

Australian vocational education and training
Research messages 2005



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Australian vocational education and training Research messages 2005

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 and state and territory governments

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Preface

Research messages 2005 is a collection of key messages from research projects published by the National Centre for Vocational Education Research (NCVER) in 2005.

It covers work undertaken by both NCVER and external researchers through the following programs:

- National Vocational Education and Training Research Evaluation Program
- National Vocational Education and Training Statistical Program
- National Adult Literacy and Numeracy Program
- Systematic Review of Research Program
- NCVER Core Research Program
- NCVER consultancy work.

NCVER acknowledges the funding the Department of Education, Science and Training provided on behalf of the Australian Government and state and territory governments for the first four programs listed above. Details are shown in the appendix on page 57. We thank also each of the authors of the individual projects.

The summaries are clustered under five broad themes used by NCVER to organise all of its vocational education and training (VET) research and analysis:

- Industry and employers
- Students and individuals
- Teaching and learning
- VET system
- VET in context

Forty-two pieces of work are included, and each summary provides details of how to access the full research reports. Other value-added research dissemination products by NCVER such as *At a glance*, *Getting to grips with ...* and *Research readings* are not covered in this book.

Established in 1981, NCVER is an independent body responsible for collecting, managing, analysing, evaluating and communicating research and statistics about vocational education and training. Its vision is that Australia's VET policy and practice are informed by a sound base of quality information.

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Industry and employers

Apprentice and trainee completion rates

Katrina Ball, David John

Apprentices and trainees undertake vocational education and training through a contract of training, which is a formal contract between an employer and an apprentice or trainee. This publication reports completion rates for apprentices and trainees who commenced their apprenticeship or traineeship between 1995 and 1999, and attrition rates for more recent commencements.

Key messages

- For apprentices and trainees commencing in 1999, the completion rate was 52% for those on their original contract, rising to 55% after taking into account those who had recommenced training for the same qualification with a different employer, and reaching 60% after taking into account those who had changed both qualification and employer.
- Completion rates have declined for traditional apprentices from 71% for the cohort of 1995 to 60% for the cohort of 1999 (same trade but different employer from that of their original contract).
- Completion rates have increased for those who were not traditional apprentices from 47% for the cohort of 1995 to 52% for the cohort of 1999 (same trade but different employer from that of their original contract).
- Completion rates reflect the economy-wide pattern of labour market mobility. The age group with the lowest completion rates is the 20- to 24-year age group, which is also the most job-mobile age group. Occupations such as sales and service workers, which exhibit high rates of labour mobility, also tend to have low completion rates.
- In more recent years, attrition rates in the first year of an apprenticeship or traineeship have fallen, suggesting that completion rates may be on the increase.

Apprentice and trainee completion rates can be found on NCVER's website
<http://www.ncver.edu.au/publications/1582.html>

Note: The above publication was produced through the National Vocational Education and Training Statistical Program, see page 57 for details.

Factors pertaining to quality outcomes of shorter duration apprenticeships and traineeships

Kaye Bowman, John Stanwick, Ann Blythe

The aim of this project was to examine existing literature and national data to identify the key factors necessary for achieving high-quality outcomes from apprentices and traineeships of shorter-than-normal duration.

Key messages

- For the purpose of this study, quality outcomes refer to the employment and related benefits achieved from completing the apprenticeship or traineeship related qualification and the level of client satisfaction with the program. Shorter duration apprenticeships or traineeships are defined as those of expected duration two years or less.
- The evidence indicates that the rate of training completion, and hence qualifications attained, is the key issue related to quality outcomes for shorter duration apprenticeships and traineeships. Those who do complete shorter duration apprenticeships and traineeships achieve relatively good employment-related outcomes and express high levels of satisfaction with the program.
- Based on 1995 to 2000 data the study found that, on average, only one in two apprentices and trainees in shorter duration programs complete their training compared with three in four in longer duration ones. However, there is much variability by industry and occupation in training completion rates of shorter duration apprenticeships and traineeships. Risk areas where shorter duration contracts have very low training completion rates relative to longer term ones, include all trades and related occupations and the personal and other services industry area.
- Of the various factors that can affect the quality of outcomes of apprenticeships and traineeships, it is the actions of New Apprenticeships Centres, registered training organisations and employers that appear to have had the biggest impact and appear to be associated mainly with shorter duration apprenticeships and traineeships, based on 35 research studies undertaken between 1990 and 2003. Issues arising from the actions of New Apprenticeships Centres, registered training organisations, and employers that require attention, include the level of awareness by all parties of their roles and responsibilities, the level of employer support and commitment, the level of skills of the trainers, and the amount of training provided.
- A key suggestion is that a proper and thorough induction process be developed, and perhaps the mandatory development of a training plan, to ensure roles and responsibilities and necessary training commitments are understood by all players. Further research is also needed to separate the factors of 'duration' from 'Australian Qualifications Framework (AQF) level' in respect of training completion rates, and to gauge the effect of existing workers on training completion rates.
- The quality of outcomes of shorter duration apprenticeships and traineeships is an important issue for the training sector because they are a significant and growing subset of all apprenticeships and traineeships that in turn are a growing cohort of all students in vocational education and training. It is expected that shorter duration apprenticeships and traineeships will dominate longer duration ones in the near future.

Note: NCVET consultancy work, commissioned by the former Australian National Training Authority. See page 57 for more information on NCVET consultancy work.

Factors pertaining to quality outcomes of shorter duration apprenticeships and traineeships can be found on NCVET's website
 <<http://www.ncvet.edu.au/publications/1571.html>>

Getting the job done: How employers use and value accredited training leading to a qualification

Ray Townsend, Peter Waterhouse, Marg Malloch

How employers perceive, use and value vocational education and training (VET) qualifications is an important and complex issue. The views of 14 employers spanning eight industries are examined in this report.

Key messages

- Generally, qualifications are viewed by employers as serving two purposes: as a 'gate-keeping' mechanism at point of recruitment of new employees and as a development tool, providing a career pathway for existing employees.
- Compliance with external regulations and/or standards emerges as a key motivator for acceptance of formal qualifications by employers.
- Different interpretations of what is meant by the terms 'qualifications', 'competency' and 'work-related learning' influence the value which individual employers place on them. Training providers may also have a different understanding of these terms.
- An innovative and responsive partnership between training providers and employers is more likely to make employers view VET qualifications positively.

Getting the job done: How employers use and value accredited training leading to a qualification can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1578.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

The place of recognised qualifications in the outcomes of training

Lee Ridoutt, Kevin Hummel, Ralph Dutneal, Chris Selby Smith

The purpose of this study was to identify employers' perceptions of the relationship between the competency requirements of particular jobs and formal qualifications.

Key messages

- Employers do not significantly value qualifications in the same way as the vocational education and training sector. The approach taken to 'qualifications' by enterprise managers is generally to seek recognition only of a small number of competencies, not a whole Australian Qualifications Framework qualification. However, this point of view varies significantly in relation to a number of variables, including the job under consideration, and types of competencies being contemplated.
- The main types of competencies that employers target for recognition through part qualifications in the form of statements of attainment include: competencies associated with specific licences; permits and tickets conferred by non-training bodies; competencies associated with occupational health and safety; and competencies associated with training and assessment.

The place of recognised qualifications in the outcomes of training can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1569.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Qualifications use for recruitment in the Australian labour market

Jack Keating, Tanya Nicholas, John Polesel, Jocelyn Watson

The use of qualifications by employers is poorly understood and documented. This study explored how employers use qualifications in their recruiting processes.

Key messages

- The study found that about half of the 359 employers surveyed used qualifications as a screening mechanism and minimal requirement in their selection processes, while a quarter used them as a sorting or ranking mechanism. Employers valued qualifications as a signal of greater potential for further learning and skills acquisition.
- As a signal of immediate competence, employers placed a high priority on previous work experience and experience in their industry. Employers also considered personal qualities in their recruitment decisions.
- These uses of qualifications by employers do not apply across the board to all positions within the enterprise. They apply more to professional, managerial and clerical employees. Employers typically rely on networks and local contacts and work experience for operator level and technical trades positions. The growth of casual employment has not altered these behaviours.
- The detailed results suggest that qualifications are embedded in employers' recruitment decisions. However, there is room to build stronger currency of vocational education and training (VET) qualifications by linking them with industry and work experience to reflect the behaviours and experiences that are most valued by employers.

Qualifications use for recruitment in the Australian labour market
can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1627.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

What it's worth: Establishing the value of vocational qualifications to employers

Mark Cully

This research starts from the premise that the value of qualifications to employers is what they are prepared to pay for them in the labour market.

Key messages

- There are clear differences in the way employers value the importance of qualifications for different categories of worker. Employers consider formal qualifications as important or essential for management, professional and trades/technical operations, less so in the clerical, sales and service, and plant and machine operator occupations, and virtually non-existent in labour and related occupations.
- While employers may use qualifications in the selection process as a signal of competence, direct industry experience and evidence of personal qualities are often rated higher and more valuable.
- Although qualifications are a less important element in the recruitment process than other factors, it is clear that those with higher-level qualifications have superior labour market outcomes.
- Those with non-school qualifications (those issued by registered training providers and higher education providers) are more likely to be employed on a full-time basis, although much is dependent on the level of qualification—indicated by individuals with degrees or higher having the best employment outcomes.
- In terms of earnings, there are considerable gains for degree and diploma holders, as well as those who have completed an Australian Qualifications Framework (AQF) certificate level III/IV qualification. High school Year 12 levels appear to matter more than lower-level (certificate I and II) vocational qualifications.

What it's worth: Establishing the value of vocational qualifications to employers can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1589.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

What value do employers give to qualifications?

Lee Ridoutt, Chris Selby Smith, Kevin Hummel, Christina Cheang

The value of qualifications to employers raises many questions. This report examines how Australian employers value and use qualifications and their various categories in the day-to-day running of their businesses.

Key messages

- Employers value qualifications mainly for higher-level occupations and for recruiting new employees about whom they have otherwise limited information. Qualifications are also used to manage regulatory compliance risk, such as occupational health and safety. Employers see qualifications as less important in managing business risks, such as potential loss of profit, believing these risks require forms of control other than skills development/qualifications.
- The particular industry sector does not seem to influence the way in which employers value and use qualifications, although the size of the enterprise does. Employers of larger enterprises tend to support a more 'comprehensive approach' to worker qualifications, while small business owners tend to be more discriminating when assigning worth to qualifications.
- The type of enterprise also influences employer perspectives on qualifications. Enterprises undergoing structural and other change or those involved in highly innovative activities are less supportive of qualifications in their workers.

What value do employers give to qualifications?
can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1553.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Skilling a seasonal workforce: A way forward for rural regions

Sue Kilpatrick, Helen Bound

Seasonal work is crucial for the many rural regions reliant on seasonal industries such as agriculture, forestry, aquaculture and tourism. This report examines the diverse nature of the seasonal workforce in two locations and the approaches used in their training.

Key messages

- As a group, seasonal workers tend to fall through the formal training net.
- Collaborative arrangements among regional stakeholders, such as local government, development bodies, industry bodies, major employers, recruitment and labour market agencies, training providers and unions have the potential to put in place programs and initiatives to address the learning and training needs of seasonal workers, their supervisors and employers.
- Training must be integrated into industry and community processes. Planning needs to take place at a regional level to ensure that training is beneficial to and accepted by seasonal workers and employers. Only then can we be reasonably confident that those at the margins of the 'standard' workforce, including seasonal workers, will have easy access to the formal Australian vocational education and training (VET) system.
- A collaborative, integrated regional approach to training must be matched by an integrated approach in education and training, employment, recruitment, community development and industry policies.

*Skilling a seasonal workforce: A way forward
for rural regions*
can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1567.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Training skilled workers: Lessons from the oil and gas industry

Jane Figgis, Alf Standen

Global industries such as the oil and gas industry understand the value of training and do not need to be convinced to conduct training or to train more. Lack of engagement with the formal vocational education and training (VET) sector is not necessarily a sign that these industries disdain training; the oil and gas industry spends many millions of dollars annually on training. Lack of engagement with the sector, however, may be a signal the sector might reflect on.

Key messages

- Workers' attitudes are key in developing a high performance/high skill workforce. Commitment to safety, a willingness to question and to learn are attitudes required to be recruited to the oil and gas industry. They are non-negotiable. VET providers working with candidates at entry level need to understand that developing appropriate attitudes in students is as important as their acquiring specialist skill and knowledge. This adds a considerable challenge to the training task.
- Competencies are more important than qualifications in the oil and gas industry because, when it comes to assigning work, competencies are the only currency. Qualifications on their own are insufficiently informative—a view shared by employees and employers.
- Skilled workers are different from entry-level learners in that, on the whole, they are far more confident learners and, in this industry, thrive on challenge. In a workplace that affords them the opportunities, they effectively take charge of their own learning program; they act like the autonomous professionals they are. This is a reminder that VET produces professional workers in the true sense of the word.
- Advanced skill learners reported requiring training with 'bite'. This means training where, to quote Dewey, people learn by doing, 'but the doing is of such a nature as to demand thinking'. This requires thoughtful instructional design where the trainer perceptively judges the degree of challenge ('bite') in light of each worker's capacity to meet the challenge.
- There is a market for assessment and recognition of competencies. The 'safety case' regime, which identifies major risks in a facility and outlines ways of avoiding them or dealing with them should they occur, is now in effect in the oil and gas industry. This means that evidence of workers' skill and applicable knowledge must effectively meet a legal standard, which requires expert assessment of competencies. The VET 'recognition system' (where recognition of competence is formally granted) is more important than the traditional TAFE 'training delivery system' in this industry, and is in urgent need of attention.
- The role of time in learning needs re-thinking. Extended and repeated experience appears to be a critical element in acquiring advanced skill. No one is suggesting a return to 'time-serving', but we need to better understand whether (or where) repeated practice does not stall progress but actually opens out new horizons and expertise.
- Developing advanced skills in global industries has implications for Australia's immigration policies. Experiential learning to master leading-edge skill requires the learner to work alongside an expert. In global industries such expertise often resides outside Australia, yet it is exceedingly difficult to obtain permission to import experts to work here for specified periods, even though a demonstrable outcome is the growth of local capability.
- Enterprises ought to conceptualise the workplace as a learning environment as well as the site where products/services are created. Learning environments are characterised by the tasks people are given, the resources at their disposal to complete the tasks, and the support offered. Experience suggests that it is of real benefit for employers to envisage their workplaces in terms of this trio of learning 'affordances' and observe the quality of the learning that emerges

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Training skilled workers: Lessons from the oil and gas industry can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1597.html>>

Workplace training practices in the residential aged care sector

Robin Booth, Sue Roy, Helen Jenkins, Berwyn Clayton, Sarah Sutcliffe

Australia's population is ageing and is projected to increase to be about one-fifth of the general population in the next 30 years. Aged care workers have therefore a vital role to play in ensuring that the needs of the aged are met. Recognition of skills and the training needs of this group of workers are examined through an analysis of the aged care industry and on-site interviews with a range of personnel, including management, the workers themselves, and members of relevant registered training organisations.

Key messages

- Managers of residential aged care facilities appreciate that effective skills recognition and training for its personal care workers is crucial to helping them meet aged care facility standards. Such training will enable staff to more easily understand the requirements of their jobs and the importance of accurate record-keeping.
- Personal care workers have a poor uptake rate of recognition of prior learning even amongst workers with substantial experience in the industry. They show a preference for undertaking the training instead, and learning the theory behind their practices. Their managers also favour training over existing skills recognition as a vehicle for workplace culture change.
- Where it is agreed that recognition of prior learning is a viable option, more realistic strategies are required that rely more on practical demonstration of their skills and knowledge and less on paper-based evidence.
- Registered training organisations need to ensure that training supports the aged care facility's goal, is delivered on site where possible, has theory embedded with practice, provides additional learner support and is structured and paced to the needs of the particular groups of workers.
- Associated features of good practice in training from the case studies include increased collaboration between aged care facilities (to achieve critical mass of numbers, for example) and easier access to training information for managers.

Workplace training practices in the residential aged care sector
can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1598.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Enterprises' commitment to nationally recognised training for existing workers

Erica Smith, Richard Pickersgill, Andy Smith, Peter Rushbrook

Enterprises use nationally recognised training for a variety of reasons, depending on individual situations and contexts. This report examines how and why enterprises make decisions about nationally recognised training.

Key messages

- Nationally recognised training has improved the distribution of training within companies, as it tends to be delivered to lower-level workers for whom this may be their first opportunity to access qualifications. It may also increase the incidence of non-accredited training for lower-level workers and improve access to training for part-time and casual workers. In this respect, the implementation of training packages has had a very positive effect.
- The industry-endorsed competency standards associated with nationally recognised training are also increasingly being used in human resource procedures and practices, such as performance management systems and the preparation of job descriptions. In some enterprises, the standards are fully integrated into human resource management systems.
- Because the recognised training system is complex, a company 'evangelist' is required. The evangelist should have previous knowledge and experience of nationally recognised training. Their job is to persuade management to accept this form of training. This role is different from a more general 'training champion'. If the evangelist leaves before nationally recognised training is fully embedded in the enterprise, then this form of training may disappear.
- A number of the regulatory procedures of state accreditation bodies cause concern among enterprises seeking to be registered training organisations.
- There may be an argument for governments to use funding to kick-start nationally recognised training in enterprises. While government funding is a critical factor in the initial implementation of nationally recognised training for existing workers, it becomes less critical when this training is embedded within enterprises and the benefits have become apparent.
- The ability to customise nationally recognised training is more commonly used by enterprises which are registered training organisations than by enterprises which purchase such training. High levels of customisation may reduce the portability of the skills gained and have the potential to affect the integrity of the qualifications.
- There is a need for increased promotion of nationally recognised training throughout Australia. Criticism by enterprises sometimes seemed to result from a lack of understanding or knowledge about the training packages, rather than deficiencies in the packages themselves.

Enterprises' commitment to nationally recognised training for existing workers can be found on NCVER's website
<http://www.ncver.edu.au/publications/1550.html>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Students and individuals

Technical report: Survey methodological options for a) non-completers of VET and b) apprentices and trainees over time

Stephen Lamb

Current destination surveys of vocational education and training (VET) students in Australia tend to focus on course and module completers.¹ There is no regular national follow-up of students who drop out of VET programs without recording any educational achievement. Furthermore, there is little follow-up information on apprentices and trainees and where they end up in the longer term.

Key messages

- Finding out about students who drop out of VET with no recorded achievement would be useful in developing strategies to reduce this occurrence. Considering all the methodological options, the author suggests a two-pronged approach, whereby administrative data on student enrolments are analysed regularly to indicate the size and broad dimension of student non-completions. A survey of non-completers is also undertaken every three years to determine the reasons for, and behavioural factors leading to withdrawal and non-completion.
- A longitudinal survey of apprentices and trainees is also useful for providing data to help us to better understand the long-term impact of a contracted training approach on career paths and earnings. The author recommends the Canadian National Apprenticed Trades Survey as providing a good working model for such an approach. The survey should be based on a sample of completers and non-completers of apprenticeship and traineeship programs determined through administrative data analysis.

*Technical report: Survey methodological options for
a) non-completers of VET and b) apprentices and trainees
over time
can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1651.html>>*

¹ Those who successfully complete all or part of a course and then leave the VET system.

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Why do students leave? Leaving vocational education and training with no recorded achievement

Victor Callan

It is important to understand the reasons why some students who enrol in vocational education and training (VET) courses leave without completing their course. This report investigates the characteristics and motivations of these students.

Key messages

- Students who are 'true' non-completers of any subject are more likely to be unemployed and to have a Year 10 or less level of previous education. Vocational education and training institutions need to offer greater support to these students in particular.
- The major reasons for leaving were the perceived poor quality of the teaching staff, the content of the course not matching students' needs and the course not being able to fit into the demands of their job.
- There needs to be greater segmentation in how courses are marketed, promoted, delivered and assessed, especially distinguishing between students who enrol for 'interest' as opposed to students who want the qualification, or those who enrol to gain a specific skill rather than a full qualification.
- VET providers and the national students collection need to introduce more effective data-tracking mechanisms to describe the movements of their students in and out of institutions, and across institutions and qualifications. Until then, we will be unsure of the true levels of students who leave with no recorded achievement in the VET sector.

Why do students leave? Leaving vocational education and training with no recorded achievement can be found on NCVER's website
 <<http://www.ncver.edu.au/publications/1566.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Enhancing career development: The role of community-based career guidance for disengaged adults

Francesca Beddie, Barb Lorey, Barbara Pamphilon

This project investigates learning and career development services for adults, particularly those who are in some way disengaged from the labour market or educational systems.

Key messages

- Most adults do not understand that, in the contemporary world of work, it is important to develop the skills to be able to manage one's own career and life pathways.
- A strong culture of career development needs to be built in Australia, one which has a focus on all age groups and which encourages older adults to consider career and learning options before a crisis hits.
- When made aware of what career guidance services can offer, many older adults who are disengaged from the labour force recognise their value. This indicates a potential demand for a career guidance service which is conducted face-to-face in a community setting by people with appropriate qualifications in career guidance and adult learning. Those offering advice and guidance need to be familiar with local labour market conditions and the variety of formal and informal learning options available in the community.
- Such career guidance and advice is best when it is community-based, affordable and impartial; that is, when it is one step removed from agencies offering other assistance, such as welfare, job matching or training.
- Timely personal intervention in career decisions is needed, as most adults disengaged from the labour force are not likely to be proactive in seeking career guidance. In this context career advice or guidance should be offered as early as possible to enable people to make informed decisions about their options.
- Local conditions will determine how an impartial, community-based career guidance service operates. To be sustainable, they will usually require a partnership funding model, with contributions from various public agencies and some fee-for-service revenue. In addition, providers will need to develop their counselling skills and build their capacity in terms of relationship building, negotiation, policy development, marketing, financial management and evaluation.

Enhancing career development: The role of community-based career guidance for disengaged adults can be found on NCVET's website
<http://www.ncver.edu.au/publications/1599.html>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

From school to work: The role of traineeships

A Michael Dockery, Paul Koshy, Thorsten Stromback

Since 1995 traineeships at certificates I and II level have become an increasingly important pathway in young people's transition from school to work. Around 15% of the cohort of school leavers analysed in this study participated in a traineeship at some time between the ages of 15 and 21 years. The aim of the study was to compare the effect of participation in traineeships on labour market outcomes for young people up to the age of 21 years with those who did not enter into any formal post-school education and training in the immediate post-school years (that is, the control group).

Key messages

- Participation in traineeships was found to have positive effects on both employment prospects and wages. At the age of 21 years, participants in traineeships were less likely to be experiencing unemployment by comparison with the school leaver control group. Moreover, the wages of those who had undertaken traineeships were about 6% higher at the age of 21 years. At the age of 19 years, however, their wages were initially lower compared with the control group of school leavers.
- On average, participation in a traineeship was found to result in greater initial satisfaction with both the type of work undertaken and future career prospects; however, these positive effects appear to have largely dissipated by age 21 years.
- The results suggest strongly the need to take into account longer, as well as shorter-term outcomes when determining the success of traineeships in young people's school-to-work transitions.

From school to work: The role of traineeships
can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1631.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

How workplace experiences while at school affect career pathways

Erica Smith, Annette Green

This report describes and analyses how work activities undertaken by students while at school affect their post-school pathways into work and between work and study.

Key messages

- Workplace engagement while at school provides many benefits, including the development of employability skills, confirmation of skills and interests, specific experiences in preferred jobs, which can confirm or deter entrance to that career, and the potential for gaining permanent employment at the same workplace, or through contacts made at work.
- The broader the range of workplace experiences, the more options appear to open up for young people.
- Students participating in school-based New Apprenticeships tend not to undertake other forms of workplace experience. These apprenticeships do, however, lead to positive post-school employment options in the areas with which they are associated.
- Part-time jobs while at school are important, less as career pathways than as earning opportunities and a means of supporting other study and career options.
- As part-time jobs often lead to post-school employment in the same industry, industries currently experiencing difficulties in attracting labour should consider making part-time jobs available for students where possible, and where legislative requirements allow.
- An adaptable model is suggested, which describes the links between school workplace experiences and post-school activities. However, it is important to highlight that workplace experiences are only one group of factors affecting young people's decisions about post-school options and subsequent careers. Workplace experiences are of more importance to some young people than to others.

How workplace experiences while at school affect career pathways can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1606.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

What makes vocational training programs in schools work? A study of New South Wales and Queensland schools

Janet Porter

This project investigated the views of various stakeholder groups about school-based vocational education and training (VET) programs (specifically, VET in Schools programs) in five New South Wales and five Queensland schools during the period 2000–02.

Key messages

- The schools and communities involved in this study saw positive results from their school-based VET programs, although the various stakeholders emphasised different outcomes.
 - Governments, schools and training organisations emphasised the attainment of specific skills and qualifications.
 - Students and most employers emphasised the development of personal qualities and generic work skills.
- Traditional pathways from school remain the norm and are influenced by the structure of the school curriculum.
 - Those students taking all or mainly general education subjects anticipated going on to full-time study.
 - Those students taking all or mainly VET subjects aspired to full-time apprenticeships or full-time work.
- VET courses with a structured workplace component were highly regarded by students, coordinators, trainers and employers.
 - For employers, work placement allowed students to achieve a degree of work readiness.
 - Students were able to practise work skills, experience real job application processes and experiment with different career pathways.
- The author's view is that long-term and adequate funding, restructuring of the school timetable and greater integration of community resources have the potential to generate increased efficiency in the delivery of school-based VET programs and enable multiple post-school pathways. However, cultural change within schools, as well as changed perceptions of the status of vocational education and training, is needed.

What makes vocational training programs in schools work? A study of New South Wales and Queensland schools can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1629.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Aspects of training that meet Indigenous Australians' aspirations: A systematic review of research

Cyde Miller

This systematic review of research provides evidence to enable vocational education and training (VET) policy-makers and practitioners to act and move forward in developing training that meets the aspirations and needs of Indigenous¹ Australians.

Key messages

- Through a systematic review of existing research, clear evidence has been found that seven key factors lead to positive and improved outcomes for Indigenous Australians as a result of vocational education and training. These are:
 - community ownership and involvement
 - the incorporation of Indigenous identities, cultures, knowledge and values
 - the establishment of 'true' partnerships
 - flexibility in course design, content and delivery
 - quality staff and committed advocacy
 - extensive student support services
 - appropriate funding that allows for sustainability.
- Training built on all seven of these factors will lead to outcomes from VET that Indigenous Australians aspire to, including skills for self-development, employment, community development and self-determination. The absence of any one of these will lessen the likelihood of positive outcomes.
- This set of critical factors must be observed, regardless of context, time and place. Indigenous communities and cultures in Australia are diverse; consequently there can be no single approach to providing education and training. The high level of diversity has been one of the challenges of this systematic review, but this has also enabled the generation of a set of overarching criteria for success in any and all circumstances.
- These seven factors should form the basis for program planning, design and evaluation. They are already linked with the charter developed by TAFE Directors Australia for Indigenous education and training, which has been designed to guide future activity in technical and further education (TAFE) institutes across the country.

Aspects of training that meet Indigenous Australians' aspirations: A systematic review of research can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1625.html>>

¹ The term 'Indigenous' refers to Australian Aboriginal and Torres Strait Islander people, unless otherwise specified. Other location-specific terms used include Koori (Victoria), Maori (New Zealand) and First Nations (Canada).

Note: The above publication was produced through the Systematic Review of Research Program, see page 57 for details.

Learning through Indigenous business: The role of vocational education and training in Indigenous enterprise and community development

Kate Flamsteed, Barry Golding

Many Indigenous Australians are involved in enterprises and businesses. These enterprises offer an ideal learning context for Indigenous Australians, although facilitating this learning presents a number of challenges, particularly in remote regions.

Key messages

- Support for learning in Indigenous business must be sensitive to location. Remote areas offer a significant challenge.
- Learning through Indigenous business is most effective where learning is tied to earning; the content is customised; it is parallel to real work; and it is applied through employment in commercial businesses.
- Businesses operated primarily for social and community benefits are not ideal training grounds for Indigenous people who wish to learn how to run a commercial business.

Learning through Indigenous business: The role of vocational education and training in Indigenous enterprise and community development can be found on NCVER's website <<http://www.ncver.edu.au/publications/1572.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

The mature-aged and skill development activities: A systematic review of research

Peter Thomson, Susan Dawe, Alison Anlezark, Kaye Bowman

Many older Australians are upskilling or retraining to improve their employment opportunities. This systematic review of research relates to the relationship between skill development activities for mature-aged workers and labour market outcomes and is the first systematic review of research undertaken in the vocational education and training (VET) sector.

Key messages

- Through a systematic review of existing research, evidence has been found that skill development activities lead to improved labour market outcomes for some mature-aged people (in terms of higher employment rates or wages), especially for those who were previously unemployed, and for women.
- Evidence has been found that labour-market-related gains are greater for the mature-aged who complete higher-level qualifications. Gaining lower-level qualifications or incomplete qualifications may have a negative effect on labour-market-related gains for some older people.
- The specifics of which skill development activities work, when, and for which groups of mature-aged are sparse in this systematic review, as the included studies mostly focused on the level of 'qualification' acquired, or simply referred to 'training' as the skill development activity.
- Three main factors emerged as barriers to skills development of mature-aged people while providing ideas for facilitating this development. The factors leading to improved attachment to the labour market or improved productivity are:
 - attitudes and behaviours of employers and employees towards older people working and to learning new skills and knowledge
 - individuals' personal circumstances and attitude to learning
 - public policy beyond vocational education and training, such as some aspects of superannuation and retirement income policies.
- Through this systematic review, the need for further research was revealed, especially to identify which skill development activities work, when, and for which groups of mature-aged. Evidence from such research would complement the large-scale data analyses already undertaken which have yielded the above results. It may also offer supporting evidence to promote lifelong education and training.
- It is proposed that this systematic review will be updated over the next 12 months.

*The mature-aged and skill development activities:
A systematic review of research
can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1574.html>>*

Note: NCVET consultancy work, commissioned by the former Australian National Training Authority. See page 57 for more information on NCVET consultancy work.

People with a disability in vocational education and training: A statistical compendium

Toni Cavallaro, Paul Foley, John Saunders, Kaye Bowman

Statistical information on people with disabilities is vital for policy-makers, vocational education and training (VET) providers and other stakeholders in the sector to ensure that the vocational education and training needs of this group of people are effectively met.

Key messages

- Of the five recognised equity groups in vocational education and training—women, Indigenous people, people with a disability, people in regional/rural areas and people from non-English speaking backgrounds—people with a disability, as a whole, have the lowest levels of educational achievement and employment outcomes from VET.
- This compendium provides much new information on people with a disability as a whole, as well as for subgroups with different types of disability.
- As a whole, students with a disability in VET have prior schooling education levels strikingly far below those for all other VET students. About 55% of all people with a disability had left school at or before the end of Year 10, compared with 40% for all VET students. This suggests that developing educational pathways before Year 10 for people with a disability is important as part of an early-intervention approach.
- As a whole, people with a disability are less likely to undertake/attain higher-level Australian Qualifications Framework qualifications (such as diplomas and certificate IIIs) and are more likely to undertake/achieve certificate I or II qualifications; their subject completion rates are lower than those of students with no declared disability.
- However, type of disability does matter: educational achievements and outcomes from VET vary significantly between disability groups, suggesting that different improvement strategies may be necessary for different groups of people with a disability in VET.
- Of all disability types, VET students with hearing or vision disabilities have the highest probability of passing assessed subjects, and the highest employment outcomes, whereas VET students with intellectual or learning disabilities have the lowest, and well below the average level for all VET students with a disability. Those with about the average levels include people with physical and medical disabilities. Those with just below the average include people with a mental illness and acquired brain impairments.

People with a disability in vocational education and training: A statistical compendium can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1577.html>>

Note: The above publication was produced through the National Vocational Education and Training Statistical Program, see page 57 for details.

Vocational education and training provision and recidivism in Queensland correctional institutions

Victor Callan, John Gardner

The relationship between prisoners' participation in education programs and reduction in the rates of recidivism has been proposed. This report examines links between the participation of prisoners in the vocational education and training (VET) programs in Queensland prisons and their likelihood of returning to prison.

Key messages

- In Queensland, about one in five prisoners is participating in some form of VET program before release. Being involved in a vocational education program before initial release is associated with a decrease in the chance of offenders returning to custody. Ignoring the potential role of all other factors, offenders who have been involved in VET programs before initial release have a recidivism rate of 23%, compared with 32% for offenders who do not participate in VET programs.
- Persistent values and cultures in correctional institutions mean many continue to give vocational education and training a low priority. Evidence in this and previous research concerned with the barriers to the provision of education and vocational training shows that Australian correctional systems are still grappling with how to more fully integrate the management of offenders. Nevertheless, many of the key elements needed to develop this more integrated strategy are already in place, such as flexible arrangements within centres that assist offenders to attend VET programs and good levels of cooperation between corrections staff and VET trainers.
- There is a need for the ongoing development, introduction and enhancement of a wide range of psychological, educational and vocational training programs in prisons. These programs need to target the needs of specific prisoner groups, to provide them with opportunities, to address their personal, social and educational disadvantages, and to help reduce recidivism.

Vocational education and training provision and recidivism in Queensland correctional institutions can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1592.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Who's missing out? Access and equity in vocational education and training

Gillian Considine, Ian Watson, Richard Hall

This report explores some key issues in relation to access and equity in vocational education and training (VET) in Australia.

Key messages

- Effective research into access and equity in vocational education and training requires a methodology that sheds light on both who is missing out on VET and why they are missing out.
- Specific sub-groups of young people systematically miss out on VET; structural barriers also stand in their way. Young people most likely to miss out on VET in the late 1990s were those with disabilities, those still living at home, those from single-parent families, and those from families with a history of parental unemployment.
- Patterns of disadvantage in accessing post-secondary education and training operate quite differently for VET by comparison with university. The VET system has made substantial gains in improving access and equity over the last 20 years, while access and equity with regard to university has deteriorated.
- The notion of disadvantage which has informed VET policy-making needs to be reconceptualised. There are major shortcomings in viewing disadvantage in terms of abstract 'client groups'. Target groups for VET equity initiatives need to be specific groups of individuals who face multiple disadvantages.
- Striking a balance between the pursuit of social and economic outcomes is essential for the success of community-based initiatives designed to address access and equity in VET. Indeed, for individuals who face multiple disadvantages in accessing VET, the pursuit of social outcomes should take precedence, and be recognised as an important stepping stone to the achievement of economic outcomes.
- A number of community-based initiatives are improving access and equity for groups typically excluded from the VET system. These initiatives seek to overcome the barriers associated with the individual characteristics of people excluded from VET and the structural barriers associated with the institutional setting.

Who's missing out? Access and equity in vocational education and training can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1611.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

Teaching and learning

Contradicting the stereotype: Case studies of success despite literacy difficulties

Peter Waterhouse, Crina Virgona

This study set out to investigate how successful people with limited literacy have achieved and sustained employability.

Key messages

- Based on ten case histories, the study reveals that individuals achieve success in their lives, despite their literacy difficulties. However, the strategies adopted often involve some degree of deception, avoidance and dependence. It is not an easy path. Perseverance, networks and technologies emerge as key strategies used by these people, and resilience is identified as a significant personal attribute for success.
- The study reinforces the observation that schools and adult literacy education providers have a relatively narrow interpretation of what counts as success. The lives of the individuals represented in this study show that broader interpretations and multiple pathways to success are possible and needed. A focus on positive capabilities rather than perceived deficits will open up possibilities for learning, personal development and vocational success.

Contradicting the stereotype: Case studies of success despite literacy difficulties can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1590.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Economic returns to education and training for adults with low numeracy skills

Lynne Gleeson

Through analysis of Australian and United States longitudinal data sets, this project discusses the benefits of further training for people with low levels of numeracy.

Key messages

- The project shows that individuals with low numeracy skills are disadvantaged members of the workforce in terms of skill levels; this group is also the least likely to be given opportunities for further training, and generally undertake lower levels of training.
- When they are able to participate in on-the-job training programs, they receive positive and significant benefits, such as higher wages.
- Workers who display higher levels of skills are normally those with longer tenure and more experience.

Economic returns to education and training for adults with low numeracy skills
can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1613.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Integrated approaches to teaching adult literacy in Australia: A snapshot of practice in community services

Rosa McKenna, Lynne Fitzpatrick

The aim of this project was to examine and document the 'integrated approach' to delivering language, literacy and numeracy skills using the community services industry as a case study. This industry recognises these skills as crucial.

Key messages

- The extent to which language, literacy and numeracy is delivered successfully in an integrated approach is dependent on the ability of facilitators and assessors to interpret vocational training packages and to develop appropriate teaching and learning strategies.
- Practitioners experienced some challenges with understanding training packages and used different language, literacy and numeracy frameworks and support materials. However, they were able to demonstrate great flexibility in response to contextualising training to the community services industry and applied a remarkable consistency of instructional strategies to enhance the language, literacy and numeracy skills of students.
- Restrictive funding models leave registered training organisations to make commercial decisions about levels of support required by learners, affecting the time and resources available for practitioners to explicitly address the language, literacy and numeracy needs of students.

Integrated approaches to teaching adult literacy in Australia: A snapshot of practice in community services can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1601.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Integrating literacies: Using partnerships to build literacy capabilities in communities

Rosie Wickert, Jenny McGuirk

This report seeks to identify examples of successful integration of literacy learning in community and workplace settings.

Key messages

- More can be done in Australia to build the literacy capabilities of adults by integrating literacy learning into activities beyond formal education and training programs.
- Literacy workers can act as mentors, brokers and facilitators supporting social and community workers to embed literacy development into their policy and strategies.
- As in successful workplace literacy programs, educators must be open to the knowledge and experiences of other sectors regarding effective or appropriate action or intervention. Collaboration is a two-way learning experience. Vocational education and training providers could improve collaboration across sectors to achieve effective and sustainable responses to literacy challenges.
- A 'simpler' message about literacies is required to build understanding and allow workers in other sectors to act with confidence in relation to clients with literacy needs.
- A better understanding of effective localised approaches appropriate for different populations is also required to assist policy and funding decisions.
- Short-term ad hoc funding provides no real incentive and limits change possibilities. Innovation is easier to encourage when there are funding incentives and people understand and can relate to the overall strategic objectives and desired outcomes, as exemplified by the Workplace English Language and Literacy (WELL) Programme.

Integrating literacies: Using partnerships to build literacy capabilities in communities
can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1607.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Learning numeracy on the job: A case study of chemical handling and spraying

Gail FitzSimons, Susan Mlcek, Oksana Hull, Claire Wright

This research illustrates the challenges faced by industries using chemical handling and spraying as they attempt to ensure that workers have the appropriate numeracy skills.

Key messages

- The 'numeracy' task of preparing and applying chemicals requires that the person responsible takes a complex set of variables into account. Although chemical sprayers and handlers may have undergone specific training and/or learned the required mathematical skills at school, they still require further on-the-job mentoring and support.
- The worksite influences both the type of numeracy skills needed, as well as how they are deployed. In other words, the task, the history of the task (for example, how previous records were taken), and the equipment used determine the sorts of calculations people must be able to make. Once these are learned, they have to be embedded through practice.
- Workplace numeracy education cannot be approached from a traditional 'school mathematics' mentality.
- Workplace numeracy requires training that reflects workplace practices and incorporates authentic problem-solving in real or simulated tasks in small groups with shared responsibilities. It also needs to incorporate the development of metacognitive skills, such as critical thinking, learning to learn, planning and problem-solving.

Learning numeracy on the job: A case study of chemical handling and spraying can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1609.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Literacy, numeracy and alternative dispute resolution

J Joy Cumming, Janice M Wilson

The difficulties experienced by users of adult dispute resolution in Australia are investigated in this report and processes that lead to difficulties are identified. The report offers suggestions for professional development and specific strategies for mediators to assist those who have limited literacy and numeracy.

Key messages

- This study demonstrates that limited literacy and numeracy can be a barrier to fair participation in alternative dispute resolution processes, despite its being promoted as a fair and equitable process for all. It is likely therefore that participants in alternative dispute resolution who have limited literacy and numeracy are not achieving fair outcomes from these processes.
- Application forms for participation in the alternative dispute resolution process and some associated documentation require fluency at a level equal to at least a level IV certificate in the Australian Qualifications Framework.
- It is possible that individuals who have limited literacy and numeracy are not accessing alternative dispute resolution processes due to the literacy and numeracy demands of the forms and guidelines, and a general reluctance to engage with the law.
- Alternative dispute resolution practitioners need awareness training to enable them to identify potential literacy and numeracy difficulties in clients, especially as many adults will not willingly disclose such difficulties due to public embarrassment. To date this has not been a specific focus.

Literacy, numeracy and alternative dispute resolution
can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1605.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Reframe, rename, revitalise: Future directions for the language, literacy and numeracy National Reporting System

Kate Perkins

The National Reporting System (NRS) was developed in the 1980s to report the outcomes of English language, literacy and numeracy provision in Australia's vocational education and training (VET) and adult and community (ACE) sectors, and in labour market programs. However, since its introduction it has been used more as a reporting tool, for setting standards, and for curriculum and assessment purposes. Through interviews and a literature review, this publication offers a current assessment of the value of the National Reporting System.

Key messages

- The National Reporting System for adult English language, literacy and numeracy has influenced the content and emphasis of literacy and numeracy curricula nationally, and played a role in the literacy and numeracy aspects of training packages.
 - Those interviewed for this study all agreed it was time for the NRS to be reviewed.
 - It was felt that a review would provide an opportunity to:
 - streamline the conceptual framework
 - develop a set of user-friendly support materials
- revise the rules for reporting within Commonwealth programs
 - consider how best to provide adequate and ongoing professional development, with an opportunity to build national ownership of outcomes
 - further explore ideas for broader applications.

Reframe, rename, revitalise: Future directions for the language, literacy and numeracy National Reporting System can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1579.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Using information and communication technologies in adult literacy education: New practices, new challenges

Ilana Snyder, Anne Jones, Joseph Lo Bianco

Using a case study approach, this report examines the interaction between new and emerging digital technologies, adult learning and literacies for both educators and learners.

Key messages

- The findings from this study suggest grounds for rethinking how to further adult literacy education and how it is labelled.
- The study illustrates that it makes little sense to continue to think and talk about literacy practices and the use of information and communication technologies as if they were separate activities: literacy education is equally and simultaneously digital literacy education.
- Adult literacy educators need to understand the new reality of contemporary communication so that they can produce learners who are prepared to contribute actively, critically and responsibly to a changing society that is mediated by the use of information and communication technologies.
- The case study analysis revealed that adult literacy learners need and want a broader technology curriculum than is currently available to them; in particular, they require information and communication technology 'lifeskills' such as online banking and internet searching information. Many adult literacy educators possess the skills and knowledge that their learners need. However, traditional institutionalised understandings of literacy often prevent the development of learning environments and delivery strategies to provide coherent integrated programs that encompass all literacies—old and new. Adult literacy programs that incorporate digital literacies need to take account of settings, contexts and purposes.
- Particular attention is required in the adult and community education sector, which is relatively poorly funded and therefore unlikely to be able to respond to the challenge of integrating the use of information and communication technologies in a timely and appropriate fashion. A coordinated, centralised assembling of resources for teaching and learning with these technologies would be invaluable.
- Because the term 'literacy' is strongly associated with the world of print, it has come to assume the stigma of failure and inadequacy. We need to rethink not only the work of technology-mediated adult literacy education, but also how it is labelled. 'Communication' could usefully replace the word 'literacy' in adult education programs. The advantage would be to focus attention on how the use of information and communication technologies is never divorced from wider communication practices, while at the same time remove the negative impact of the term 'literacy' and its close association with print.

Using information and communication technologies in adult literacy education: New practices, new challenges can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1608.html>>

Note: The above publication was produced through the National Adult Literacy and Numeracy Research Program, see page 57 for details.

Trading places: The impact and outcomes of market reform in vocational education and training

Damon Anderson

This study is an evaluation, from a national perspective, of the impact and outcomes of market reform in vocational education and training (VET), particularly competitive tendering for government funds by all VET providers and 'user choice', where employers and their apprentices and trainees are able to choose their training provider and course elements. The introduction of market mechanisms into VET funding from the early 1990s has triggered complex chains of interactive effects that are often difficult to interpret. Nonetheless, the research findings highlight, as at 2001, a number of general market reform outcomes.

Key messages

- The study identifies several benefits and costs of market-based competition in VET. On balance, the weight of available evidence suggests that, currently, negative rather than positive outcomes predominate.
- Outcomes appear to be positive in relation to choice and diversity, responsiveness (to medium/large enterprises and fee-paying clients), flexibility, and innovation.
- Outcomes appear to be generally negative in relation to efficiency (due largely to high transaction costs and complexity), responsiveness (to small enterprises, local/surrounding communities, and government-subsidised students), quality, and access and equity.
- As a result of market reform, technical and further education (TAFE) institutes and non-TAFE registered training organisations are trading places with respect to income sources, whereby non-TAFE organisations are becoming more heavily dependent on government VET funds, and TAFE institutes are becoming less reliant.
- Assessments by registered training organisations of the global impact of market reform in VET are evenly divided, although a net majority of TAFE institutes and adult and community education (ACE) centres delivered a negative verdict.
- The report argues the need for a more creative and judicious mix of state planning and market forces that serves the needs and interests of all stakeholders and preserves the distinctive character and mission of the public VET sector. It suggests that existing policy arrangements need review, particularly in regard to the impact of market reform on public interest objectives (including community service obligations and public accountability), thin markets (where the number of students undertaking a particular qualification only warrants funding for one or a small number of providers), and the financial viability of TAFE institutes and small registered training organisations.

Trading places: The impact and outcomes of market reform in vocational education and training can be found on NCVET's website
<<http://www.ncver.edu.au/publications/1641.html>>

Note: The above publication was produced through the National Vocational Education and Training Research and Evaluation Program, see page 57 for details.

An aid to systematic reviews of research in vocational education and training in Australia

Alison Anlezark, Susan Dawe, Sarah Hayman

In establishing systematic reviews of research in the vocational education and training (VET) sector, the National Centre for Vocational Education Research (NCVER) is bringing research directly into the decision-making processes at the level of both policy and practice. This report, which accompanies NCVER's first systematic review, documents their eight-step model for this and future systematic reviews of research.

Key messages

- A systematic review of research is a decision-making tool for policy and practice. It is a piece of research in its own right, using explicit and rigorous methods that follow a standard set of stages. These methods identify, critically appraise and synthesise relevant research (both published and unpublished) around a specific research question.
- The review process allows for different studies to be weighted for relevance and quality of findings to answer a given question. The ultimate effect of this is that research can influence a review's conclusion only when based on agreed guidelines, and when the reviewers have confidence in the research.
- In undertaking the first systematic review of research in vocational education and training in Australia on the mature-aged and skill development activities, NCVER was required to also establish a model and infrastructure for future reviews. NCVER's proposed eight-step model is outlined in this report.

*An aid to systematic reviews of research in vocational education and training in Australia can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1575.html>>*

Note: NCVER consultancy work, commissioned by the former Australian National Training Authority. See page 57 for more information on NCVER commissioned work.

Australian Qualifications Framework lower-level qualifications: Pathways to where for young people?

John Stanwick

This report investigates the outcomes from lower-level qualifications (certificates I and II) for young people aged 15 to 24 years. The data analysed were largely derived from two of the national data collections held by the National Centre for Vocational Education Research (NCVER).

The findings indicate that vocational and further study outcomes for young people from certificate I and II qualifications could be described as fair, at best, with some variations to these findings according to age, gender and certificate level.

Key messages

- Young people's rates of completing courses at certificate levels I and II are relatively low. It has been projected that about 33% who enrolled at certificate I level complete a course, with 43% at certificate II level.
- The minority who complete (graduates) receive reasonable employment outcomes in the 15 to 19-years age group, while they were less reasonable for the 20 to 24-years age group. Over a third of all graduates reported no job-related benefits from the course.
- Reasonable proportions of graduates enrolled in further study at a higher level within six months after the course, with about a third of certificate I graduates and 43% of certificate II graduates doing so. Similar proportions of graduates completed a further qualification within 30 months after their initial training (28% and 40% respectively), although not always at a higher level.
- Subjects-only completers, who form the majority of students at both certificate I and II levels, do not receive as good employment outcomes as graduates. Subjects-only completers were also more likely than graduates to report no job-related benefit from the course. Subjects-only completers were less likely than graduates to enrol in further study at a higher level, or to complete an additional qualification.
- Preparatory courses, which form a substantial proportion of enrolments at certificate I level (about 47%), do not have good outcomes either in terms of employment or further study. Preparatory courses may, however, have other short-term benefits, which could lead to employment or further study outcomes at a later date.

*Australian Qualifications Framework:
Pathways to where for young people?*
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Note: The above publication was produced through the NCVER Core Research Program, see page 57 for details.

Lessons and challenges: Vocational education in schools – Research overview

Kate Barnett, Robin Ryan

This report provides an update on research findings and policy directions in relation to vocational education and training (VET) programs in schools between 1997 and mid-2003. It builds on a 1997 general review of research on the topic.

Key messages

- As VET in Schools has evolved, early concerns about its value have been addressed and it has achieved a legitimate place in the school curriculum for senior year students in Years 10, 11 and 12. Earlier research had found that, in many schools, VET programs were of low status and seen as a 'soft' option. However, a major recent study reports a 'sea change' in cultural attitudes within schools, although industry acceptance of these programs remains an issue.
- Research undertaken towards the end of the timeframe considered by this project and focused on short-term outcomes suggests that school VET is helping students to move on to work or to post-school VET at higher qualification levels, and that structured workplace learning is a key mechanism for achieving this. It is of concern, therefore, that the amount of real work experience is diminishing per student in VET in Schools programs.
- While a range of personal and social benefits of school VET programs have been identified by students and their teachers—such as improved student motivation and confidence, and reduced absenteeism from school—the emerging outcomes data suggest that VET in Schools programs apparently have not kept more young people at school. Rather, they have made school more attractive for those students already planning to continue their studies.
- The literature also makes it clear that the practicalities of implementing VET in Schools programs, including the structured workplace learning components, remain major obstacles that are poorly understood by policy-makers and system-level managers.

*Lessons and challenges: Vocational education in schools
– Research overview*
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Sustaining the skill base of technical and further education institutes: TAFE managers' perspectives

Berwyn Clayton, Thea Fisher, Elvie Hughes

The demographic changes in Australia's labour market present challenges for Australia's technical and further (TAFE) institutes. As the current TAFE workforce retires, there is concern that the skill and knowledge base will be undermined unless strategies are implemented to sustain and maintain the skills of TAFE trainers.

Key messages

- Australia's TAFE institutes have an ageing teaching workforce, whose impending departure endangers the institutes' skill base. This is at a time when workplace change demands (from TAFE and the broader vocational education and training [VET] sector) a more highly skilled teaching workforce than ever before. TAFE institutes greatly depend on the vocational competency of their teachers—their technical competency and currency, comprehensive industry know-how, networks and high-level teaching skills—to maintain and build their credibility.
- Retaining, developing and renewing TAFE institutes' organisational capability involves planned recruitment and the retention of key mature teaching staff through appropriate incentives and arrangements. More commitment is needed to targeted training and re-training, as well as to strategies which help share the critical knowledge that is otherwise lost, as highly experienced teachers leave.
- TAFE institutes need to draw more upon similar experiences and processes used in other sectors and organisations to maintain their skill base. Such approaches need to be properly resourced, and supported by funding bodies, policy-makers, TAFE management and teachers.

Sustaining the skill base of technical and further education institutes: TAFE managers' perspectives can be found on NCVET's website
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Unmet student demand for tertiary education

Margaret Giles, Michael McLure, A Michael Dockery

Unmet demand for tertiary education is difficult to define and to estimate. In this report, data from the Australian Bureau of Statistics 2001 Survey of Education, Training and Information Technology are used to shed light on defining and enumerating unmet demand.

Key messages

- Unmet demand occurs when potential students apply for a place at university or in the vocational education and training (VET) sector and their application is unsuccessful. It also occurs when potential students are discouraged from applying because their preferred course was not available, had limited places or was perceived to be highly competitive.
- The report finds that unmet demand at a general level (ability to obtain any place) in 2001 was very low at 16 000 or 1% of total applications, but considerably higher in terms of getting a place in a preferred course at a preferred institution (10% of total applications, or 175 000).
- A potential difficulty with these figures could be that they are understated. This is based on the widely acknowledged understanding that some individuals are not applying for courses because they assume that their applications will be unsuccessful. However, the data do not support that this is the case. That is, the estimates of unmet demand noted above are not understated.

*Unmet student demand for tertiary education
can be found on NCVER's website
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Dimensions of innovation: Some historical perspectives on vocational education and training and innovation in Australia – A discussion paper

Richard Pickersgill

This discussion paper considers the development of a uniquely Australian system of innovation and its relation to the vocational education and training (VET) system. It asserts that the Australian system of innovation fits the pattern of incremental innovation and diffusion of technical knowledge.

Key messages

- Creating knowledge is a *necessary* condition for innovation to occur; however, the creation of knowledge is not a *sufficient* condition for innovation to occur. In practice, innovation comes from complex interactions between many individuals, organisations and environmental factors rather than being a straight line from new knowledge to a new product. These complex interactions are the result of the particular historical experiences which shape individual national systems of innovation.
- The Australian system of innovation fits the pattern of gradual innovation and diffusion of technical knowledge. Most innovation occurs as a result of incremental changes to production processes or services. It is not primarily the result of radical new breakthroughs in basic science or technology.
- To respond to challenges of geography and climate, Australia depended on innovative local solutions to local problems. With the growth of an Australian-born population, the skills supplied by migration were increasingly supplemented by the skills developed by an emerging technical education system at semi-skilled, trade, certificate and diploma levels.
- A key characteristic of Australian developments in technical education and its relationship with industrial, agricultural and extractive industries that distinguishes Australia from Britain was the formative roles of the states. Industrial law, through apprenticeships and industry, rather than enterprise-based awards, provided a de facto national system of occupation-based definitions of formal skill.
- A skilled workforce is a key pathway by which diffusion of knowledge occurs and the development of the skilled workforce is, in general, the domain of the VET institutions in Australia.

Dimensions of innovation: Some historical perspectives on vocational education and training and innovation in Australia – A discussion paper can be found on NCVER's website
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Student traffic: Two-way movement between vocational education and training and higher education

Roger Harris, Robert Sumner, Linda Rainey

Movement in Australia's tertiary sector is a key feature of Australia's post-compulsory education system although little is known of its nature and extent.

Key messages

- Student movement within and between the tertiary education sectors—vocational education and training (VET) and higher education—is growing and complex. Intersectoral and intrasectoral movement of tertiary students is significant. The flow from higher education to vocational education and training is estimated to be three times greater, nationally and in South Australia, than the flow from VET to higher education, which has been declining over time. Student traffic is a complex phenomenon, involving students with backgrounds in multiple education sectors, various combinations of complete and incomplete qualifications, and some concurrent enrolment in the two sectors.
- Student motivation in both sectors is similar: Students in both the higher education and VET sectors responded similarly to questions about reasons for undertaking further study, both emphasising employment prospects and personal development. Thus, greater recognition needs to be given to the different, but increasingly complementary roles that higher education and vocational education and training play.
- The transition from the higher education to the VET sector is smoother than the reverse. The majority of tertiary students moving from one sector to another find the transition easy, with one exception. Both sets of students experience difficulty in making changes in their life so that they have enough time to study. Transition to higher education poses greater difficulties (particularly relating to financial issues) than transition to the VET sector, largely because those moving to VET tend to be older, more financially secure, more experienced in the workforce and more confident.

Student traffic: Two-way movement between vocational education and training and higher education can be found on NCVER's website
<<http://www.ncver.edu.au/publications/1549.html>>

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Linking vocational education and training with industry in Australia and China

Josie Misko, Liu Yufeng, Jiang Dayuan, Wu Quanquan, Wang Zerong

This report describes and compares the establishment, operation and take-up of collaborative activities between industry and vocational education and training in Australia and China.

Key messages

- Country comparisons between Australia and China, in terms of industry and vocational education linkages sector, are not straightforward. They need to take account of major differences in individual country traditions and the size of political, economic and educational structures and institutions. Nevertheless, it is clear that, because of its apprenticeship system, Australia has had a head start in establishing these linkages.
- Changing economic, political and educational philosophies of successive governments in China have affected the development of vocational education and its linkages with industry. Although there have been slight variations in the policies of different government regimes in Australia, the basic tenets of the need for industry and the vocational education sector to collaborate have remained the same.
- Industry bodies in China are generally interested in the welfare of their members, and are focused mainly on the training required by their particular sectors. There is a need to expand their scope of provision, so that the community as a whole can also benefit from industry-specific skills training.
- Australia and China are dependent on political and government interventions, in the form of infrastructure, funding and resources for expanding vocational education and encouraging industry participation in collaborative activities. However, the system of employer incentives for taking on apprentices and trainees is far more developed in Australia than China. The challenge for both countries is to ensure that government intervention enhances rather than hinders the development of industry–vocational education linkages.

*Linking vocational education and training with industry
in Australia and China*
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<<http://www.ncver.edu.au/publications/1615.html>>

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'A huge learning curve': TAFE practitioners' ways of working with private enterprises

Roger Harris, Michele Simons, Julian Moore

This study explores the roles of technical and further education (TAFE) practitioners working with and within private enterprises. It provides an in-depth analysis of six case studies in Victoria (metropolitan) and South Australia (metropolitan and regional), as well as several pilot interviews in New South Wales.

Key messages

- Forming linkages between TAFE institutes and enterprises depends on the organisations' understanding their respective cultures, ways of operating and priorities. Sustainable linkages depend heavily upon committing the time and energy needed to establish personal relationships between TAFE practitioners and enterprise members.
- TAFE institutes need to select the 'right' people for collaborative linkages. These practitioners need to become familiar with the enterprise environment, culture and networks rapidly; have, or develop vital skills, such as 'sussing out' what is required; be able to identify skill deficits and options for 'top up' training; be flexible and able to adapt training approaches to the flow of the enterprise's work; work collaboratively in teams of TAFE and enterprise staff; and sensitively customise training methods and materials.
- Training and learning strategies that are needs-based, just-in-time and very interactive are highly valued approaches to facilitating learning in enterprise-based environments.
- These workplace-focused approaches require that practitioners work in different ways from those of their colleagues based in institutes. Moreover, these practitioners are under less direct supervision from their managers. These approaches therefore have human resource and industrial relations implications for the institutes concerned, particularly in terms of their responsibilities, and how key performance indicators are framed and monitored.
- There is still much work to be done in modifying perceptions about policies and practices that work against effective linkages, in educating enterprises and TAFE practitioners about how to implement training packages creatively, and in reducing negative perceptions of TAFE held by industry.

'A huge learning curve': TAFE practitioners' ways of working with private enterprises can be found on NCVER's website
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Forming, developing and sustaining social partnerships

Stephen Billett, Allie Clemans, Terri Seddon

Social partnerships are local networks connecting some combinations of local community groups, education and training providers, industry and governments for the purpose of working on local issues and community-building activities. They are becoming an increasingly widespread organisational form and are considered to work well in expressing and responding to local needs and building decision-making capacity at the local level.

Key messages

- Through studies of ten social partnerships involving vocational education and training (VET) in Queensland and Victoria, this research demonstrates that social partnerships are established and maintained because participants engage in 'partnership work'—the interactive and collaborative process of working together to identify, negotiate and define goals, and to develop processes for realising and reviewing those goals.
- A key finding is that this is complex work, demanding significant skills in cross-cultural and interpersonal communication. Although this issue was identified in earlier research, this study has enabled these complex activities to be further examined and defined.
- Partnership work is underpinned by a set of principles that vary for different types of work at different stages of the partnership. The principles include developing or maintaining: the partnership; shared goals; relations with partners; capacity for partnership work; governance and leadership; and trust and trustworthiness.
- Given that vocational education provision is often supported by social partnerships, as reflected in many of the partnerships canvassed in this study, the nature of partnership work is of interest and relevance to vocational education and training, and particularly in relation to achieving objective 3 of the National Strategy for VET 2004–2010, which is concerned with strengthening communities and regions economically and socially through learning and employment.

*Forming, developing and sustaining social partnerships can be found on NCVET's website
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- **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.

- **Systematic Review of Research Program**

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- **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.



The National Centre for Vocational Education Research is an independent body responsible for collecting, managing and analysing, and evaluating and communicating research and statistics about vocational education and training.

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