New South Wales Public Education Inquiry in 2001.

- ✧ Northern Adelaide has the Northern Adelaide State Secondary Schools Principals Network, which works in a skills hub arrangement with five VET curriculum organisers for the skills areas: agriculture/land; science and technology; community services; IT and business; and arts. These work across the region, with students going to the particular schools that offer their course preferences for their VET classes. The network is linked to Northern Futures, a peak regional governance group focused on successful transitions of youth to adulthood, 12 to 25 years. Northern Futures aims to bridge the traditional gaps between these groups and has membership from industry, public and non-government schools, TAFE, private training providers, UniSA, local government, youth agencies, health agencies and young people. It has a comprehensive strategy to engage and support young people across the region and coordinates the range of available programs.

Flexibility through workplace delivery

Examples of partnership arrangements between TAFE and large firms existed in all regions, usually under fee-for-service arrangements. These arrangements typically included workplace delivery of training, recognition of prior learning, and customisation of provision to meet the distinctive needs of the organisation. Examples include:

- ✧ partnership between Illawarra TAFE Institute and Bega Cheese, directed at staff undertaking Certificate III in Food Processing, with staff obtaining Certificate II in Food Processing through recognition of prior learning processes. There are similar schemes with Bega Valley and Snowy River councils in the area of water operations
- ✧ partnership between Wide Bay TAFE Institute (which covers Cooloola/Gympie) and the Centro retail development, including Big W, with workplace delivery arrangements
- ✧ Partnerships between TAFENSW Riverina Institute—Griffith campus and the local wine industry, with almost all VET delivery (92%) occurring on worksites.

Innovation to achieve enterprising human capital

Limited evidence was found of VET organisations contributing to the development of enterprising human capital. A notable exception was the Northern Advanced Manufacturing Industry Group ‘Concept 2 Creation’ program.

- ✧ A VET in Schools initiative developed and led by industry, the Northern Advanced Manufacturing Industry Group’s Concept 2 Creation program introduces students and teachers to a product life cycle approach to science, maths and technology education. It is an action-oriented approach to learning and developing industry experience, in which students work together to solve a problem that requires a new product or service, as identified by the Northern Advanced Manufacturing Industry Group members. The group offers support and professional development for the teachers as well as their students. Over 500 students had been through the Concept 2 Creation program in its first eighteen months, a scale required to make a lasting difference at a regional level rather than an individual level. The initiative has been included in the recent national *Shifting gears report* (2006) (House of Representatives Standing Committee on Employment, Workplace Relations and Workforce Participation 2006) and recommended throughout Australia as a means of facilitating an enduring culture of advanced manufacturing industry engagement with VET providers.
- ✧ Other smaller examples were the Rage Cage and Sprint Go-carts, also in Northern Adelaide, and linked with the Elizabeth TAFE campus. These two initiatives were action-oriented ‘learn to earn’ programs involving the students in skills development through the building of a playground full of equipment, in the case of the Rage Cage, and a race car, in the case of the Sprint Go-carts initiative.

Innovation to extend opportunities

We observed willingness among VET providers to adopt new approaches to add value to existing products or services. A notable example is an innovative joint Riverina TAFE–Charles Sturt University project that has been undertaken in response to a desire for higher-level skills and university-level education opportunities in Griffith.

- ✧ An active Western Riverina Higher Education Reference Group exists that has aided the joint development and delivery of a unique integrated Degree in Business Management program by Griffith TAFE and Charles Sturt University. The degree is now in its fourth year and allows for sub-degree qualifications as part of the pathway. The concept has since been applied at the Albury and Wagga campuses of the TAFENSW Riverina Institute and Charles Sturt University in business, information technology, fine art and digital media. The information technology integrated program is available across New South Wales. Griffith people expressed interest for health to be the next area earmarked for a similar program to be developed at Griffith.

VET opportunities are also extended to locals in Northern Adelaide via the local governments that play a key brokerage role:

- ✧ Salisbury City Council has an officer that brokers VET foundation and employment programs for local adults. The officer provides a complete package, from the identification of local employers' skills needs, to finding locals who would like to be trained to meet the employers' needs, to contracting a suitable VET provider and job placement after training, with follow-up for the first few weeks to ensure that the entrant settles into the job.
- ✧ Playford City Council also has an officer who brokers local community-focused learning and education programs. A notable Playford initiative is the *Marni Waeindi—towards a future* model. It has just won a national local government award from the former Department of Transport and Regional Services and was designated a 'project of national significance' by the former Department of Education, Science and Training. Marni Waeindi is described as a learning node connected to a network of other agencies and local industry and provides a comprehensive range of education and training and other support services to engage Indigenous young people in seamless aspirational action-based learning pathways to employment, social inclusion and cultural participation.

Connection-making between learning and regional innovation

The Sunshine Coast has a clear vision of a knowledge economy and lifestyle community and has a sustainable regional development plan focused on achieving a quadruple bottom line. The region has established the high-level Education Executive as a means of harnessing the role of learning; it is linked to the Sunshine Coast Regional Organisation of Councils, which oversees the vision and strategic plan. The Education Executive comprises the Vice Chancellor of the Sunshine Coast University, the Director, Sunshine Coast TAFE, the state Education Department's Regional Director and the Executive Director of the Sunshine Coast Regional Organisation of Councils.

The Noosa Community Social Board, in its Social Sector Plan for 2002–15, recognises the link between learning, flexibility, and responsiveness in the following terms:

Learning is crucial to sustainable communities which are adaptive, flexible and proactive in addressing community priorities. Learning is a powerful tool for identifying problems, and enhances the development of skills and knowledge relevant to our community.

(Noosa Community Social Board 2002)

Barriers to VET flexibility and innovation

The barriers we found to VET becoming more innovative include: VET funding pressures to be competitive versus the requirement to also collaborate; VET internal culture pressures to be compliant versus being innovative; and VET role tensions as providers of individuals' learning versus being strategic partners in a locality's overall development, which requires community learning and organisational capacity-building.

Competitive versus cooperative VET providers

We found that VET funding policy, with its emphasis on competition, is serving as a barrier to collaboration between VET providers in all regions and communities studied. While competition is useful to keep the quality of VET high, it does prevent optimal VET delivery. We have concluded that enhanced cooperation between VET providers linked to regional development planning would bring benefits to our regions in extending the skill base. VET providers should cooperate at least to rationalise and maximise VET provision in thin markets.

VET internal cultures

We encountered some criticisms in relation to the public TAFEs—that their VET provision is not being sufficiently flexible or innovative. However, we also recorded the opposite response—that TAFE is wonderful and that TAFE has pockets of flexibility and innovativeness. The latter probably reflects the true situation, summed up in one consultation where the view was expressed that there was a dichotomy between the ‘old’ and ‘new’ TAFE.

Cultures have been changing in public TAFEs and moving towards a stronger client focus since the competitive VET market model was introduced in the early 1990s. According to recent research conducted by Clayton (2007), there now exist multiple cultures within VET organisations. Clayton suggests that VET organisations need to meet the challenges of balancing their multiplicity of cultures with a unifying culture. The recently formed TAFE SA Adelaide North is seeking to achieve a unifying culture through the amalgamation of three separate TAFE institutes, each with different cultures. It is hoped that this unifying culture will be one of innovation.

There are many successful VET partnerships in Northern Adelaide being effective in so-called ‘bottom up’ development. Those interviewed suggested the next step for them was to be allowed to tailor VET and related programs to the local terrain. They have innovative people and collaborative networks and know what it takes for partnerships to work. They want more opportunities to decide how to use the available money, and for integrated projects, not isolated functional projects.

While Clayton argues that culture is a driver of an organisation, she notes that structures also have an impact and that, in the current highly dynamic environment, VET structures need to become more organic and decentralised in order for TAFE institutes to meet the demands being placed on them. This view was also expressed by some interviewed in our project.

VET role tensions

The national VET strategy 2004–10 calls for a change in policy for VET. To date, VET has been charged with being a provider of individuals’ learning and skills development and adding to the currently needed national stock of human capital. The new policy role sees VET as a strategic partner in the long-term future of the locality in which it is located. We found no solid examples of VET organisations embracing the regional development role, although the Sunshine Coast has made a promising start.

VET community partnerships and frameworks

We found that relationships of many sorts are facilitating successful VET in our local communities for particular groups, but we did not observe any overarching whole-of-region, whole-of-VET human capital development frameworks that connected the VET role to sustainable regional development. The Sunshine Coast/Noosa area comes the closest, but so far it has no demonstrated achievements. The Northern Adelaide experience illustrates the difficulties in this field. There had been (until abolished in 2006) an Office of the North and Northern Partnerships for the purposes of coordination between the various partnerships within the region. Sandeman and Elliot (2006)

documented the Northern Adelaide experience of new governance arrangements for sustained collaboration and made the following point:

A culture of collaboration is more than a preparedness to work together, it involves changes, not just in how individuals work with each other, but also about addressing the way organisations operate. Patience is one virtue necessary for collaboration as it's often necessary to wait for the 'planets to align' rather than attempting to force the collaboration before sufficient social capital has accumulated and a shared vision has engaged the participants.
(Sandeman & Elliot 2006, p.24)

While the outcomes of broad partnerships are mixed, the more narrow partnerships seem to have been more effective, both in their relationships and in their outcomes. We found good examples of VET in Schools partnerships, VET–industry partnerships, and VET for social inclusion partnerships. We also observed VET and other related services being delivered through one overall private provider. While a range of partnerships existed that involved VET, we found that these tend to be ad hoc initiatives or focused on a single strategic issue. This situation may be seen in terms of the following typology.

Table 3 Typology of partnership types by case study region

Ad hoc partnerships	Intermediate development of partnerships	Strategic but single issue focused
SE NSW Cooloolool	Sunshine Coast Riverina	North Adelaide

We found that partnership arrangements for VET in Schools were particularly impressive, possibly because they are aided by specific government support, the Local Community Partnerships program. Partnerships between TAFE and big industries were also evident, more so than partnership arrangements involving small businesses. On the social side, most VET organisations had ad hoc networks with social services organisations to help disadvantaged students. Formal relationships between TAFE and social agencies were rare. The exception is Northern Adelaide, where the TAFEs displayed the features of full inclusiveness determined by Volkoff, Clarke and Walstab (2008). They were driven by the needs of their catchment community and reported that managing diversity and community capacity-building were part of their role. One of the local campuses of TAFE had a dedicated manager of pathways and partnerships as part of its inclusiveness strategy.

We also found that some private organisations had 'built in' support services rather than having additional network arrangements. For example, a large private provider in northern Adelaide offered a range of social services, as well as VET, to students at risk of dropping out. Another example was a large private organisation in Griffith which offered a range of employment services as well as VET. It was a registered training organisation (able to deliver accredited VET), a group training company (able to employ apprentices and trainees), an Australian Apprenticeship Centre (able to broker contracts of training between employers and potential employees and training plans for them with VET providers), and also offered a labour hire service.

Less evidence was found of activity seeking to link the available partnerships and networks into comprehensive frameworks that provide 'productive linkages' on a strategic basis, so that innovation and adapting to change becomes systemic. As Sandeman and Elliot (2006) note:

The chief difficulty is that a series of narrow partnerships may not in themselves address the complex challenges the region faces and may compete for scarce resources. While more difficult to achieve, the broader partnerships are perhaps a necessary precondition to the whole of government approaches that are required.
(Sandeman & Elliot 2006, p.25)

Case study findings in summary

The following are the key findings from the five case studies discussed in this section.

- ✧ VET provision is not always well integrated with regional development plans, and local demands for VET in supporting sustainable development are not always well understood.
- ✧ VET supply-to-demand matching is not straightforward; it is not a scientific exercise but, due to the many impacting factors, is an art requiring judgement and requires aligning and balancing VET provision with many demands.
- ✧ Context matters when considering VET demand vis-a-vis supply issues.
- ✧ VET organisations have become more flexible in terms of timing, location and modes of delivery, but more needs to be done to enhance the VET contribution to innovation and to building entrepreneurial skills generally in the workforce and a learning and innovation culture in communities and regions.
- ✧ VET partnerships or relationships of many sorts are facilitating successful VET in local communities for particular groups. However, we did not observe any overarching whole-of-VET and whole-of-community frameworks that are clearly working and connecting VET with sustainable regional development.
- ✧ There is a need for effective regional delivery models which link small service centres and, particularly, small businesses. In our case studies the greatest need (and difficulty) for effective VET existed in the small communities in the Bega Valley and Cooloola regions and in relation to small businesses in all five regions.

Conclusions

Overall, we have concluded that the VET role in contributing to sustainable regional development should be strengthened in ways that foster a more dynamic two-way interaction between VET and the processes of regional development. This may be seen as a process of co-development, or co-evolution.

We believe that this will generally require the broadening of the VET role in serving communities and regions, along with shifts in the socioeconomic context of VET. How this is done may vary from region to region, due to the diversity of contexts and situations identified in this study.

This broader approach to the VET role and relationships has been advocated in concepts such as workforce development and skill ecosystems, and internationally in the work of UNESCO and UNEVOC in advocating a re-orientation of VET to support sustainable development. It would be timely to work towards a creative synthesis of these perspectives in ways that reflect Australian conditions in a range of contexts.

We have used the notion of the double helix of VET and regional development to convey key ideas in our conclusions about VET and regional development. We have taken this concept from an influential report from the Institute on Education and the Economy at Columbia University on education and the economy (Berryman & Bailey 1992).

- ✧ The spiral of the helix image reminds us that regional development is complex rather than a predictable linear process.
- ✧ VET and regional development both involve dynamic processes, so that effective VET and regional development relationships require ongoing alignment both ways.
- ✧ Collaborative frameworks have major value in facilitating this ongoing process of interaction and alignment.
- ✧ These relationships should be seen as a regional system of innovation and learning.

We have also concluded that the alignment process of co-development is best facilitated through a comprehensive regional framework, such as a learning region, which encourages and facilitates ongoing interaction and learning, and the application of learning strategies to drive VET and regional development.

In strengthening the VET role in sustainable regional development, the findings of this study suggest the need to:

- ✧ enhance flexibility in the VET response to the full range of learning and skill needs in community and regional development, particularly in relation to the small business sector, small underserved communities and in thin markets generally, including those associated with emerging industries within rural and regional contexts
- ✧ encourage innovation and enterprise in VET institutions, especially in the TAFE sector as the public provider
- ✧ encourage and support community and regional frameworks that connect and extend VET partnerships in strategic ways and which foster ongoing dialogue and interaction
- ✧ consider funding arrangements that support these objectives.

We suggest funding a special program to make VET integral to economic and social renewal. We draw on the work of Buchanan on the role of better skills ecosystems to suggest:

- ✧ a new role for VET providers at the local and regional levels, as catalysts for change, in the form of a new, semi-autonomous section of TAFE institutes which works to make them more integral to local economic and social renewal, but without a monopoly on the catalyst role
- ✧ a core of funding from VET, but also funding from across a range of portfolios relating to industry innovation and regional development, to support the establishment of this role
- ✧ a guiding coalition at the regional level, with representation from the Australian Government and state and territory governments, employers and unions, TAFE and other registered training organisations, with governance arrangements that reflect local circumstances
- ✧ support, preferably by a new national ‘extension service’ similar to those that operate in many agricultural industries. Such a service would help intermediaries at the local level to build new networks that better integrate employment and learning (Buchanan 2006).

While these matters require further examination and discussion, the research role in this process of re-orienting VET to strengthen its contribution to sustainable community and regional development is potentially substantial.

Our findings and conclusions suggest that there would be value in studies that supported the following:

- ✧ pilot projects that develop models for the strengthened interactive role of VET in sustainable regional development in selected contexts
- ✧ the development and testing of a ‘VET in the regions evaluation framework’, which would build on research findings and provide a self-assessment tool to assist regions to integrate the VET role in sustainable regional development
- ✧ the development of regional innovation blueprints which would provide a framework and stimulus for strengthening enterprise and innovation in VET institutions
- ✧ clarification of the relationship between key innovation skills and the employability skills included in VET training packages, so that VET provides a broad foundation of generic skills that support innovation, employability and learning throughout life.

This would involve a significant ‘VET in the regions’ research program. However, the importance of aligning VET more closely with sustainable community and regional development to support enterprise, innovation and flexibility in response to regional needs is justification for this investment.

The pedagogical aspects are important in the context of the learning processes discussed in this report. We observed interesting examples of pedagogical innovations across the regions studied. These were responses to the new approaches to formal and informal learning in a wide range of community and work contexts and in an environment of ongoing change. Some good uses of e-learning, workplace learning, and action learning were observed. However, the significant pedagogical implications of the conclusions we have reached, in the context of recent research findings on future skill needs, should be clarified in a more detailed and systematic way than we have been able to address in the confines of this study.

VET is at a watershed in the context of shifting learning and skill needs in Australian society, and an investment in the VET sector for serving communities and regions could bring substantial benefits in the future.

References

- Allison, J, Gorringer, S & Lacey, J 2004, *Building learning communities: Partnerships, social capital and VET performance*, NCVER, Adelaide.
- Anderson, D 2005, *Trading places: The impact and outcomes of market reform in vocational education and training*, NCVER, Adelaide.
- Australian Chamber of Commerce and Industry 2000, 'Regional development: An issue for the whole of Australia', *ACCI Review*, August 2000, no.66, Canberra.
- ANTA (Australian National Training Authority) 2003, *Shaping our future: Australia's national strategy for vocational education and training 2440–2010*, ANTA, Brisbane.
- Berryman, S & Bailey, T 1992, *The double helix of education and the economy*, IEE Publications, New York.
- Buchanan, J 2006, *From skills shortages to decent work*, NSW Department of Education and Training, Sydney.
- Bureau of Transport and Regional Economics 2006, *Skill shortages in Australia's regions*, Department of Transport and Regional Services, Canberra.
- Business Council of Australia 2006, *New concepts in innovation: The keys to a growing Australia*, Business Council of Australia, Melbourne.
- Callan, V & Ashworth, P 2004, *Working together: Industry and VET provider training partnerships*, NCVER, Adelaide.
- CEDEFOP 2003, *Promoting the learning region: Education and training agencies leading role in promoting innovation on a regional basis*, CEDEFOP, Thessalonika.
- Council of Australian Governments 2006, *Human capital reform communiqué*, February and July, COAG, Canberra.
- Clayton, B 2007, *Assessing the impact of cultures and structures on individual and organisational capability*, viewed 10 September 2007, <<http://www.consortiumresearchprogram.net.au>>.
- Dawe, S (ed.) 2004, *Research readings on innovation and VET*, NCVER, Adelaide.
- Florida, R 2002, *The rise of the creative class*, Basic Books, New York.
- Gelade, S, Stehlik, T & Willis, P 2006, *Learning collaborations between ACE and vocational education and training providers: Good practice partnerships*, NCVER, Adelaide.
- Garlick, S 2001, 'The enterprising region: Policy and practice', paper presented to the Australian and New Zealand Regional Science Association Conference, Bendigo.
- 2002, 'Creative regional development: Knowledge-based associations between universities and their places', paper presented to the Universities and Community Engagement Forum, University of Western Sydney, September.
- 2003, 'Universities and their regional communities: Is the connection myth or reality?', Australian University Alumni Council Conference: A Bridge to the Community, Launceston.
- Garlick, S & Pryor, G 2002, *Universities and their communities: Creative regional development through knowledge-based engagement*, report for the Department of Transport and Regional Services, Canberra.
- Garlick, S, Taylor, M & Plummer, P 2007, *An enterprising approach to regional growth: The role of VET in regional development*, NCVER, Adelaide.
- Green, R 1999, 'What makes global regions', contributed paper for National Innovation Summit, Melbourne, 9–11 February 2000.
- House of Representatives Standing Committee on Employment, Workplace Relations and Workforce Participation 2006, *Shifting gears: Employment in the automotive components manufacturing industry*, Canberra.
- Howard Partners 2006, *Changing paradigms: Rethinking innovation policies, practices and programs*, Business Council of Australia, Melbourne.
- Kanter, R 1995, *World class: Thriving locally in the global economy*, Simon & Schuster, New York.
- Kearns, P & Papadopoulos, G 2000, *Building a learning and training culture: The experience of five OECD countries*, NCVER, Adelaide.
- Lowry, D, Molloy, S & McGlennon, G 2008, *Future skills needs: Projections and employers' views*, NCVER, Adelaide.

- Lundvall, B-A (ed.) 1992, *National systems of innovation: Towards a theory of innovation and interactive learning*, Pinter, London.
- Lundvall, B-A & Johnson, B 1994, 'The learning economy', *Journal of Industry Studies*, vol.1, no.2, pp.23–42.
- National Institute of Economic and Industry Research 2006, *Wide Bay–Burnett region: Demographic and economic change—A perspective and prospective analysis*, NIEIR, Melbourne.
- Noosa Community Social Board 2002, *Social sector plan for 2005–2015*, Noosa Council, Noosa, Queensland.
- OECD (Organisation for Economic Co-operation and Development) 1996, *Better policies for rural development*, OECD, Paris.
- 2001, *Cities and regions in the new learning economy*, OECD, Paris.
- Richardson, S 2007, *What is a skills shortage?* NCVER, Adelaide.
- Richardson, S & Tan, Y 2007, *Forecasting future demands: What we can and cannot know*, NCVER, Adelaide.
- Sandeman, P & Elliot, M 2006, 'New governance for sustained collaboration—The Northern Adelaide experience', refereed paper presented to Governments and Communities in Partnership Conference, Centre of Public Policy, University of Melbourne 25–27 September.
- Smart State Council 2006, *Smart regions: Characteristics of globally successful regions and implications for Queensland*, Queensland Government, Brisbane
- Stokes, K, Stacey, K & Lake, M 2006, *Schools, vocational education and training and partnerships: Capacity building in rural and regional communities*, NCVER, Adelaide.
- Teghe, D & Rolfe, J 2003, *Learning for success: Factors affecting best practice in regional development*, Institute for Sustainable Regional Development, Rockhampton.
- UNESCO 1999, *Final report*, Second International Conference on Technical & Vocational Education, UNESCO, Paris.
- 2004, *Learning for work, citizenship, and sustainability*, report of the UNESCO International Experts Meeting, UNEVOC, Bonn.
- UNESCO & ILO 2001, *Joint recommendation on technical and vocational education and training for the twenty-first century*, UNESCO, Paris.
- UNEVOC, 2006, *Orienting technical and vocational education and training for sustainable development*, UNEVOC, Bonn.
- Volkoff, V, Clarke, K & Walstab, A 2008, *The impact of TAFE inclusiveness strategies*, NCVER, Adelaide.
- Walstab, A & Lamb, S 2008, *Participation in vocational education and training across Australia: A regional analysis*, NCVER, Adelaide.
- Waterhouse, P, Virgona, C & Brown, R 2006, *Creating synergies: Local governments facilitating learning and development through partnerships*, NCVER, Adelaide.
- Windsor, K 2006, *A mid-term evaluation of the Skill Ecosystem Demonstration Project*, NSW Department of Education and Training, Sydney.

Appendix A:

List of consultations questions

Regional consultations

A Regional development contexts

1. Is there a clear understanding of what the region comprises? What are the strengths and weaknesses of the region? How are these reflected in the priority objectives and themes in the economic and social development of the region?
2. What do you see as the key drivers that are impacting on the development of your region? Why is this happening?
3. Is sustainability under some type of triple bottom line approach a key objective in the development of the region? What has been achieved to date?
4. What strategies have been developed to build partnerships and co-ordinate development? How is leadership exercised and sustained? What are the key partnership success factors?
5. To what extent and in what ways has the VET sector contributed to partnership building and co-ordination of effort? Overall, what roles have TAFE and other training providers (private VET and adult community providers, VET in schools, and workplaces) played up to now in the economic and social development of the region?
6. What strategies have been adopted to foster flexibility in regional development in education and training, response to changing needs and conditions. How successful have these been?

B Matching VET provision to regional development skill needs

7. What are the main data sources used in matching VET provision to regional development needs? How adequate are these sources? What else is needed?
8. What priority skill needs have been identified for the region, or in your sphere of activity? Do you see other learning and skill needs that require more attention in the future?
9. What general approach and strategies have education and training providers adopted in response to meeting skill needs, including emerging skill and learning needs, required for the economic and social development of the region?
10. Are there currently skill shortages? In what areas? Are the causes known? What is being done to address them, and by whom?
11. Looking ahead, what do you see as the VET role (TAFE, schools, private providers, and workplace learning) in successful regional development? To what extent is this happening now? Can you identify good practice examples and barriers?

C Success factors and outcomes

12. What do you regard as the main success factors in the achievements of your region in economic and social development in the last ten years? What do you regard 'successful' as involving? How is this determined?
13. What have been the achievements and outcomes to date? Is there hard evidence?
14. What needs to happen in the future to boost economic and social development in the region?

Local consultations

A Questions on the local community context

- 1 What factors do you see as giving your community a distinctiveness against other local/regional communities?
- 2 What pressures for change do you see impacting on your community now and in future?

Taking into account your answers to Q1 and Q2 ...

- 3 What important challenges do you see VET needs to address in relation to the provision of skilled people or human capital for your particular community to the fullest extent it is able?
- 4 Outside of its role as provider of education and training, what other role(s) do you feel VET should be playing towards sustainable local development?

B Questions on local VET skills needs compared to VET offerings

- 5 For young people in your community, what are the main types of jobs/ occupations for which VET provides courses? Is there a gap between what young people would like in VET course provision and what is actually offered by the local VET institution(s)?
- 6 Apart from job/occupation specific skills training and education, do you feel additional attention should be given by VET to developing (young) students' skills in such areas as 'communication', 'critical thinking and problem solving', 'organisational ability', 'working in groups', literacy and numeracy, and attitudes to work, family and community?
- 7 Some jobs and skills become less important while others become more important as pressures impacting on the community change. Are there areas where VET could be doing more in relation to working adults i.e. 'retraining and re-skilling' for those whose skills are made redundant but who want to remain in the community and/or 'upskilling or new-skilling' as work requirements change or new industry areas emerge?
- 8 Should VET be doing more for others in your community not already discussed, such as older people, those from different cultures, single parents, financially or physically/mentally disadvantaged, etc and if yes, in what ways?
- 9 Perhaps VET offerings are not the issue regarding filling local jobs vacancies? There are four at least drivers of skills demand/shortages:

Training—the number of people being trained for jobs

Wastage—the number of people trained in a skill, but not working in that occupation perhaps because of work conditions, a poor perception of the industry etc.

Migration—the number of newcomers versus departing members of the community.

Workforce exits—the number of people with the skills but permanently leaving the workforce.

- 10 Overall, then, how well do you think the range of available locally available VET offerings align with local VET skills needs now, and in coming years to 2015?

C. Questions on the flexibility and innovativeness of VET

- 11 Do you think your local VET providers are sufficiently flexible, that is, willing to change aspects of the education and training programs and services to suit clients, such as its timing, location, the numbers to be involved, taking account of the skills and knowledge the client already has etc? If yes please give a significant example(s).
- 12 Do you think local VET providers are innovative, that is, willing to do new things to add value to products, services and processes by drawing on knowledge and creativity? If yes, please give specific examples.
- 13 What do you think the key factors are that prevent local VET providers from being more flexible and innovative?

D. Questions on VET–community partnerships and frameworks

- 14 In general, do the VET providers in your community adopt a competitive or collaborative model of operation with each other? And, which of these two models do you think would work best for your community?
- 15 Do VET providers in your local community ‘reach out’ and work with businesses on their education and training needs? One on one? In clusters? If yes please give examples.
- 16 Do local VET providers ‘reach out’ to social agencies to obtain support services for their students, as needed, in order for them to undertake education and training?
- 17 Is there a local group that acts as broker or builder of relationships between all the relevant stakeholders for the purposes of achieving education and training integrated for sustainable local development purposes?
- 18 How would you describe the role played by VET providers in partnering for local development?

E. Summation question

19. What is the number one new initiative that you would like to see put in place in your community to obtain a better alignment and balance between local demand for VET skills and the available supply of VET skills?

Support document details

Additional information relating to this research is available in *The double helix of vocational education and training and regional development—Support document*. It can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1989.html>> and contains:

- ✧ Literature review
- ✧ Case studies



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**National Centre for Vocational
Education Research Ltd**

Level 11, 33 King William Street
Adelaide SA 5000

PO Box 8288 Station Arcade
South Australia 5000

Phone +61 8 8230 8400

Fax +61 8 8212 3436

Email ncver@ncver.edu.au

www.ncver.edu.au