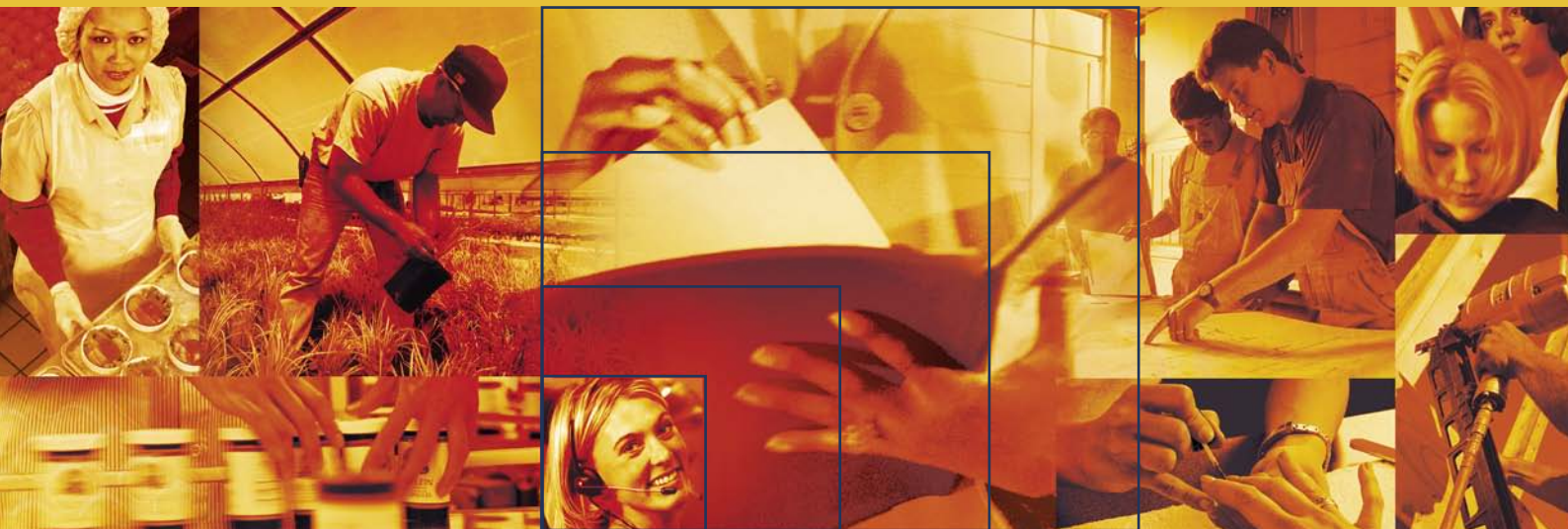


# Australian vocational education and training

## Research messages 2007





# Australian vocational education and training Research messages 2007

National Centre for Vocational Education Research

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

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ISSN 1832-3480

TD/TNC 92.09

Published by NCVER  
ABN 87 007 967 311

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# Highlights for 2007

## Highlights for 2007

Mark Cully and Francesca Beddie

### Introduction

In March 2007 the National Centre for Vocational Education Research (NCVER) held a symposium to mark its 25th anniversary. Invited speakers and discussants were asked to reflect on the development of a research and statistical evidence base for Australia's vocational education and training (VET) sector, and the contribution that this 'evidence' had made to informing policy and practice in the sector.

From modest beginnings in the early 1990s a vibrant VET research community has developed in Australia, with its own professional association representing researchers in universities, technical and further education (TAFE) institutes and other agencies. Maintaining and renewing that capacity is a constant challenge. Below we discuss initiatives NCVER adopted in 2007 to address this.

NCVER plays a pivotal role in VET research, with many staff recognised as authoritative researchers in their own right; furthermore, the organisation's contribution as manager of the National VET Research and Evaluation program should not be underestimated. This latter role involves not just the commissioning of research but, equally importantly, the dissemination of research findings throughout the sector. This is widely recognised as an outstanding attribute of NCVER's practice.

In this overview of NCVER's research activities in 2007 we highlight the lessons learned from reports published—those authored by NCVER staff, as well as those by commissioned researchers—and the events held. These are presented under the five themes by which NCVER organises its work. Key messages and/or references for all the work published, as well as conference papers presented by NCVER during 2007, can be found in the body of this volume. *At a glance* publications are shown only in the references section, with a direct link to the website, as is the *Did you know?* publication referred to in this section on highlights for 2007.

### Industry and employers

The issue of skills shortages—how to anticipate and plan for them, and how to respond as they reach a pressure point—continued to dominate the public discussion around skills.

Forward planning for occupations in demand is easier said than done, as Sue Richardson and her colleague Yan Tan pointed out in *Forecasting future demands: What we can and cannot know*. Across the world there is a variety of models used to project future employment levels across industries and occupations. Australia is fortunate to have one of the best of these, the MONASH model, maintained by the Centre of Policy Studies at Monash University. Even so, Richardson and Tan argue, the MONASH model does not provide the VET sector with sufficiently accurate forecasts to match training to future skill needs in any precise way. Karmel illustrates this point in his conference paper *Workforce planning for the resources and infrastructure industry*. The demand for mineral resources is difficult to predict with any accuracy, as it is contingent on commodity prices, the value of the Australian dollar and global economic conditions. Moreover, the industry sources its workforce from many different places; it does not rely only on the VET sector.

Richardson and Yan also stress that those involved in planning VET delivery need to allow for people changing occupations and retiring from work. This replacement demand is, for most occupations, much more significant than demand generated through new jobs. Bill Martin touches on this in *Skill acquisition and use across the life course*. In particular, he shows that trade occupations exhibit a distinct pattern where people enter a trade by their mid-20s, after which there is a steady stream as they exit into other occupations. What this suggests is that retention in the trades is a significant contributing factor to skills shortages.



In the health sector, Sue Kilpatrick and colleagues in *Responding to health skill shortages: Innovative solutions from vocational education and training* found that it is only through partnerships between employers, government and training providers that shortages can be tackled effectively. This is the subject of their report.

Any discussion on skills shortages quickly turns to apprenticeships, representing as they do fresh sources of supply. This is contingent on young people wanting to take up the option of apprenticeships. In *Doing an apprenticeship: What young people think*, Josie Misko and colleagues at NCVER surveyed school students in Years 10 to 12 and found that around 15% were interested in undertaking a trades apprenticeship, while a further 17% would consider it. On the face of it, these numbers do not suggest a problem with the attractiveness of a career in the trades. Having an intrinsic interest in the work done is the primary motivating factor, but the authors show that better promotion of the virtues of an apprenticeship and a trades career is likely to encourage more young people to consider this option. Tom Dumbrell and Erica Smith in *Pre-apprenticeships in three key trades* concluded that those who undertake a pre-apprenticeship course find it a valuable induction experience, one that leaves them more engaged with their particular trade.

And one canard should finally be put to rest by Tom Karmel and Koon Ong in their NCVER occasional paper *Will we run out of young men? Implications of the ageing of the population for the trades in Australia*. The answer to that question is that, over the next 30 to 40 years, the trades will continue to be dominated by young men, despite the ageing of the population—and there are unlikely to be shortages.

Every two years NCVER conducts a nationally representative survey of employers to examine what training they are providing for their workforce and what views they have on the training conducted through the national training system. Small employers are the least likely to make use of formal training, and one in five of them in 2007 provided no training at all, whether formal or informal. In *Education and training that meets the needs of small business*, Susan Dawe and Nhi Nguyen undertake a systematic review of the international and national research evidence. They find

that small business owners are not deterred by cost—they will pay for training if it is of value—but they are seeking training that has a clear focus on business-specific needs, with a personal approach (such as through a known broker), and delivered flexibly.

The demand for skilled workers has also prompted the question of how the VET system responds to industry needs and, more particularly, the role of higher-level VET qualifications. In *Higher-level vocational education and training qualifications: Their importance in today's training market*, Sue Foster and several others examined the relevance of such qualifications to students and employers in six industry sectors: disability services; nursing; engineering; electronics/electro-technology; multimedia; and design. They found that the value and role of higher-level qualifications differs across sectors and that employers do not necessarily favour graduates with higher-level qualifications, but rather are looking for demonstrated experience and sound generic skills. They also throw up a challenge to the VET sector—in a number of areas employers prefer university graduates to VET diploma holders.

## Students and individuals

Much of NCVER's own research activity and the commissioned research focused on particular segments of the student population, especially disadvantaged groups. NCVER has been working closely with the two national advisory taskforces on Indigenous students and students with a disability, with further work to be done in 2008.

Three reports on Indigenous students were published in 2007 and continue to highlight the difficulties involved in providing Indigenous Australians with meaningful education and employment pathways. *Pathways and barriers: Indigenous schooling and VET participation in the Goulburn Valley* by Katrina Alford and Richard James found that many students are lost to VET participation because they withdraw from school early and, where they do return to education through VET, they are not well equipped to cope with the work, such that few successfully complete their courses. The authors called for intensive investment in early literacy and numeracy programs and individual case management of students.

Mike Dockery and Nicola Alsom look at a later stage of the life cycle in *A review of Indigenous employment programs*. They show the persistently inferior labour market prospects of Indigenous Australians, but also highlight the more successful outcomes enjoyed by those participating in Indigenous-specific programs, the features of which are a mix of on-the-job learning and experience, with wage subsidies and support such as mentoring.

*Growing the desert: Educational pathways for remote Indigenous people* by Metta Young, John Guenther and Alicia Boyle showed that VET participation is not providing desert Indigenous people with pathways from learning to work or into higher-level education. Indigenous labour force participation rates have declined substantially across remote areas of Australia since 2002, despite the fact that desert Indigenous people are well represented in VET. The authors explain that this is because the content and delivery models of VET are not well aligned to the prior skills, educational demands and aspirations of desert Indigenous people. VET programs struggle to address the learning needs that arise as a result of language and cultural differences and the different ways that work is constructed and occurs across the desert.

The plight of students with hearing difficulties was examined by Catherine Clark in *Connecting the dots: A successful transition for deaf students from vocational education and training to employment*, which examined the personal histories of seven deaf people with recent experience of vocational education and training. She found that students are hampered by a lack of connectedness between the different agencies with an interest in assisting deaf people from education into employment.

Justice David Harper of the Victorian Supreme Court launched *Vocational education and training for adult prisoners and offenders in Australia: Research readings* edited by Susan Dawe. This collection of papers covers international and national research on the value of training for prisoners—how much does it reduce recidivism, as an example—and the various approaches and pilots being pursued across different jurisdictions of Australia. Justice Harper complimented the work as an example of 'reasoned argument based on thorough research'.

There is also continuing interest in students at both ends of the age spectrum. Davinia Woods synthesised recent research on young students for her *At a glance—The role of VET in helping young people's transition into work*. She found that, for those young people not going on to university after leaving school, completion of a VET qualification improves their likelihood of gaining employment. The payoff to different pathways is something that NCVET will be exploring in much more detail over the next couple of years through analysis of the Longitudinal Surveys of Australian Youth.

An interest in older students is driven by the ageing of the population and the projected downward impact this may have on workforce participation. In *Older workers' perspectives on training and retention of older workers*, David Lundberg and Zaniah Marshallsay survey four groups of older workers and find that 70% of them have revised upwards their expectations about retirement age. Were these changes in expectations to result in older workers staying in work longer it would place less downward pressure on workforce participation rates. Many older workers, however, still perceive discriminatory attitudes toward their age from colleagues and employers.

Engaging men in learning, for social rather than vocational reasons, was the subject of research by Barry Golding and others into a form of community learning that offers opportunities for regular hands-on activity by groups deliberately and mainly comprising men. These 'men's sheds' have been particularly successful in attracting older men facing issues such as retirement, isolation, unemployment, disability and separation. Being heavily reliant on volunteers, men's sheds often struggle to become established; nevertheless, they are growing in number and have attracted significant interest, as attested by the popularity of Barry Golding et al.'s NCVET report, *Men's sheds in Australia: Learning through community contexts*.

## Teaching and learning

The need to understand the cultural background and prior experiences of learners is a message emerging from studies of newly arrived migrants

and refugees. The research suggests that teachers have to be alert to specific barriers to learning, for example, a background in a predominantly oral culture and the difficulties of settling into a new country. In their study of Sudanese refugee learners, *Classroom management strategies to address the needs of Sudanese refugee learners*, Burgoyne and Hull showed that learning English provided students with opportunities to build social networks and that they rely on the Sudanese community to deal with the stresses of the past and present. Nevertheless, the authors found the Sudanese learners to be resilient and often very motivated to learn in order to find work, something teachers should bear in mind when designing their classes. Teachers also need to keep in mind the Sudanese oral tradition. They also pointed out that not enough attention is paid to numeracy in the tuition being offered to Sudanese refugees.

Poor numeracy is not an issue confined to new arrivals. The results of the second Adult Literacy and Life Skills Survey conducted by the Australian Bureau of Statistics were released at the end of 2007. On the numeracy scale, approximately 7.9 million (53%) Australians were assessed at the lowest levels (Level 1 or 2), 4.7 million (31%) at Level 3 and 2.4 million (16%) at Level 4/5. On the problem-solving scale, approximately 10.6 million (70%) Australians were assessed at Level 1 or 2; there were 3.7 million at Level 3 (25%) and 800 000 (5%) at Level 4 (table 1).

It was timely therefore for Beth Marr and Jan Hagston to look into how numeracy is best taught for its application in the workplace. In *Thinking beyond numbers: Learning numeracy for the future workplace*, the authors concluded that most workers want training that is informal, immediate and delivered on the job by peers or supervisors, rather than anything which reminds them of the school environment. Industry representatives preferred a combination of on- and off-floor training that had immediate workplace application, while also incorporating opportunities for practice and reflection.

The benefits of offering a comfortable learning environment and, in some cases, a less formal approach to assessment is a theme in Daryl Dymock's mapping report, *Community adult*

*language, literacy and numeracy provision in Australia: Diverse approaches and outcomes*. This study focused on the non-accredited community adult learning sector. He found that students and providers generally consider non-accredited courses to be less pressured and to be effective in developing self-confidence as well as skills. The survey also highlighted the need to better measure the benefits of non-accredited learning and the contribution of the community education sector. Dymock suggested that this should include a more sustained approach by the sector to monitoring progress of students' personal growth and skills development.

## The VET system

The VET system can seem labyrinthine to outsiders. That is why NCVER produced *Did you know? A guide to vocational education and training in Australia*. This publication provides some basic information about what VET is, who funds it, how and where it is taught, and what qualifications it offers.

Skills shortages, changing government policy, new technology, different work structures, competition and learners' expectations produce a complex operating environment for VET providers. This has implications for the business of VET and for its workforce. Over the last two years a consortium of researchers has addressed these issues in a program of work focused on helping VET providers to build their capability (see <[www.consortiumresearchprogram.net.au](http://www.consortiumresearchprogram.net.au)>).

This research confirmed that providers need to be innovative, flexible and capable. Its key messages are that strategies to build capability must concentrate on the needs of both the individual and the organisation, and that these strategies require the attention of top management, which must also address the constraints posed by over-regulation.

The rationale for these conclusions is that people require strategies to help them effect change. They need to be able to draw on research and the experiences others have had in confronting and managing transitions. At the moment such knowledge and experience are often locked away. To assist in remedying this, NCVER and

the consortium's principal researchers presented a summary of the research (*Supporting vocational education and training providers in building capability for the workforce: Research overview* by Roger Harris, Berwyn Clayton and Clive Chappell) and components of their work at seven one-day forums in Melbourne, Hobart, Brisbane, Sydney, Adelaide, Perth and Albury.

Effective leadership in VET organisations is critical to their success. Callan and his colleagues, who were part of the consortium, noted in their report, *Approaches for sustaining and building management and leadership capacity in VET providers*, that management and leadership capabilities need to be both supported through formal training programs designed to meet the needs of the organisation, and less formally by effectively managing the on-the-job learning of VET staff. The remainder of the consortium's work will be published in 2008 and will offer VET practitioners further ideas about how to tackle the complexities of the system.

Another aspect of the VET system calling for renewed attention, according to Figgis and her colleagues, is the cause of equity. In their report, *Advancing equity: Merging 'bottom up' initiatives with 'top down' strategies*, they argued that equity clients should be thought of as those who need extra support because they are disadvantaged in relation to learning—because of poor literacy or a lack of confidence, or a sense of cultural alienation in a TAFE institute or other provider. They suggested a range of promising mechanisms for more effectively merging bottom-up practice with top-down strategy within providers, including identifying both the specific obstacles to improving outcomes for disadvantaged learners and those individuals adept at bringing people together and helping them to build relationships, uncover needs and share ideas amongst themselves—all of which will help them do their jobs better.

### VET in context

Another consistent message emerging from the 2007 research, in particular from a suite of work conducted on VET in regional Australia, is the need for greater collaboration across sectors and within

communities in order to serve learners well. This regional research was initiated on the premise that development of human capital is a crucial ingredient in economic growth and that the VET sector, which is well represented in the regions, has an important role in local economies.

All of the reports commissioned concluded that to be effective, the VET sector should be engaged in partnerships between institutions, businesses and individuals. Such partnerships can offer practical and creative solutions to local needs and problems. While not necessarily having to take the lead in such arrangements, there was much scope for VET providers to work with adult and community education (ACE) providers, business and industry, schools and local government in order to build human capital. Steve Garlick, Mike Taylor and Paul Plummer found in their exploration of regional economic growth that the VET sector's significant presence in the regions means it can play a key role in regional growth by developing enterprising skills, knowledge and cultures. (See *An enterprising approach to regional growth: Implications for policy and the role of vocational education and training*.)

The research cautions that establishing and maintaining such partnerships can be complex and challenging and demands a high level of trust and an investment of time and money. These messages were echoed during the presentations on this research in Geraldton, Townsville, Newcastle and Geelong. A synthesis of the findings can be found in Tabatha Griffin and Penelope Curtin's *Regional partnerships: At a glance*.

Cross-sectoral efforts are also important in society's efforts to achieve environmental sustainability, with education undoubtedly having its part to play. David Goldney and colleagues investigated the particular role of VET in their report *Finding the common ground: Is there a place for sustainability education in VET?* They argued for the mandatory integration of sustainability education into VET policy and practice, pointing out that this would need the incorporation of sustainability skills into industry training packages and a less narrow economic focus on VET policy-making.

## Building research capacity

In 2007, NCVER embarked on several initiatives to encourage VET practitioners to undertake research and to bring new researchers into the field of VET studies. Seven VET practitioners received New Researcher Awards, which allowed them to present at the 2007 *No frills* conference in Alice Springs. While the subject matter of these presentations varied considerably, they all demonstrated the sector interest in research that helps practitioners to do their work better. These papers will be published in 2008, when a further initiative to encourage VET practitioners to become involved in academic study or in more practically oriented research projects is being launched.

## Looking forward

In June 2007 the Ministerial Council for Vocational and Technical Education met. It endorsed, among the business it transacted, a set of five research priorities through to the end of 2010. These are summarised in box 1.

### Box 1 National VET research priorities 2007–10

1. Growing the labour supply: by examining how VET can support greater participation in the workforce, especially for equity groups whose participation is relatively low.
2. Motivating individuals to participate in VET: by understanding why people choose to, or not to, participate in VET, what drives demand for VET and what outcomes it offers participants in the medium-to-long-term.
3. Sustaining a skills base through apprenticeships and traineeships: by identifying ways of maximising the number of people who complete their apprenticeship or traineeship.
4. Enhancing the productive capacity of enterprises: by ensuring that employers are well placed to maintain the skills of their workers and to adapt to new work practices and technologies.
5. Enabling VET providers to compete effectively: by identifying the barriers VET providers face to operating effectively in a competitive environment.

These priorities reflect the sector's views on where national research activity should be concentrated and they will determine projects funded under the National VET Research and Evaluation program, as well as provide a guide to NCVER's own research activities. They have also informed the three-year programs of work to be undertaken by the Australian National University, the University of Melbourne, the University of South Australia and the University of Sydney, beginning in 2008.

In their scope and reach the priorities go beyond the intricacies of the VET sector to explore how vocational education and training interconnects with the economy, workplaces, and other education sectors. The backdrop is the resolve articulated by the Council of Australian Governments to ensure that all Australians are provided with the education and training needed to realise productive and meaningful lives.



**Industry and employers**

## Will we run out of young men? Implications of the ageing of the population for the trades in Australia

Tom Karmel, Koon Ong

### Abstract

The ageing of the population has been attracting the attention of policy-makers in Australia and many other countries. One of the concerns is that labour shortages could occur because of inadequate growth in labour supply. The particular aspect picked up in this paper is the trades sector of the labour market. The distinct feature of the trades is that the apprenticeship model is the dominant method of training, and almost all apprentices in the traditional trades (excluding hairdressing) are young men. This paper considers the labour market for the traditional trades in Australia over the next 30 to 40 years and investigates whether the ageing of the population will pose particular problems for this labour market. The broad conclusion is that

the ageing of the population will significantly impact on the size of the potential trades workforce, but this is unlikely to result in shortages. Rather, any shortage is more likely to occur if the trades lose their attractiveness relative to other occupations. Moreover, the age distribution of the trades workforce will remain largely unaltered.

*Will we run out of young men? Implications of the ageing of the population for the trades in Australia* can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1935.html>>



## Higher-level vocational education and training qualifications: Their importance in today's training market

*Sue Foster, Bernadette Delaney, Andrea Bateman, Chloe Dyson*

This project investigated higher-level vocational education and training (VET) qualifications (certificate IV, diploma and advanced diploma, vocational graduate diploma) in six sectors across three industries: disability services, nursing, engineering, electronics/electrotechnology, multimedia and design. It examined the relevance of higher-level VET qualifications for enterprises and employment outcomes for students; how higher-level VET qualifications might be improved; and the implications of the new associate degree for higher-level VET qualifications.

### Key messages

- Higher-level VET qualifications have a role to play in meeting employers' needs for more highly skilled workers, but employers do not necessarily favour graduates with higher-level qualifications. The value and role of these qualifications differs across sectors studied; for example, the requirements for entry into enrolled nursing are quite different from those required for multimedia and design.
- Course developers need to work very hard to establish the credibility of higher-level qualifications in the eyes of employers. Higher-level qualifications need to:
  - emphasise generic skills, such as the ability to deal with change and problem-solving
  - involve substantial work placement/ experience opportunities (which will be a challenge to organise).
- Currently, the role and value of the associate degree is little known, nor does evidence exist that the associate degree will have an impact upon participation in higher-level VET qualifications.

*Higher-level vocational education and training qualifications: Their importance in today's training market can be found on NCVER's website*  
 <<http://www.ncver.edu.au/publications/1800.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Forecasting future demands: What we can and cannot know

Sue Richardson, Yan Tan

The vocational education and training (VET) sector seeks to teach courses that will meet future demands from employers in terms of the quantity and types of skills required. The question is how does the VET sector anticipate what these future demands might be in the context of a rapidly evolving economy.

This report is part of the larger research program, 'A well-skilled future: Tailoring VET to the emerging labour market'.

### Key messages

- The MONASH model for projecting future skills needs is of high quality by international standards, but the complexity of the economy is such that it is not possible to make accurate projections of future skill needs in any detail, or for more than a few years into the future.
- New VET graduates play only a modest part in filling expanding skilled vacancies; other sources of 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, are out of the labour force or are unemployed, or are migrants.
- VET planners should not try to match training to projected skills needs in any precise way; they should instead focus on distinguishing skills that are in growing demand from those in declining demand, and on skills that take a long time to learn (and to gear up to teach).
- VET planners also need to anticipate areas where there are large numbers of people with specific skills who will leave employment in the forecast period, that is, replacement demand.

*Forecasting future demands:  
What we can and cannot know*  
can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1744.html>>

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Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Pre-apprenticeships in three key trades

Tom Dumbrell, Erica Smith

This study examines the characteristics of pre-apprenticeships in Australia and how they might contribute to addressing shortages of skills in some of the key trades. Pre-apprenticeships are courses which provide initial training in a particular industry or occupation. If completed successfully, the courses can assist participants in obtaining an apprenticeship. The study found that pre-apprenticeships have been used in Australia and elsewhere for many years and are widely regarded as a valuable strategy for increasing the supply and quality of potential apprentices.

### Key messages

- Employers are in favour of pre-apprenticeships; they see them as weeding out unsuitable candidates. Hence, pre-apprenticeships are likely to improve retention.
- Prospective apprentices like them. They see them as a useful way into an apprenticeship and are positive about the experience.
- Those who undertake pre-apprenticeships are more engaged with the occupation and are more likely to have plans for higher-level training after they complete their apprenticeships.
- Pre-apprenticeships should not be seen as getting students 'work ready'; they are more about engagement with the trade.

*Pre-apprenticeships in three key trades*  
can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1781.html>>

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Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Responding to health skills shortages: Innovative solutions from vocational education and training

*Sue Kilpatrick, Quynh Lê, Susan Johns, Pat Millar, Georgie Routley*

This study examines how the vocational education and training (VET) sector can respond to skill shortages in the health sector. The study focuses largely on VET-trained workers in the health industry, such as enrolled nurses, nursing assistants, personal care assistants, allied health assistants and Aboriginal and Torres Strait Islander health workers.

### Key messages

- Responsibility for addressing skills shortages should be jointly shared between the health sector, education and training organisations and government, with industry and employers taking a proactive role. A partnership approach is necessary to provide the commitment and breadth of human, infrastructure and financial resources necessary for addressing skills shortages sustainably.
- Industry-driven approaches are a recurring characteristic of well-developed and effective models for addressing skills shortages.
- Innovative models first consider the tasks involved in the skills shortage, identify the requisite competencies, then design the training and/or redesign the job.
- Targeted training appears to be most effective in meeting skills shortages. Training components of programs within organisations should be complemented by a focus on retention of workers, increased job satisfaction and better career paths.
- There needs to be a mix of short-term solutions (training only) and medium-to-longer-term solutions (job redesign, holistic approaches).

*Responding to health skills shortages: Innovative solutions from vocational education and training* can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1833.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Skill acquisition and use across the life course: Current trends, future prospects

*Bill Martin*

This study investigates whether, between 1981 and 2001, there have been significant changes in the timing and sequencing of the major life transitions of Australians, such as partnering, parenthood, entry to and exit from paid work and post-secondary education, and the implications of these changes.

This report is part of the larger research program, 'A well-skilled future: Tailoring VET to the emerging labour market'.

### Key messages

- The life-course patterns of Australians have changed steadily, with the proportion following unconventional life trajectories slowly increasing between 1981 and 2001. Nevertheless, a majority of people continue to follow well-established conventional life-course pathways. These trends are likely to continue.
- The widespread acceptance of working motherhood and living alone are the major changes in standard life-course patterns. The withdrawal of prime-aged men (between 25 and 54 years) from the labour force and the rise of single parenthood are amongst the rising instances of unconventional life trajectories, as is an increased number of people beginning post-secondary education after their 20s.
- The vocational education and training (VET) sector has been significantly more affected by rising unconventional life trajectories than the university sector. In particular, its part-time student body has a growing proportion of people following unconventional life courses, notably commencing post-secondary education late, being single parents, and being prime-aged men without full-time work.
- Given the continuation of existing patterns of skill utilisation through the life course, the VET sector has an important opportunity for catering to the special circumstances of its increasingly unconventional part-time student body, thereby enhancing the employment opportunities of these relatively disadvantaged groups and increasing the supply of relevant skills to the Australian labour market.
- People in trades occupations display a distinct pattern, whereby they obtain training and enter the occupations by their mid-20s and then steadily exit the occupations over their working lives, beginning this exit soon after they qualify. This is in contrast to people in professional occupations who are trained and enter the occupations by their later 20s but who do not leave the occupations in substantial numbers until retirement.

*Skill acquisition and use across the life course:  
Current trends, future prospects  
can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1747.html>>*

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Workforce planning for the resources and infrastructure industry

Tom Karmel

### Abstract

It is argued that workforce planning should be built on an understanding of how the labour market works, and the links between it and education and training. Workforce planning is particularly difficult for the resources and infrastructure industry because (1) the demand for resources is difficult to forecast and (2) the industry is made up of relatively small employers and draws workers from a wide range of occupations.

*Workforce planning for the resources and infrastructure industry* was presented to Grow and Maintain the Workforce, the national conference of the Resources and Infrastructure Industry Skills Council on 23 August 2006 at Swissotel Sydney.

*Workforce planning for the resources and infrastructure industry* can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1826.html>>

## Education and training that meets the needs of small business: A systematic review of research

Susan Dawe, Nhi Nguyen

Through a systematic review of existing research, this study set out to find evidence to answer the following question: 'What intervention strategies achieve participation of small business managers and employees in education and training that meets the needs of small business?'. This topic was of interest because small businesses employ around 3.6 million people in Australia, but two-thirds of small businesses do not provide structured training for their employees.

### Key messages

- Strategies that work for small business are clearly focused on business need rather than driven by government agendas and funding.
- Lowering the costs of formal training is useful in engaging some small businesses, but financial incentives alone are not sufficient to meet small business needs. Small business will pay for education and training if they see the value in it and it is in line with their interests.
- Strategies which fit with the way small business learns are clearly more successful than direct or formal training. Small business learns 'through doing', with the focus on current or real issues in the workplace, and through social networks—learning from other business people.
- Successful strategies are business mentoring, networking, and collaborative or group learning with other businesses through clusters, alliances or action learning. Other effective strategies include diagnostic services, such as training needs analysis, and benchmarking processes against other organisations. Programs which employ a number of these work better than those relying on a single approach.
- Strategies that meet the needs of the diverse range of small businesses demonstrate three essential elements. These are:
  - a clear focus on business-specific needs
  - a personal approach through a recognised local facilitator or business service organisation that is able to reach small business operators who may not be positive about training
  - flexible provision which carefully individualises training information, content and delivery to the needs of each small business.
- Ten factors which contribute to strategies that work for small business are:
  - providing opportunities to share skills, knowledge and experience with other business people
  - linking training to business performance—increased profit, growth or survival
  - linking training to specific stages in the business cycle (that is start-up, crisis and/or survival, growth and/or expansion and export and/or internationalisation)
  - contacting small business managers personally to analyse their business needs
  - providing ongoing business-specific support through a business service organisation
  - minimising time spent away from the workplace
  - integrating formal training and learning with informal learning processes in the workplace
  - lowering costs of training by collaborating with other businesses or through financial incentives, such as a government subsidy or 'interest free' loans
  - ensuring that facilitators and trainers have the appropriate networks and experience to enable them to be trusted and respected by all business participants, especially in the case of Indigenous Australian small business operators
  - planning the strategy with small businesses and business service organisations.

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

*Education and training that meets the needs of small business: A systematic review of research* can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1737.html>>





**Students and individuals**

## The demand for tertiary education in Australia

*Tom Karmel*

### Abstract

This paper looks at the domestic demand for tertiary education (that is, excluding overseas students). It argues that the concept is problematic because of the dominant role of the government in provision, and discusses the factors that impinge on it: fees, returns to study and demographics. It shows how student demand has been changing and looks at likely trends in coming years. While much

has been made of the impact of ageing, in fact other factors will be more important in determining the level of student demand.

*The demand for tertiary education in Australia*  
can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1825.html>>

## The socio-economic status of vocational education and training students in Australia

*Paul Foley*

This report investigates the relationship between socio-economic status and participation and achievement in the vocational education and training (VET) sector. The research examines the extent to which training opportunities provided by the public VET system are taken up by people from different socio-economic backgrounds. The relationship between socio-economic status and VET participation and achievement is determined by applying aggregate area-based Socio-Economic Indexes for Areas (SEIFA) developed by the Australian Bureau of Statistics (ABS) to the 2001 National VET Provider Collection maintained by the National Centre for Vocational Education Research (NCVER).

### Key messages

- There is an over-representation of students from low socio-economic areas in the Australian VET sector.
- This over-representation is partly driven by the relatively high participation by students in vocational education and training in regions outside the capital cities, which on average tend to be lower socio-economic areas.
- People from low socio-economic areas tend to undertake lower-level qualifications.
- VET students from lower socio-economic areas complete qualifications at a better-than-average rate.

*The socio-economic status of vocational education and training students in Australia can be found on NCVER's website*  
<<http://www.ncver.edu.au/publications/1690.html>>

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Note: This publication was produced through the National Vocational Education and Training Statistical Program; see page 52 for details.

## Connecting the dots: A successful transition for deaf students from vocational education and training to employment

Catherine Clark

Through interviews with seven young people from Victoria, this study identifies and evaluates the pathways available from vocational education and training (VET) to work for students who are deaf or hard of hearing.

### Key messages

- Deaf people are able to access a variety of careers. Nevertheless, the 'dots', represented by secondary school deaf facilities, deaf schools, mainstream students and other support services available to deaf people, such as specialist employment agencies and disability liaison officers at technical and further education (TAFE) institutes, need to be better 'connected' to ensure a smoother transition from school to further education and to employment. This will enable students to achieve more satisfying jobs commensurate with their skills and training.
- Those interviewed indicated that their career options were limited by the perceptions, both their own and others, of what they were able to do.
- The largest barrier faced by deaf and hard of hearing students in a learning environment is the availability and provision of communication support (such as Auslan—Australian Sign Language—interpreters, notetakers, real-time captioning and voice recognition software).
- Deaf students require more specialised assistance, such as access to life coaching and specialist deaf career advisors to assist in determining appropriate career paths. The deaf people interviewed also felt they would like access to deaf role models and information in a more accessible format to help them to make more informed decisions about their career.

*Connecting the dots: A successful transition for deaf students from vocational education and training to employment* can be found on NCVET's website <<http://www.ncver.edu.au/publications/1798.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Doing an apprenticeship: What young people think

*Josie Misko, Nhi Nguyen, John Saunders*

This study identifies the factors which explain why individuals enter or do not enter traditional trade apprenticeships.

### Key messages

- Having an intrinsic interest in a trade is the main motivation for taking up or wanting to take up an apprenticeship. Improving the image of the trades among students, teachers and parents would promote a greater interest.
- Most senior secondary school students claim not to be interested in doing an apprenticeship, with students of higher academic ability much less likely to be interested. Students of parents with university degrees were also less likely to be interested. Apprenticeship recruitment drives are likely to be more effective if they target those not planning to go on to higher education. Information should be made available to all students, since over one in three commencing apprentices have completed Year 12.
- The current information and guidance available to school students is a potential barrier to greater interest in apprenticeships among young people. Apprenticeships were not widely promoted at school, and specific information was not always easy to obtain. Relatively few students were encouraged by their teachers and counsellors to pursue an apprenticeship.
- Many school students are not attracted to apprenticeships because they believe the pay of tradespeople to be too low (by comparison with pay for professionals). In contrast, those part way through an apprenticeship believe the main barrier to continuing is the training wage, which is low relative to what they might earn elsewhere. It is likely that this is a contributing factor to uptake and perhaps to non-completion.
- Those part way through an apprenticeship are very positive about the experience, pointing especially to the enjoyment and challenge obtained from working and learning new skills, and the foundation the apprenticeship provides for good job and pay prospects for the future. Promoting these positive experiences could improve interest in apprenticeships among school students.

*Doing an apprenticeship: What young people think*  
can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1797.html>>

Note: This publication was produced through the NCVER Core Research Program; see page 52 for details.

## A review of Indigenous employment programs

*A Michael Dockery, Nicola Milsom*

This report critically reviews evaluations of the major post-1985 labour market assistance measures for Indigenous Australians, with a view to helping shape future policy in addressing Indigenous disadvantage.

### Key messages

- In terms of achieving short-term employment outcomes, Australia's major Indigenous-specific programs appear to have been highly successful. A mix of on-the-job work experience, achieved through wage subsidies or brokered placements, combined with other appropriate support, such as mentoring, offers a successful approach. Involvement of Indigenous people in the provision of assistance can also improve program effectiveness.
- However, despite considerable public investment in labour market programs and other forms of assistance for economic development, Indigenous Australians remain significantly worse off on all major measures of economic and social wellbeing, relative to non-Indigenous Australians.
- From the 1980s, government policy towards Indigenous economic development, as embodied in the Community Development Employment Projects scheme and the Aboriginal Employment Development Policy, stressed the importance of self-determination and cultural preservation in promoting Indigenous wellbeing.
- Indigenous employment policies and programs are products of specific political philosophies, and policy and program objectives are shaped by those philosophies. At evaluation stage, objectives such as self-determination and choice have been ignored or have been replaced by more easily quantifiable objectives, such as increased numbers of Indigenous people in mainstream jobs. Policy-makers need to pay greater attention to how programs are evaluated.
- The primary objectives of the main labour market programs now accessed by Indigenous Australians, encompassing the Indigenous Employment Policy and the Job Network, are the achievement of mainstream employment outcomes, and for many Indigenous Australians this is consistent with their own aspirations. Our view is that it is also likely to result in a more rapid pace of social and cultural assimilation.

*A review of Indigenous employment programs  
can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1729.html>>*

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Growing the desert: Educational pathways for remote Indigenous people

*Metta Young, John Guenther, Alicia Boyle*

This study maps the participation of desert Indigenous people in the Australian vocational education and training (VET) sector and in non-formal adult and community education (ACE) learning programs, and analyses the contexts in which learning occurs across the desert.

### Key messages

- There is evidence of significant fluctuation and some decline occurring in the participation of desert Indigenous people in VET. Outcomes in terms of completions and qualifications are poor.
- VET participation is not providing desert Indigenous people with pathways from learning to work, or into higher-level education. Indigenous labour force participation rates have declined substantially across remote areas of Australia since 2002, despite the relatively high participation rates of desert Indigenous people in VET.
- There is a significant misalignment between the content and delivery models of VET and the prior skills, educational demands and aspirations of desert Indigenous people. VET programs struggle to adapt to and address the types of learning needs that arise as a result of language and cultural differences and the different ways work is constructed and occurs across the desert.
- Distinct cultural, demographic and geographic landscapes define Australia's desert regions. These contexts require a combination of educational investments and supports, and real engagement with the types of livelihoods and economies emerging in desert regions.

*Growing the desert: Educational pathways for remote Indigenous people* can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1911.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Men's sheds in Australia: Learning through community contexts

*Barry Golding, Mike Brown, Annette Foley, Jack Harvey, Lynne Gleeson*

Men's sheds organisations are typically located in shed or workshop-type spaces in community settings that provide opportunities for regular hands-on activity by groups deliberately and mainly comprising men. They have recently proliferated across parts of southern Australia with higher proportions of older men not in work.

### Key messages

- Men's sheds are particularly successful in attracting older men who have proved difficult to engage through conventional health, employment, education and training initiatives. Many of these older men are facing issues associated with significant change, including ageing, health, retirement, isolation, unemployment, disability and separation.
- They provide mateship and a sense of belonging through positive and therapeutic informal activities and experiences with other men. Men's sheds achieve positive health, happiness and wellbeing outcomes for men who participate, as well as for their partners, families and communities.
- Men's sheds confirm the preferences of older men for hands-on, practical learning styles, more similar to those found in adult and community education (ACE) compared with those in formal education settings.
- Men's sheds have more to do with producing non-vocational benefits and rarely provide direct vocational pathways to future paid work.
- Being heavily reliant on volunteers, men's sheds often struggle to cope with the initial costs, regulations and complexities associated with establishing a safe working environment and procuring funding to assist with coordination and supervision of participants. Despite the limitations in funding, men's sheds have grown in number; however, the impact on future growth and sustainability is uncertain.

*Men's sheds in Australia:  
Learning through community contexts  
can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1780.html>>*

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.



## Older workers' perspectives on training and retention of older workers

David Lundberg, Zaniah Marshallsay

The aim of this study is to inform public and policy debates and discussion on Australia's ageing population and workforce by offering an analysis of the views of older workers on the training and retention of this group of workers. The perspectives of the group themselves have been largely missing from previous research. The views of older workers from a range of industries were obtained.

### Key messages

- Across those surveyed, around 70% stated that, to achieve a better lifestyle, they would either need or would choose to work past retirement age (at least part-time). Large majorities of the respondents favoured workers being able to work beyond retirement age.
- Increasing retention of older workers is not so much a matter of persuading or inducing the workers to seek work beyond retirement age. Rather, as the analysis indicated, the issues influencing retention are more related to removing perceived discriminatory barriers and some important disincentives in existing federal or state policy (for example, workcover and insurance provisions).
- Large majorities of those surveyed saw a need for an attitudinal change among younger workers and employers in relation to age-related stereotypes. This is despite only a minority reporting negative attitudes from their own colleagues or employers towards older workers working beyond retirement age.
- Older workers favour 'train the trainer' courses to equip them to train or mentor younger workers. They also advocate more equal access to training programs to enable them to update and enhance specific skills in their particular fields and to keep up with developments in technology, especially in computing.

*Older workers' perspectives on training and retention of older workers* can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1779.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Pathways and barriers: Indigenous schooling and VET participation in the Goulburn Valley region

*Katrina Alford, Richard James*

The educational participation and completion rates for the Goulburn Valley Indigenous community are very poor. This research reveals some of the problems of participation in schooling and vocational education and training (VET).

### Key messages

- The VET in Schools and Victorian Certificate of Applied Learning programs begin in Year 11, well after most Indigenous students have left school, indicating that the 'one size fits all' Year 7–10 curriculum may itself be a problem in attracting and retaining Indigenous students in schools.
- Many Indigenous early school leavers re-engage in post-school education and training (for example, in technical and further education [TAFE]), but completion rates are low, as are the progression rates to skilled employment.
- The Indigenous regional community lacks sufficient social capital (skills, mainstream knowledge and networks) to provide a supportive context for school and VET students. Developing and maintaining confidence and motivation in an education, training and working environment perceived as racist is difficult for many Kooris.
- The costs of not completing schooling and taking up post-school training are substantial for the Koori community and for government, in terms of:
  - forgone education subsidies resulting from high attrition and low retention rates in schools
  - high welfare subsidies
  - indirect 'macro' costs, including forgone output and tax revenue.
- These problems are complex but not insurmountable. Strategies that might boost successful VET participation include:
  - the establishment of an 'entitlement fund to 12 years of education', to offer alternatives to young Kooris who leave school early
  - intensive investment in early literacy and numeracy programs and highly coordinated individual case management
  - the greater involvement of the community in the planning and leadership of educational programs
  - greater recognition of Koori culture and language in the mainstream education and training system, the absence of which is currently inhibiting Indigenous students' engagement.

*Pathways and barriers: Indigenous schooling and VET participation in the Goulburn Valley region can be found on NCVET's website <<http://www.ncver.edu.au/publications/1734.html>>*

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Vocational education and training and young people: Last but not least

*Tom Karmel*

### Abstract

Vocational education and training (VET) is much more important to young people than might be immediately apparent. This paper focuses on how young people participate in VET, what they study, and their outcomes. Of particular note is the importance of VET for those young people who do not proceed on the conventional academic path of 12 years of school followed by university. However, while the levels of participation are extremely high,

the proportion emerging with a qualification is much lower, and the proportion emerging with a middle-level qualification or higher is lower again.

*Vocational education and training and young people:  
Last but not least*  
can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1736.html>>

## Vocational education and training for adult prisoners and offenders in Australia: Research readings

*Edited by Susan Dawe*

On 30 June 2006, there were 25 800 adult prisoners (20 200 sentenced and 5600 unsentenced) in Australian prisons. In addition, there were 52 200 adult offenders—those sentenced to community-based orders (or on parole from prison), and 862 people on periodic detention.

As at 30 June 2006, there were 117 custodial facilities nationally, including 84 government-operated prisons and seven privately operated prisons. While 75% of adult prisoners were held in secure facilities, 25% were held in open prisons (facilities classified as low security).

To assist ex-prisoners and ex-offenders to return to the community as law-abiding citizens, correctional services deliver (to high risk offenders in particular) learning programs which target the behaviour directly related to the offence, for example, substance abuse or anger management. To date, these programs are not as effective as they might be, since 60% of individuals incarcerated have previously been in an adult prison.

Adult prisoners and offenders typically have inadequate literacy skills or school education, and a history of unemployment. Indigenous Australians are ten times more likely to be in prison than non-Indigenous Australians.

### Key messages

- Recidivism is affected by a range of factors including education level, employment history, substance abuse, social support, physical and mental health, and accommodation. The lack of education and employment skills, and other factors that correlate with recidivism, often result in unemployment.
- Education and training for adult prisoners and offenders can make a significant difference towards successful post-offending employment outcomes, and thus reduce the likelihood of re-offending.
- Employment assistance programs for adult prisoners and offenders can significantly lower the rate of re-offending.
- Irrespective of whether prisoners have a pessimistic or optimistic attitude to life, those prisoners undertaking VET courses expect better labour market futures (such as work, more enjoyable work, and more money) than those undertaking non-vocational courses or prison work alone.
- The willingness of employers in the community to employ those people with a criminal history is critical to successful employment outcomes.
- The integration of education and training with personal support is required for successful transition from prison to the community. This includes one-to-one counselling and ongoing monitoring and assistance.
- Community-ownership and involvement in the education and training of Indigenous Australian prisoners ensures further education, work opportunities, and community-support services are available after their release from prison.
- VET for Indigenous Australian prisoners and offenders should also incorporate Indigenous identities, culture, knowledge and values, if it is to lead to positive and improved outcomes for individuals.
- In most jurisdictions, only a small percentage of all prisoners are participating in VET, therefore increasing participation rates would most likely reduce re-offending.

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

*Vocational education and training for adult prisoners and offenders in Australia: Research readings* can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1789.html>>

## What is happening to traditional apprentice completions?

*Tom Karmel, Gurjinder Virk*

### Abstract

This paper models completions for traditional apprenticeships on the basis of commencements in earlier quarters. These models are used to understand the dynamics of the relationship between these two variables in order to predict future completions. On the basis of the models, it is expected that completions of traditional apprenticeships will increase over coming quarters.

The models also allow us to comment on the variation in completion rates across states and changes in them over time.

*What is happening to traditional  
apprentice completions?*  
can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1724.html>>



**Teaching and learning**

## Classroom management strategies to address the needs of Sudanese refugee learners

*Ursula Burgoyne, Oksana Hull*

This study examined the experiences of Sudanese refugees undertaking English language, literacy and numeracy classes. It also identified classroom management practices that are 'working well' and enabling teachers to address the needs of Sudanese adult learners.

### Key messages

- Sudanese settlers in Australia are culturally and linguistically diverse. Many have been denied access to formal education as a result of years of conflict and therefore are at a low starting point. Because they come from a highly oral cultural background, they have well-developed informal learning strategies that can be utilised as a 'way in' to English language learning.
- Programs requiring concurrent development of speaking, listening, reading, writing, numeracy and learning skills may constitute too great a learning burden for Sudanese learners. Greater flexibility in course content and outcomes to enable learners to concentrate initially on oral English language skills may provide a better strategy.
- Greater emphasis needs to be placed on the teaching of numeracy. Inadequate attention to numeracy may disadvantage learners when accessing work opportunities or entering vocational education and training.
- The teaching of Sudanese refugees would work better if:
  - registered training organisations provided teachers with relevant background information on the Sudanese students
  - class sizes were reduced from 15 to ten students per teacher for these learners
  - Sudanese learners could be taught separately from learners from other backgrounds.
- English language programs developed in consultation with the local Sudanese community and learners and linked to an immediate resettlement need or vocational purpose have been successful models of delivery for this learner population.

*Classroom management strategies to address the needs of Sudanese refugee learners can be found on NCVET's website*  
<<http://www.ncver.edu.au/publications/1778.html>>

Note: This publication was produced through the National Adult Literacy and Numeracy Program; see page 52 for details.



## Community adult language, literacy and numeracy provision in Australia: Diverse approaches and outcomes

*Darryl Dymock*

This study explores the scope of non-accredited (where the learners do not receive a formal certificate) community adult language, literacy and numeracy provision in Australia. It looks at the extent of provision, the characteristics and motivations of the students, learning outcomes and pathways to other education and employment, and how providers can best be assisted to maintain and expand their programs.

### Key messages

- Thousands of adults each year receive non-accredited community language, literacy and numeracy assistance in Australia. Many choose this form of assistance because they either do not need or would struggle with accredited courses.
- For learners, the development of language, literacy and numeracy skills appears closely linked to the development of self-confidence. Both aspects need time to grow.
- Teachers and tutors have a key role in developing both skills and self-confidence. Therefore greater attention to initial training and professional development is essential, as is a broad approach to assessment.
- Providers believe that non-accredited language, literacy and numeracy teaching makes a valuable contribution to the community and that greater recognition and funding are warranted.

*Community adult language, literacy and numeracy provision in Australia: Diverse approaches and outcomes* can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1796.html>>

Note: This publication was produced through the National Adult Literacy and Numeracy Program; see page 52 for details.

## Thinking beyond numbers: Learning numeracy for the future workplace

*Beth Marr, Jan Hagston*

Through interviews with a range of stakeholders and workers in manufacturing and aged care, this study examined the use, learning and transference of workplace numeracy skills, as well as current understandings of the term 'numeracy'. The study challenges the training system, training organisations, and trainers to provide numeracy training that makes links directly to workplace contexts.

### Key messages

- Numeracy skills are vital in the workplace context and will become more so because of the increasing use of technology.
- Many workers tacitly and competently exercise numeracy skills in the workplace, despite lacking confidence in their abilities, which is often associated with negative experiences of secondary school mathematics.
- Numeracy skills can be extended by being framed within other workplace training, pitching them at an appropriate and attainable level and having practical application for the worker; and ideally be designed and delivered by a training team which has both adult numeracy expertise and local enterprise and industry knowledge.

*Thinking beyond numbers: Learning numeracy for the future workplace* can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1795.html>>

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Note: This publication was produced through the National Adult Literacy and Numeracy Program; see page 52 for details.



## Advancing equity: Merging ‘bottom up’ initiatives with ‘top down’ strategies

*Anne Butorac, Berwyn Clayton, Mary Dickie, Jane Figgis, Jeff Malley, Rod McDonald, Dave Meyers*

The purpose of this study was to identify the factors which help successful equity initiatives that had been ‘seeded’ in technical and further education (TAFE) institutes through short-term funding to ‘take root and spread’. Overall, we found such initiatives lack cohesion and their spread was minimal. Equity clients are those who need extra support because they are disadvantaged in relation to learning.

### Key messages

- The cause of equity appears to have lost ground during the past decade of vocational education and training (VET) reform. Many are of the view that equity needs to be reinstated as a priority principle in the sector; in line with the social justice foundations of VET established by Kangan in 1974.
- Funds allocated through short-term pilot equity initiatives have been primarily used to purchase direct support for learners, including a substantial increase in teacher-to-student ratios. This individual support for disadvantaged clients—often with multiple disadvantages—results in good outcomes. However, the initiatives rarely permeate into the institutes to the extent of influencing other practitioners.
- The most successful initiatives are those which had been established by people in the community rather than by government or government agencies, ‘outsiders’ who had a long-term commitment to the specific equity group.
- The funding model—‘seed funding’—is flawed. One-off pilot projects rarely generate ongoing provision. Furthermore, pilot projects need to be systematically applied in other contexts to test their long-term applicability.
- Policy-makers and funding bodies responsible for equity in the VET sector need to rethink the funding mechanisms currently used to stimulate innovative equity practice.

*Advancing equity: Merging ‘bottom up’ initiatives with ‘top down’ strategies*  
can be found on NCVET’s website  
<<http://www.ncver.edu.au/publications/1742.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.

## Approaches for sustaining and building management and leadership capability in VET providers

*Victor Callan, John Mitchell, Berwyn Clayton, Larry Smith*

This study examines the existing and potential strategies for sustaining and building greater levels of management and leadership capability in training organisations.

### Key messages

- *Vocational education and training (VET) providers are well aware of the urgent need to develop the leadership talent that presently exists to guarantee both the current and future success of their organisations.*

The good news is that the talent is seen to be there at various levels and, if not, it is being brought in mostly from private sector organisations, particularly to meet leadership needs at the executive level.
- *The programs and initiatives used to build the existing and future management and leadership talent are still in the very early development stages in most VET organisations.*

Most organisations are still working to reach agreement about the capabilities required for their managers and leaders. While the progress is slow, what is being done is being executed soundly. Appropriate financial and in-kind support—especially time—is required to help assure success.
- *Existing management and leadership development programs are often fragmentary and short-term, and not focused on longer-term corporate strategies and needs.*

Consequently, the needs of the majority of staff in leadership roles at various levels in the organisation are not being met. To reap better returns from their investments in leadership programs, training organisations need to make stronger links between their corporate strategy and objectives, and their training and development plans and initiatives.
- *VET organisations need to embrace the wide range of available approaches to develop their current and potential leaders and managers.*

More support is needed for learning on the job and action-learning projects that bring staff together from across the organisation, particularly in terms of developing both lower- and middle-level leadership talent. In addition, better use can be made of strategies such as coaching.
- *Currently, there is considerable duplication of effort in developing resources and tools for meeting managers' professional development needs across the sector.*

The sharing of these resources and the enhancement of support mechanisms at a national level is a more efficient way to build leadership and management capabilities in the VET sector.

*Approaches for sustaining and building management and leadership capability in VET providers can be found on NCVET's website*  
<http://www.ncver.edu.au/publications/1802.html>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.





## Finding the common ground: Is there a place for sustainability education in VET?

*John Fien, David Goldney, Jenny Kent, Tom Murphy*

Society is becoming increasingly aware of the need to sustain and repair the environment for future generations, and to incorporate environmental concerns when making social, political or economic decisions. Education is a key agent of change in this process and involves integrating knowledge and understanding about sustainability into practical vocational skills. 'Education for sustainability' is now a widely accepted concept which seeks to promote and develop sustainability skills and awareness throughout a learner's educational pathway.

### Key messages

- The vocational education and training (VET) sector has a key role to play in promoting sustainability education, both in policy and practice. The development of practical skills which promote sustainability in the workplace will be vital for employers of the future and for the wider community.
- Training packages are a practical means of integrating sustainability into vocational education and training. The current incorporation of generic or life skills into VET programs—rather than merely technical, occupation-specific skills—leads the way for a similar integration of long-term sustainability skills.
- VET practitioners already use teaching practices which are appropriate for sustainability skills. These include action learning, group learning and problem-solving. However, restrictive curriculum requirements limit the ability of training providers to incorporate sustainability concepts into their courses.
- If they are taught sustainability skills throughout their education, learners can develop the ability to promote these concepts in the workplace, devise and encourage sustainable work practices, and develop strategies for negotiating and justifying desirable changes with colleagues and managers.

*Finding the common ground: Is there a place for sustainability in VET?* can be found on NCVET's website  
<<http://www.ncver.edu.au/publications/1718.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.



## An enterprising approach to regional growth: Implications for policy and the role of vocational education and training

Steve Garlick, Mike Taylor, Paul Plummer

This report explores patterns of regional economic growth in Australia over the period 1984 to 2002 in order to identify the drivers of variation in regional growth. It attempts to identify regional opportunities and the policies and practices that assist in realising them, in particular, the potential contribution of the vocational education and training (VET) sector to regional growth.

### Key messages

- National growth over the last two decades has not been equally spread. Key metropolitan regions have been the main beneficiaries of national growth, while other regions generally have had declining growth.
- Traditional regional growth theories, focused on an 'institutional' approach, are flawed because they fail to take account of:
  - global capitalism
  - the ways in which business relationships are conducted
  - the dynamics of regional economies.
- Human capital, in particular 'enterprising' human capital, whereby individuals take responsibility for action, is the key driver of regional growth. Other drivers include access to high technology, greater industry specialisation and less government intervention.
- The VET sector's size and its significant presence in the regions means that it is ideally placed to play a key role in regional growth by:
  - developing enterprising skills, knowledge and cultures
  - using its connections with business to establish regional coalitions that link regional attributes, objectives, strategies, investment and VET programs.

*An enterprising approach to regional growth: Implications for policy and the role of vocational education and training* can be found on NCVER's website  
<<http://www.ncver.edu.au/publications/1801.html>>

Note: This publication was produced through the National Vocational Education and Training Research and Evaluation Program; see page 52 for details.



# References

## References

- Griffin, T & Curtin, P 2007, *Regional partnerships: At a glance*, NCVET, Adelaide, viewed December 2007, <<http://www.ncver.edu.au/publications/1938.html>>.
- Harris, R, Clayton, B & Chappell, C, *Supporting vocational education and training providers in building capability for the workforce: Research overview*, NCVET, Adelaide, viewed March 2008, <<http://www.ncver.edu.au/publications/1827.html>>.
- NCVER (National Centre for Vocational Education Research) 2007, *Did you know? A guide to vocational education and training in Australia*, NCVET, Adelaide, viewed August 2007, <<http://www.ncver.edu.au/publications/1790.html>>.
- Woods, D 2007, *The role of VET in helping young people's transition into work: At a glance*, NCVET, Adelaide, viewed March 2007, <<http://www.ncver.edu.au/publications/1725.html>>.

# Funding programs

## Funding programs

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NCVER acknowledges the programs for the various reports as listed below.

- **National Vocational Education and Training Research and Evaluation Program\***

This work has been managed and produced by NCVER on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Department of Education, Science and Training under the National Vocational Education and Training Research and Evaluation Program. The author/project team was funded to undertake this research via a grant. These grants are awarded to organisations through a competitive process in which NCVER does not participate.

- **National Vocational Education and Training Statistical Program\***

This work has been produced by NCVER on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Department of Education, Science and Training under the National Vocational Education and Training Statistics Program.

- **National Adult Literacy and Numeracy Research Program\***

This work has been managed and produced by NCVER on behalf of the Australian Government. Funding has been provided under the Adult Literacy National Project by the Australian Government, through the Department of Education, Science and Training. The author/project team was funded to undertake this research via a grant. These grants are awarded to organisations through a competitive process, in which NCVER does not participate.

- **NCVER Core Research Program**

NCVER's inhouse research and evaluation program undertakes projects which are strategic to the vocational education and training sector. These projects are developed and conducted by NCVER's research staff and are funded by NCVER.

- **NCVER consultancy work**

Through its commercial arm, NCVER provides professional research, development and implementation services to Australian and international clients. These projects are funded by the client and some of these are made publicly available with client approval.

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\* In December 2007 the Department of Education, Science and Training was abolished and its functions—including funding this program—were taken over by a new department, the Department of Education, Employment and Workplace Relations.

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