



Research messages 2013



Australian Government
Department of Industry



Research messages 2013

National Centre for Vocational Education Research

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This document should be attributed as National Centre for Vocational Education Research 2014, *Research messages 2013*, NCVER, Adelaide.

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ISSN 1838-8531 web
1838-8515 print
TD/TNC 114.13

Published by NCVER, ABN 87 007 967 311
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Highlights for 2013

Georgina Atkinson

For the first time, the National Centre for Vocational Education Research (NCVER) has published peer-reviewed conference papers from its 'No Frills' conference, (*21st National Vocational Education and Training Research Conference 'No Frills': refereed papers* edited by Tabatha Griffin). The papers span a broad range of topics, including: Indigenous students and their intentions; educational pathways; skills recognition; leadership in vocational education and training (VET) providers; workplace mentoring; and the experiences of apprentices. The collection provides insight into the array of topics presented at the conference but is also a reflection of the broad range of research topics published by NCVER throughout the year.

The following introduction provides a summary of the research published in 2013 in the following broad categories:

- skills and productivity: from VET qualifications to higher-level qualifications and issues affecting the workforce
- social inclusion and participation in education and training: equity groups and measuring socioeconomic disadvantage
- young people: school, science and income support
- the VET sector: institutions, practices and the workforce
- structures in the tertiary education and training system.

Skills and productivity: from VET qualifications to higher-level qualifications and issues affecting the workforce

From VET qualifications to higher-level qualifications

Several papers have been published in 2013 which focus on the pathways between vocational education and training and higher education and how students move between the two. In *Hurdling the barriers: enabling student pathways from VET to higher education in building and construction management*, the authors, Anthony Mills, Patricia McLaughlin and Jane Carnegie, find there are a number of important enablers to transferring from vocational education and training to higher education. These include: guidance and support, positive learning experiences and recognition of prior learning (through admission and credit). However, as Louise Watson, Pauline Hagel and Jenny Chesters find in *A half-open door: pathways for VET award holders into Australian universities*, Australian universities differ when it comes to admitting students on the basis of VET awards and there is considerable variance in policy and practice.

For VET providers offering higher education qualifications there are other issues. Victor Callan and Kaye Bowman (*Issues for VET providers delivering associate and bachelor degrees: literature review*) examine the overlap between VET and higher education providers delivering diplomas, advanced diplomas, associate degrees

and bachelor degrees. They find that VET institutions with more effective credit transfer arrangements have specific support strategies to help students transition into higher qualifications. The authors will explore this issue and others further in their forthcoming research.

Vocational education's variable links to vocations (by Gavin Moodie, Nick Fredman, Emmaline Bexley and Leesa Wheelahan) looks at mid-level qualifications (diplomas, advanced diplomas and associate degrees) and how they assist entry to and progression in the labour market. The authors find that mid-level qualifications serve three main roles: an entry or upgrade labour market qualification; a transition to higher-level education qualifications; or wider access to higher-level qualifications.

Building on an existing suite of research, Serena Yu, Tanya Bretherton and John Buchanan look at the concept of 'vocational streams' and their role in workforce development and helping to address skills shortages (*Defining vocational streams: insights from engineering, finance, agriculture and care sectors*). The authors find that the preconditions for vocational streams include linkages of underpinning skills and knowledge and commitment and cooperation across relevant stakeholders.

Issues affecting the workforce: casual and low-skill jobs, mobility, and language, literacy and numeracy skills

In *Training and its impact on the casual employment experience*, Hielke Buddelmeyer, Felix Leung, Duncan McVicar and Mark Wooden look at the employment and training experiences of casual workers. The authors find not only are casual workers less likely to participate in work-related training than those in permanent employment, but there are fewer employment benefits to undertaking work-related training for these workers. The lack of benefits is not surprising, however, given that casual workers are generally employed on a short-term basis, therefore limiting the value of training to both employers and employees.

Looking at whether low-skill jobs provide young people with a good start to their lives, Tom Karmel, Tham Lu and Damian Oliver find that, not surprisingly, low-skilled jobs don't pay as well as higher skilled jobs. However, the wage penalty decreases over time, so having a low-skilled job is better than having no job. Those with a higher level of human capital – such as education, ability and experience – are more likely to move out of low-skilled jobs and into higher-skilled jobs (in *Starting out in low-skill jobs*).

Undertaking a VET qualification plays some role in helping people to find new jobs. Kostas Mavromaras, Stephane Mahuteau and Zhang Wei find that around 30% of people who complete a VET qualification change their occupation, industry or both within six months of finishing their studies. Those who change their occupation but stay in the same industry have the best outcomes, possibly because moving to a new occupation, especially after completing a higher-level qualification, indicates new skills and knowledge (in *Labour mobility and vocational education and training in Australia*). However, the benefits of mobility vary according to the economic cycle, and the authors find that the recent financial crisis had a negative effect on the outcomes of mobility.

A number of papers have been published this year that look at different aspects of language, literacy and numeracy skills. *Investigating the 'crisis': production workers' literacy and numeracy practices* (by Stephen Black, Keiko Yasukawa and Tony Brown) investigates the use of literacy skills in the manufacturing industry. The authors find that, according to workers, trainers and managers, there is no evidence to suggest that workers have inadequate literacy skills, and improving such skills wouldn't necessarily increase productivity. However, in *The returns to literacy skills in Australia*, Jenny Chesters, Chris Ryan and Mathias Sinning find that there are financial returns from literacy skills, as income level increases with both literacy skill level and educational qualifications.

Shifting the focus onto numeracy skills, Tina Berghella and John Molenaar (in *Seeking the N in LLN*) consider the ability of VET practitioners to determine the capacity of the VET workforce to meet the workplace numeracy needs. They find that, while VET practitioners appreciate the importance of numeracy in the workplace, there is a mismatch between the current capacity of the VET workforce and the numeracy needs of the workplace.

In regards to measuring improvements in language, literacy and numeracy, *Does 1 = 1? Mapping measures of adult literacy and numeracy* (by Michelle Circelli, Shelley Gillis, Mark Dulhunty, Margaret Wu and Leanne Calvitto) examines the equivalence of two widely used measures of language, literacy and numeracy proficiency in Australia: the Adult Literacy and Life Skills (ALLS) Survey and the Australian Core Skills Framework (ACSF). The authors find that equivalence can be found between the two frameworks at the lower skills levels, but the alignment is less clear at the higher skills levels. The research shows that alignment between the Adult Literacy and Life Skills Survey and Australian Core Skills Framework is possible, with the ACSF offering a more nuanced way of monitoring improvements in adult literacy and numeracy.

The issue of computer literacy has been broached in the research this year. In *Older Australians and the take-up of new technologies*, Jenny Chesters, Chris Ryan and Mathias Sinning find that older Australians who have recently undertaken some formal study have higher levels of computer use than those who don't.

Social inclusion and participation: equity groups and measuring socioeconomic disadvantage

Research published this year has reinforced the importance of formal and informal support to assist students from particular equity groups to participate in vocational education and training and complete their study. In *Barriers and facilitators affecting course completions by apprentices and trainees with disabilities*, Errol Cocks and Stian Thoresen find that the most common barriers to course completion reported by both those with a disability and those without were related to the lack of resources, including poor training wages, the costs associated with training and lack of time. However, formal and informal support is the most important factor facilitating course completion among students with disabilities.

The appropriate types of support are also important in assisting in the ‘social inclusion’ of the families of skilled migrants. Sue Webb, Denise Beale and Miriam Faine (*Skilled migrant women in regional Australia: promoting social inclusion through vocational education and training*) find that it is particularly difficult for the spouses of skilled migrants to find employment commensurate with their previous employment and skill levels. The authors suggest that various support structures, including recognition of prior learning and advice on educational opportunities, can assist skilled migrants to settle into training, employment and the community.

Adequate support services and financial support continue to be an issue for Indigenous learners, as Susan Bandias, Don Fuller and Steven Larkin find. In *Vocational education, Indigenous students and the choice of pathways* they conclude that despite financial and other types of support services being available to Indigenous students, they still face considerable barriers to participation in higher-level VET and higher education. Barriers include isolation from family and community and difficulty communicating in English.

The issue of language as a barrier to participation in education and training is also a key finding from *Cultural dimensions of Indigenous participation in vocational education and training: new perspectives* (by Alfred Michael Dockery). Dockery finds that having a strong cultural identity appears to promote greater participation and achievement in education and training. However, participation is higher for Indigenous people without English language difficulties; and people who speak an Indigenous language have lower incomes and employment outcomes.

NCVER also published a paper to encourage policy-makers to think about how to measure socioeconomic status and disadvantage. In *Socioeconomic disadvantage and participation in tertiary education: preliminary thoughts*, Tom Karmel and Patrick Lim find that Socio-Economic Indexes for Areas (SEIFA) measures are very poor in classifying individuals by socioeconomic status, but those measures perform quite well in measuring the aggregate relationship between socioeconomic status and educational participation. The authors argue that an implication of this is that any policy that targets funding on the basis of the Socio-Economic Indexes for Areas may unintentionally result in funds being misdirected.

Young people: school, science and income support

In *Single-sex schools and science engagement*, Joanna Sikora looks at gender differences in science engagement and whether single-sex schooling affects gendered patterns of science courses and the development of science-related career paths. She finds that boys in boys-only schools are not any more likely to take up physics subjects than their counterparts in coeducational schools. However, girls in girls-only schools are more likely to take up physical science subjects than their counterparts in coeducational schools. Nevertheless, being in a coeducational or single-sex school does not affect the likelihood of girls planning a career in physical science. But boys in boys-only schools are more likely to plan a life science career than their coeducational counterparts.

Using data from the Longitudinal Surveys of Australian Youth, Sinan Gemici, Patrick Lim and Tom Karmel look at the role of schools in influencing young people’s transition

to university and on low socioeconomic status students. In *The impact of schools on young people's transition to university* they find that while young people's individual characteristics are the main drivers of successful transition to university, approximately 20% of the variation in tertiary entrance rank (TER) score can be linked to school attributes. The measured characteristics – such as school sector, location, single-sex or coeducational, class size, student–teacher ratio and the average socioeconomic status of students – account for just over a third of the variation in tertiary entrance rank. The remaining two-thirds, unexplained by the data, perhaps represent the idiosyncrasies of each school.

In their subsequent companion paper Lim, Gemici and Karmel find that students from a low socioeconomic circumstance benefit from attending a school of high academic quality, in terms of completion, tertiary entrance rank and whether or not they go to university (*The impact of school academic quality on low socioeconomic status students*).

Looking at VET in Schools as an alternative pathway for young people, Kira Clarke examines why VET in Schools is currently not providing strong employment and further study outcomes for students. She argues that VET in Schools is perceived to have a range of objectives which limit the effectiveness of the pathway to post-secondary vocational qualifications. While Clarke identifies a range of issues, she also suggests that having a purpose-built school-based curriculum, better integration with school and a clearer role for employers and industry could improve the effectiveness of VET in Schools as a pathway to further education for young people (in *Entry to vocations: strengthening VET in Schools*).

Once students get to university and post-school vocational education and training, whether or not they receive Youth Allowance makes an impact on their post-secondary education experiences. In *Student income support and education and training participation in Australia*, Chris Ryan finds that enrolment in tertiary education following Year 12 is similar, regardless of whether students are eligible for Youth Allowance. But there appear to be pros and cons to being on Youth Allowance. Although it substantially improves course completion rates, receiving income support does not alleviate financial hardship, and those receiving Youth Allowance were the most concerned about their financial situation.

The VET sector: institutions, practices and the workforce

Berwyn Clayton, Pam Jonas, Regan Harding, Mark Harris and Melinda Toze in *Industry currency and professional obsolescence: what can industry tell us?* look at how people working in selected industries and fields retain their industry currency and what VET practitioners can learn from these practices. The authors find that networking, attending industry events and training, and reading and researching industry-relevant material are strategies people use to maintain their industry currency. Employer-supported workplace training and a commitment to retaining industry currency are also important. For VET practitioners, they argue that individuals need to be committed to updating their industry knowledge and training providers need to ensure that practitioners are supported in this.

With the increasing prevalence of VET institutions delivering higher education qualifications, Melanie Williams, Fleur Golding and Terri Seddon in *Towards a culture of scholarly practice in mixed-sector institutes* argue that there is increasingly a need for scholarship in vocational education and training. They find that, even though the term ‘scholarship’ is not generally associated with the sector, forms of scholarship are being practised by practitioners in the sector and should continue to be developed.

Looking at the assessment practices in vocational education and training in three industry areas, Sian Halliday-Wynes and Josie Misko (*Assessment issues in VET: minimising the level of risk*) identify a range of issues which affect the quality of assessment, including course duration, a lack of systemic validation and moderation practices, and the adequacy of the Certificate IV in Training and Assessment in relation to assessment. They suggest there should be greater rigour when it comes to assessment and independent validation, and that the regular involvement of employers in assessments should be encouraged.

Structures in the tertiary education and training system

NCVER published a collection of essays and discussions on the topic of structures in the tertiary education system. *Structures in tertiary education and training: a kaleidoscope or merely fragments? Research readings* (edited by Francesca Beddie, Laura O’Connor and Penelope Curtin) covered a range of questions and issues, including how educational matters influence structures in the system; who controls the system; governance in a competitive environment; and interactions with the system. The aim of this compendium is to take forward the debate about the current wave of reform in the VET sector. And like all the papers included in this collection, the aim of the research is to inform and influence policy and practice in the education and training sector. This is something NCVER will continue to do in the coming years with its future research agenda.



National Vocational Education and Training Research Program

The reports in this section have been produced by NCVET on behalf of the Australian Government and state and territory governments. Funding is provided through the Department of Industry. The NVET Program is based on national research priorities approved by ministers with responsibility for vocational education and training.

The authors/project teams were funded to undertake this research via a grant under the NVET Program. The research grants are awarded to organisations through a competitive process, in which NCVET does not participate. To ensure the quality and relevance of the research, projects are selected using an independent and transparent process and research reports are peer-reviewed.

21st National Vocational Education and Training Research Conference 'No Frills': refereed papers

Edited by Tabatha Griffin

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2595.html>.

The 21st National Vocational Education and Training Research Conference, colloquially known as 'No Frills', was held in July 2012. To celebrate this special anniversary, speakers were offered the opportunity to have their papers peer-reviewed, and these 14 refereed papers have been published in a single volume.

The papers span a broad range of topics, including Indigenous students and their intentions; educational pathways; skills recognition; leadership in VET providers; workplace mentoring; and the experiences of apprentices.

The papers provide an insight into the array of topics presented, and it is hoped they will generate interest in attending a future National Vocational Education and Training Research Conference.

Barriers and facilitators affecting course completions by apprentices and trainees with disabilities

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2597.html>.

Errol Cocks and Stian H Thoresen

Recent policies to address equity issues have encouraged people with disabilities to participate in vocational education and training (VET). While participation is worthwhile, it is completion that typically brings the greatest benefits.

This is the first report from a program of research investigating the financial and social outcomes for people with disabilities who have completed an apprenticeship or traineeship. This research is based on a three-year longitudinal survey of graduates with disabilities. In this first report, the emphasis is on the students' perspectives on the barriers to and facilitators of course completion. Not surprisingly, graduates with a disability were more likely to report barriers to the completion of their apprenticeship or traineeship compared with those without.

Key messages

- The most commonly reported barriers, across both the graduates with disabilities and those without, were related to a lack of resources. Common challenges cited were poor training wages; the cost of equipment or tools required for training; and lack of time, often due to family commitments. For some in the disability group, these barriers were compounded by their health conditions.
- Support was the most important factor facilitating course completion among the research participants with disabilities. This support was often provided by individuals from disability employment service providers, group training organisations, TAFE (technical and further education) institutes, and the employer. Informal support – that from friends, family and co-workers – was also important, particularly when formal supports were inadequate.

Only a small proportion of the research participants report that they have been supported jointly by both a disability employment service provider and a training organisation. Given the previous research showing the benefits of joint support, the authors advocate the formation of such partnerships.

Cultural dimensions of Indigenous participation in vocational education and training: new perspectives

Alfred Michael Dockery

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2573.html>.

Using data from the 2008 National Aboriginal and Torres Strait Islander Social Survey, this research provides new evidence on the interrelationships between Indigenous Australians' connection with their traditional culture and the nature of their engagement with vocational education and training (VET). The study builds on previous work by the author, *Cultural dimensions of Indigenous participation in education and training* (2009).

In particular, a more defined measure of culture has been developed, one which identifies four separate dimensions of cultural engagement: participation in cultural events; cultural identity; language; and participation in traditional economic activities. Previous findings relating to past educational attainments and participation in training are reassessed. The links between cultural attachment and current participation in education, as well as the benefits derived from education and training, are also explored.

Key messages

- Stronger cultural identity appears to promote greater participation and achievement in education and training.
- Compared with the earlier work, the evidence in this study of a causal effect flowing from cultural identity to outcomes is stronger. However, the extent of other unobserved factors, such as individual motivation and access to resources, is not clear.
- Regardless of whether individuals live in remote or non-remote areas, and irrespective of their degree of cultural attachment, the results show very strong increases in the likelihood of employment and income with additional years of completed education.
- Language is an issue: participation in education and training is higher for those without English language difficulties and who do not speak Indigenous languages. Lower income and employment outcomes are observed for those who speak an Indigenous language compared with those who do not, irrespective of gender or remoteness.

The poor outcomes for those who speak an Indigenous language are contrary to international studies of Indigenous culture in Canada and New Zealand.

Defining vocational streams: insights from the engineering, finance, agriculture and care sectors

Serena Yu, Tanya Bretherton and John Buchanan

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2667.html>.

This report is part of a wider three-year program of research, *Vocations: the link between post-compulsory education and the labour market*, which is investigating the educational and occupational paths that people take, and how their study relates to their work. This report builds on previous research by the authors, which identified a vocational stream as a set of linked occupations with related skills within a broad field of practice. They argue that vocational streams can play a role in increasing the capacity of the workforce and in helping to address skill shortages.

As part of the second year of the program, the authors interviewed a variety of stakeholders, including industry, employee, education, government and occupation groups, to validate the usefulness of a vocational stream framework for the labour market. The authors identify the preconditions for vocational streams to occur and how these preconditions can play out in industry.

Key messages

- Two preconditions are identified for realising enhanced, more adaptive workforces through vocational streams. Links, in terms of underpinning skills and knowledge, or ‘commonalities in capability’, is the first precondition that supports a vocational model of workforce development. The second precondition is the potential for commitment and cooperation across stakeholders, or social partners, on resolving issues such as skills shortages.
- These two preconditions operate interdependently. Ultimately, stakeholder engagement, collaboration and the market environment within a specific sector are all key influences in shaping vocational outcomes. The preconditions react together in producing three possible outcomes:
 - a lack of common capabilities, where specialisation occurs early in an occupation or field of study, thereby creating segmentation in the labour market and limiting mobility across occupations and weakening the impact of partner collaboration
 - an outcome characterised by linkages between occupations and an absence of institutional collaboration; for example, in the healthcare sector, where a lack of cooperation has hampered the development of more generalist roles
 - a scenario in which there are both occupational linkages, in terms of underpinning capabilities, and a high degree of social partner readiness, evidenced by a high degree of cross-occupational mobility. For example, in agriculture this outcome is characterised by compromise, the pursuit of cooperative solutions and a commitment of resources to address workforce challenges.

Entry to vocations: strengthening VET in Schools

Kira Clarke

The full report can be
found on the NCVET Portal
<[www.ncver.edu.au/
publications/2678.html](http://www.ncver.edu.au/publications/2678.html)>.

This report is part of a wider three-year program of research, *Vocations: the link between post-compulsory education and the labour market*, which is investigating the educational and occupational paths that people take and examining how their study relates to their work. It is specifically interested in exploring how to strengthen the role of VET in Schools (VETiS) so that it leads to a viable post-school pathway. It builds on previous research by the author, which argued the need for VET in Schools to be reconceptualised such that it provides a clear pathway to post-school vocational education and training (VET) rather than direct entry to the workforce.

The findings from the previous research were used as a basis for roundtable discussions with VET in Schools stakeholders, including representatives from education and training authorities, boards of studies, public and private registered training organisations, group training organisations, schools, and industry and skills advisory bodies. Of particular interest was finding out why VET in Schools is currently not providing strong employment and further study outcomes for students and how it can be strengthened.

Key messages

- The roundtable discussions indicate that VET in Schools is perceived as having a range of objectives, offering everything from a ‘taster’ of future workforce opportunities, to a linear pathway to mid-level skilled employment. The author argues that these diverse perceptions are limiting the effectiveness of VET in Schools as a pathway to post-secondary vocational qualifications.
- Particular challenges for VET in Schools as a direct pathway to employment include the difficulty of properly integrating VET with school subjects and limited access to workplace learning or industry experience.
- If the main objective is a pathway to post-secondary education, then other factors raised in discussions that might strengthen VET in Schools include:
 - using VET in Schools as a foundational pathway to further VET study following school and creating synergy between vocational learning in schools and the vocational options available to students post school
 - having a purpose-built school-based vocational curriculum rather than one based on Australian Qualifications Framework (AQF) qualifications to bring it in line with the broader preparatory role of the senior school certificate
 - integrating vocational and career learning with the general disciplinary school curriculum so that students undertake a complementary stream of study
 - providing a clearer role for employers and industry in the development of vocational programs in schools.

A half-open door: pathways for VET award holders into Australian universities

Louise Watson, Pauline Hagel and Jenny Chesters

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2659.html>.

Effective pathways from vocational education and training (VET) to higher education increase access both to higher qualifications and lifetime earnings for people holding VET awards. However, there is substantial variation in the proportion of students admitted to different higher education institutions on the basis of a VET award. This paper investigates the extent to which these differences are the product of factors associated with specific fields of study or the result of varying institutional policies and practices.

The authors use cluster analysis to identify three groups (clusters) of institutions with similar patterns of admission of VET award holders across most fields of education. The universities in Cluster 1 admit relatively high proportions of VET award holders in all fields of education. Cluster 2 contains universities where the rate of admission of VET award holders is more haphazard between fields of study but is close to the national average overall. The universities in Cluster 3 admit VET award holders at rates consistently below the national average for nearly every field of study. Not surprisingly, the Group of Eight Universities sits within Cluster 3, probably a consequence of their status and the high level of competition for places from school leavers.

Key messages

- University policies and practices appear to influence the rate at which institutions admit students on the basis of a VET award. While all Australian universities have policies to promote VET to higher education pathways, there are subtle differences between universities in the way these policies are implemented.
- Inconsistencies in the policies and practices of universities mean that access for VET award holders will differ and depend on the university to which they apply. Consequently, this may restrict the access of VET award holders to higher education in some regions.

The authors argue, on the basis of the wide variation in admission rates across universities, that their analysis dispels the view that some fields of study 'lend themselves' more to VET to higher education pathways than others.

Hurdling the barriers: enabling student pathways from VET to higher education in building and construction management

Anthony Mills, Patricia McLaughlin and Jane Carnegie

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2633.html>.

This project investigates student transfer from vocational education and training (VET) to higher education, that is, from diploma to degree, in the building and construction industry. Thirty-six VET diploma students currently studying a degree in construction management and related qualifications were interviewed across eight universities to identify what helped them to make the transition. While previous research on pathways has considered the question of enablers, limited research has been undertaken from the perspective of students.

Key messages

Students who have used a pathway from a building diploma to a construction degree identified various enablers. The most common were:

- people who provided guidance, support and knowledge of pathways (particularly VET teachers)
- positive VET learning experiences, which built confidence and motivation for ongoing learning and the development of self-directed learning skills
- the recognition given for prior VET studies through admission and credit by the receiving universities.

While the research identified various enablers, the pathway from a building diploma to a construction degree is seriously constrained by the low numbers of students in diploma-level building studies. Improving recognition of prior learning for industry employees would help to expand the potential pool of students who could take this path.

Industry currency and professional obsolescence: what can industry tell us?

Berwyn Clayton, Pam Jonas, Regan Harding, Mark Harris and Melinda Toze

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2622.html>.

Industry currency and professional obsolescence are terms that relate to the capacity of an individual to continue to perform their job. Having up-to-date skills, knowledge and experience in a particular industry is known as industry currency, whereas in the professions a lack of ongoing learning in order to retain competence is known as professional obsolescence. The knowledge required in occupations does not remain static; for example, changes in technology or the development of new products mean that workers need to learn new skills and keep abreast of these changes. This is of importance to vocational education and training (VET) because VET practitioners are training the individuals moving into these occupations. Therefore, VET practitioners need to ensure that their industry skills and knowledge are kept current.

This report explores the issues of industry currency and professional obsolescence from the viewpoint of those working in the plumbing, hairdressing and printing industries, as well as professionals working in the science, engineering, human resources and health sectors. The focus of the report was to investigate how those working in these areas maintain industry currency and prevent professional obsolescence, the aim being to find out how VET practitioners might implement some of these practices.

Key messages

- Strategies used in the plumbing, hairdressing and printing industries to maintain skills include networking, attending industry events and vendor training, reading industry magazines and trade journals, and undertaking online research.
- Employers in the science, engineering, human resources and health professions are supportive of ongoing training for their employees and have processes in place to ensure it occurs. The majority of this training also takes place in the workplace.
- In both the trades and the professions there is ready acceptance that for updating strategies to be successful there needs to be a joint commitment from both the individual and the employer.

The authors suggest that to progress the maintenance of industry currency in vocational education and training, training organisations need to adopt a strategic approach that supports updating industry knowledge and encourages practitioners to interact with employers and industry bodies. The authors also argue that individual practitioners need to be committed to the ongoing updating of their industry experience and knowledge.

Investigating the 'crisis': production workers' literacy and numeracy practices

Stephen Black, Keiko Yasukawa and Tony Brown

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2628.html>.

In recent years in Australia there has been a renewed focus on the issue of literacy and numeracy in the workplace. This has been led, in part, by the 2006 Adult Literacy and Life Skills Survey, conducted by the Australian Bureau of Statistics (ABS), which indicated that around half of Australia's adult population had literacy and numeracy skills at levels 1 and 2 (on a five-point scale), levels typically seen as insufficient to enable an individual to fully participate in the modern economy. Both national and international research have also demonstrated a positive relationship between increasing literacy and numeracy skills and labour market outcomes, such as better employment opportunities and higher wages. On the basis of these findings and surveys of employers' views, key industry groups, such as the Australian Industry Group, have advocated greater investment in addressing the low literacy and numeracy skills of Australian workers.

This research provides an interesting perspective on this literacy 'crisis' by focusing on the workers' views of the extent of the literacy and numeracy they require to undertake their jobs. Using an ethnographic approach, production workers in three manufacturing companies moving to lean production processes, along with their managers and trainers, were interviewed and observed. Manufacturing was chosen as it generally has a lower proportion of workers with formally recognised skills, while lean production is seen as requiring higher literacy and numeracy skills.

The key message from this research was that improving literacy and numeracy as a means for improving productivity was not considered necessary by workers, trainers and managers. Their general view was that tasks were done proficiently and there was no evidence to support the view that the workers' literacy was inadequate.

This does not mean that improved literacy and numeracy would not be beneficial; for example, improved literacy may well help workers to better understand their workplace rights and provide greater opportunities for leadership roles and greater labour mobility.

Issues for VET providers delivering associate and bachelor degrees: literature review

Victor Callan and Kaye Bowman

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2690.html>.

This literature review examines the available research on vocational education and training (VET) institutions delivering associate and bachelor degrees and also sets the scene for a larger research project, *VET providers delivering associate and bachelor degrees: issues and impacts*, the findings of which will be released mid-2014.

This paper looks at the overlap between VET and higher education providers delivering diplomas, advanced diplomas, associate degrees and bachelor degrees (Australian Qualifications Framework levels 5 to 7), as well as briefly mentioning the changing nature of vocational education and training and higher education. The paper identifies a number of issues that VET providers face when transitioning into higher education.

Key messages

- VET organisations have been encroached from above by some universities delivering VET qualifications and from below with the expansion of VET in Schools. VET institutes are looking at other areas of delivery in order to maintain and expand their provision.
- The delivery of higher education qualifications in VET institutions supports efforts to improve access to higher education for disadvantaged groups.
- There is some argument that VET organisations choose to deliver higher education qualifications in order to confer more status on and recognition to the organisation.
- The use of non-graded assessment in VET raises questions over the capability of VET providers to deliver higher education qualifications, which are based on graded assessment.
- VET providers who choose to deliver higher education qualifications face significant operational, financial, human resource and administrative costs.
- VET institutions with more effective credit transfer arrangements have specific support strategies in place to help students to transition to higher education qualifications.

The larger project will draw on case studies with both public and private VET providers who are delivering associate and bachelor degrees in order to understand why they chose to deliver these predominantly higher education degrees and the issues that they face in their delivery. This will help to inform models of best practice.

Labour mobility and vocational education and training in Australia

Kostas Mavromaras, Stephane Mahuteau and Zhang Wei

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2625.html>.

Labour mobility is a core element of a well-functioning and flexible labour market. Although mobility is considered to be generally desirable, this is not always the case, as individual job movers can become better or worse off after their move. This paper examines the factors which influence 'good' or 'bad' mobility.

Using data from the Student Outcomes Survey, compiled by the National Centre for Vocational Education Research (NCVER), the researchers examine the types of mobility and outcomes ensuing for those who have just completed a vocational education and training (VET) course in Australia over the period 2001–11. The different types of mobility considered include changing industry sector only, changing occupation only, and changing both sector and occupation. To determine whether job quality improves with mobility, the researchers have compared several measures of quality before and after a VET course, focusing on the association between mobility and better pay, better occupational status, a higher chance of full-time employment and a lower chance of casual employment.

Key messages

- Consistent with other labour mobility studies, it is the younger age groups and those with higher-level qualifications who are more mobile.
- Around 30% of all people completing a VET qualification change their occupation, industry sector or both within six months of finishing their studies.
- Individuals with VET qualifications who change their occupation but stay in the same industry sector have the best labour market outcomes.
- Industry sector mobility is rarely beneficial to individuals, although they may be making this change to realise benefits in the longer-term.

The benefits of changing occupation and the drawbacks of changing industry have an apt 'human capital' interpretation. Mobility is always a little risky, because the individual leaves behind the skills, knowledge and networks associated with a particular job. On the other hand, moving to a new occupation (particularly after completing a higher-level qualification) signals the acquisition of 'new technology'. Thus we see the benefits of moving to a new occupation but remaining in the same industry – the pay-off from acquiring new skills without the penalty of losing sector-specific knowledge and networks.

Older Australians and the take-up of new technologies

Jenny Chesters, Chris Ryan and Mathias Sinning

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2598.html>.

The increasing availability of high-speed broadband telecommunications provides all people with the opportunity to access the same level of information and online services, regardless of their location, age and level of mobility. But this opportunity is only available to those individuals who have the technical skills that enable them to access computers and the internet.

This research uses data from the Adult Literacy and Life Skills (ALLS) Survey to investigate computer and internet use by older Australians by comparison with younger people.

Key messages

- Not surprisingly, technology and internet use is negatively associated with age. People over the age of 65 years are much less likely to use the internet than younger people.
- Men show higher levels of computer use than women, and this gender gap increases with age.
- The levels of computer use increase as educational attainment increases. Moreover, the gap in usage due to educational attainment increases with age.
- Older Australians who undertook some form of formal study in the preceding 12 months reported higher levels of computer use. Also, the difference in computer use between those who study and those who don't increases with age.

While computer and internet usage is shown to be lower in older age groups, this is likely to be partly a cohort effect. As the birth cohorts currently exposed to computers get older, the proportion of people of a specific age who have never used a computer will decline.

It should also be noted that this report is based on survey data collected in 2006–07. Much has changed that could affect computer and internet use since then, especially with the growth of the social media. Whether or not this has altered the use of internet by older Australians is uncertain.

The returns to literacy skills in Australia

Jenny Chesters, Chris Ryan and Mathias Sinning

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2623.html>.

Most investigations into the returns to training include educational attainment and labour market experience as determinants of earnings. The authors of this study propose that individual skills may also explain why some workers earn more than others.

This research investigates the relationship between literacy skills and the incomes of workers in the Australian labour market through the use of the Survey of Aspects of Literacy (SAL) and the Adult Literacy and Life Skills (ALLS) Survey. It also estimates whether the return from literacy skills changed between 1996 and 2006, and how returns vary with level of education.

Key messages

- Both educational qualifications and literacy skill levels are positively associated with income among full-time male and female employees. In addition, within broad education levels (university-level qualifications, vocational education and training qualifications, and no post-school qualifications), income increases with literacy skill level.
- Highly educated workers experience higher returns to literacy skills than workers with low levels of education. However, the returns to literacy skills held by workers with low and medium levels of education have increased over time in some cohorts, although not for workers with high levels of education.
- There was no change in the magnitude of the return from literacy skills between 1996 and 2006 at the aggregate level.

Given that both qualification level and literacy skills are important in determining wages, an implication is that the quality of the qualification is important. Those qualifications that offer improvement in literacy skills, in addition to technical skills and knowledge, will provide the best returns for workers.

Seeking the N in LLN

Tina Berghella and John Molenaar

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2627.html>.

The importance of numeracy skills in particular in the workplace is widely recognised, with both national and international research demonstrating the impact that low numeracy skills have on workplace productivity and an individual's labour market outcomes. And yet very little is known in Australia about the extent of numeracy training required in a workplace, how best to deliver the training and, indeed, whether trainers are sufficiently skilled to deliver numeracy training in a workplace.

This study begins to redress this gap. Focusing on the process manufacturing industries, the qualifications, experience and numeracy skills of 20 language, literacy and numeracy (LLN) specialists and 24 vocational specialists – collectively referred to as VET practitioners – were investigated to determine the capacity of the vocational education and training (VET) workforce to address workplace numeracy needs.

Key messages

- VET practitioners appreciate the importance of numeracy in the workplace. However, a mismatch exists between what is required to address numeracy skills and the current capacity of VET practitioners, in terms of their understanding of numeracy requirements and their qualifications, skills and experience.
- The discrepancy between the perceived and actual numeracy skills is a clear indicator of this mismatch and demonstrates the importance of both assessing the numeracy skills of those required to deliver numeracy training and knowing the context in which the training is being delivered.

This study was modest in scale and it is possible that it does not represent the skills of VET practitioners more generally. Nonetheless, the weakness of vocational specialists and LLN specialists in the area of numeracy is an issue which the Australian Government's National Foundation Skills Strategy for Adults needs to address.

Single-sex schools and science engagement

Joanna Sikora

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2668.html>.

This paper considers whether single-sex schooling affects gendered patterns in the uptake of science courses in Year 11 and the development of science-related career paths. In particular, the author is interested in exploring gender differences relating to the take-up of the life and physical sciences. To investigate these issues, the author analyses data from the 2009 cohort of the Longitudinal Surveys of Australian Youth (LSAY).

This research was funded through the National Centre for Vocational Education Research (NCVER) fellowship program, which encourages researchers to use NCVER datasets to improve our understanding of education. A second paper is further investigating gender segregation in youth science engagement by looking at gendered pathways into post-secondary science study.

Key messages

- Across all schools, male and female students systematically select different science subjects and prefer careers in different fields of science, as did their counterparts ten years ago.
- With respect to science subjects, students' gender, science performance and science self-confidence levels have a consistent positive influence on both life and physical science engagement. The latter two are more prominent in the take-up of physical science subjects.
- Single-sex schooling does not affect the likelihood of boys taking up physical or life science subjects while at school. However, boys from boys-only schools are more likely to plan a life science career, such as physiotherapy and medicine, than their male counterparts in coeducational schools.
- Girls in girls-only schools are more likely to take up physical science subjects than their female counterparts in coeducational schools. However, single-sex schooling does not affect the likelihood of girls planning a physical science career.

After controlling for a number of student and school characteristics, the author concludes that, although some benefits of sex-segregated schooling exist, the overall effects are small. Moreover, it is unlikely that these effects have a lasting impact on young people's educational and career pathways later in life, which questions whether programs designed to extend single-sex schooling into the government sector should be introduced.

Skilled migrant women in regional Australia: promoting social inclusion through vocational education and training

Sue Webb, Denise Beale and Miriam Faine

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2653.html>.

Skilled migration is an important source of population growth and labour supply in regional Australia. However, it can be difficult for the families of skilled migrants to integrate into the local labour market socially and into the community more generally. The purpose of this report is to investigate how vocational education and training (VET) can assist in achieving 'social inclusion' for the families of skilled migrants, using the Greater Shepparton region of Victoria as the basis of the research.

This work is one of three projects undertaken by the Centre for the Economics of Education and Training at Monash University, as part of its three-year (2011–13) research partnership with NCVET exploring the geographical dimensions of social inclusion and vocational education and training in Australia.

Key messages

- Settlement and securing employment commensurate with skill levels and previous employment histories are particularly difficult for the spouses of skilled migrants; in particular, the non-recognition of qualifications and lack of family support for domestic responsibilities make it difficult for migrant women to get work commensurate with their skills.
- VET institutions can assist the spouses of skilled migrants by offering recognition of prior learning and providing advice on how educational opportunities relate to jobs.
- Resilience on the part of migrants, assistance in job seeking and finding Australian work experience or volunteering improve labour market outcomes.

The authors argue that, in order to achieve social inclusion, policies need to acknowledge the difficulties that the families of skilled migrants face and support the engagement and contribution of migrants to the communities in which they settle – support that exists for humanitarian migrants but not for skilled migrants and their families.

Structures in tertiary education and training: a kaleidoscope or merely fragments? Research readings

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2616.html>.

Editors: Francesca Beddie, Laura O'Connor and Penelope Curtin

In June 2010 the Standing Council on Tertiary Education, Skills and Employment (SCOTESE) adopted a new set of national research priorities in tertiary education and training for the period 2011 to 2013. One of these pointed to the need to better understand structures in the system by examining the impact of policy, funding and market frameworks on the provision of education and training. Since very few researchers have investigated these issues, the National Centre for Vocational Education Research (NCVER) decided to commission essays on various aspects of the topic. We hoped to throw light on the structures in the evolving tertiary education system and to take forward debate about the current wave of reform.

The authors and four discussants came together with other leaders in the system in November 2012 to talk about the essays. Given the complexity of these issues, it is quite difficult to distil the discussions into a few simple messages. Nevertheless, some of the key points were:

- A common understanding of the dynamics of the system is not easy to reach. We are still not all talking about the same thing when we refer to tertiary education.
- There is little support for a single integrated tertiary education sector. If there is a consensus it is that variety within the sector is a good thing.
- While the language of markets has been adopted in the reform effort, we need to be clear we are talking about a very unusual market, both in terms of its 'product' and its 'customers'. In fact, there is a dispute over who is the customer of the vocational education and training (VET) system – the individual student or the employers who ultimately employ those that the system educates and trains.
- Even within the sectors, there is not always consensus on definitions. This is notably the case when discussing the meaning of 'vocation' and the shape of competency-based training.
- To establish the underpinnings and value of each part of the system, we need greater clarity about the purpose of public funding, as well as a clear alignment between funding regimes and policy objectives. The issue is who should pay for what.
- Many pillars of the system can be strengthened. How institutions are governed, and how the workforce is organised and the system regulated require further thought. The extent of institutional autonomy is a key element.

While this exercise could never determine the ideal structures for tertiary education and training, it has been invaluable in teasing out the complexity of tertiary education. It also makes clear there is no simple 'market design' that would meet all the objectives of the various elements of Australia's tertiary education system.

Towards a culture of scholarly practice in mixed-sector institutions

Melanie Williams, Fleur Goulding and Terri Seddon

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2599.html>.

The increasing prevalence of primarily vocational education and training (VET) institutions delivering higher education qualifications has raised questions about the place for scholarship in these institutions. Scholarship is not commonly associated with the VET sector. Rather, teachers and trainers are expected to have the appropriate technical skills and knowledge of the subjects they are teaching and to be up to date with industry practice. This is essentially the ‘knowledge’ that teachers and trainers need and it is conceptually similar to the ‘knowledge’ required by university lecturers. In the latter case, the usual label is ‘scholarship’ and there is a vast literature defining the concept. One particularly influential framework is that of Ernest Boyer with its four forms of knowledge – discovery, integration, application and teaching – and it is this framework the researchers adopt in this project.

Key messages

- Even though the term ‘scholarship’ is not normally associated with VET, it was clear from the research that Boyer’s four forms of scholarship are relevant to the VET sector and are being practised. Examples of discovery included making films and composing music to be shared with students, while integration involved attending multidisciplinary networks and seminars. In terms of application, examples included participation in action research projects and ensuring their relevance to industry. Moreover, scholarship in VET is mainly related to teaching and learning rather than being discipline-based.
- Scholarly practice in mixed-sector institutions combines elements of scholarship from both the VET and higher education sectors. It focuses on individual practices, has an industry focus and is mainly undertaken in the areas of teaching and learning. However, as in the higher education sector, it recognises the role of critical reflection, the need to place the scholarly practice within the broader literature, and the necessity of addressing social and ethical issues.

Given the move towards delivering higher education in VET institutes, there is increasingly a need for scholarship in VET. Developing a shared language will help the teachers/lecturers in these institutes.

Training and its impact on the casual employment experience

Hielke Buddelmeyer, Felix Leung, Duncan McVicar and Mark Wooden

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2615.html>.

About one in five adult Australians is employed on a casual rather than an ongoing or permanent basis. From the point of view of skills acquisition, casual workers tend to participate less in work-related training than their permanently employed counterparts.

The focus of this research is whether the lower rate of participation in work-related training is an issue. Does undertaking training help those who are casually employed to move into permanent or fixed-term work? Further, does training have any impact on the level of satisfaction casually employed people have with their jobs, employment opportunities and life in general? These issues are investigated using data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey.

Key messages

- Casual workers are less likely to participate in work-related training than those in permanent or fixed-term employment.
- There is little evidence that receiving work-related training affects the probability of moving into permanent or fixed-term employment.
 - The apparent finding that casual workers who undertake work-related training are more likely to move into permanent or fixed-term work than those who do not becomes invalid when the panel nature of the data is exploited to account for unobserved differences between those receiving and those not receiving training.
- There is also little evidence of any strong impacts of work-related training on the level of satisfaction reported by casual workers with their job or life.
 - The exception to this is satisfaction with employment opportunities among casually employed women.

The apparent lack of benefits from training is not surprising, given that casual workers are generally employed on short tenures, thus limiting the value of training to both the employees and employers.

Vocational education, Indigenous students and the choice of pathways

Susan Bandias, Don Fuller and Steven Larkin

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2603.html>.

This report looks at the pathways that Indigenous students in the Northern Territory take between vocational education and training (VET) and higher education. The study explores the perspectives of students studying at higher-level VET (certificate IV and above) and higher education qualifications. The study aims to gain an understanding of the pathways adopted by Indigenous students, as well as their motivations for study and their experiences while studying. The project adopts a mixed methods approach and draws on enrolment data from Charles Darwin University to get a perspective on Indigenous students' enrolment and completion rates. The study also used focus groups with 29 Indigenous tertiary education students from Charles Darwin University, Batchelor Institute of Indigenous Tertiary Education and two private providers.

Key messages

- For students from Charles Darwin University who had completed a higher-level VET course, the pathway from VET to university is a viable option, with around 17% of Indigenous admissions to higher education based on previous VET. However, due to the low number of graduates at the certificate IV, diploma and advanced diploma levels, this pathway is available to relatively few students.
- The students who made the transition from VET to higher education felt their VET study was relevant to their higher education study. However, some students were unprepared for the more academic environment of higher education and the emphasis on online learning.
- The majority of students were satisfied with the quality of their course, particularly the quality of teachers and tutors, and the cultural appropriateness of the course. However, some students felt there was a lack of Indigenous teachers.
- All students received some level of financial assistance. Other types of support available to the students include: assistance with books, computers, transport, food and accommodation; childcare facilities; time off work; cultural leave; and additional time to complete the course. Some students were dissatisfied with the extent of the financial assistance and available childcare facilities, as well as with the lack of culturally appropriate places to study on campus.
- Some students from remote communities who had moved to urban locations to study felt socially isolated and had difficulties communicating in English.

Despite the support that Indigenous students receive to assist them with their study, they continue to face considerable disadvantage. This suggests that lack of social support, language issues and limited access to tertiary education still act as barriers to participation and completion.

Vocational education's variable links to vocations

Gavin Moodie, Nick Fredman, Emmaline Bexley and Leesa Wheelahan

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2689.html>.

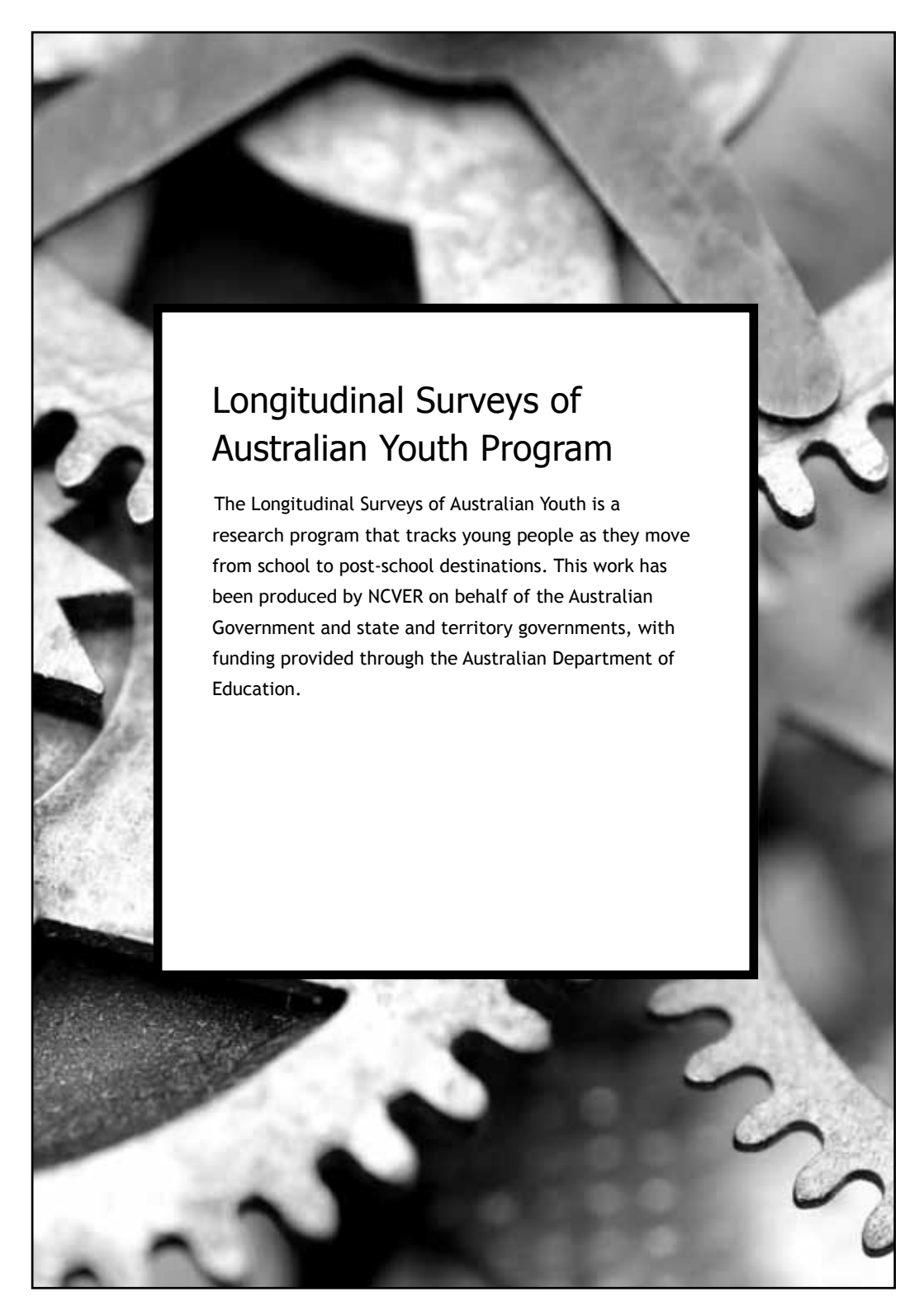
This report is part of a wider three-year program of research, *Vocations: the link between post-compulsory education and the labour market*, which is investigating the educational and occupational paths that people take and determining how their study relates to their work. Previously the authors theorised that vocational streams, whereby people study for a field of practice rather than a specific job, could support occupational progression; for example, a 'care' vocation could include workers within aged care, mental health, childcare and disability care.

This report looks specifically at mid-level qualifications, such as diplomas, advanced diplomas and associate degrees, and how they assist entry to and progression in the labour market. In order to explore these issues, the authors analyse data from the Student Outcomes Survey and the Survey of Education and Work. In addition, they undertake case studies of mid-level qualifications in engineering and finance and also examine the roles of physician assistants in health, and veterinary technologists in agriculture, to see how mid-level qualifications can be strengthened.

Key messages

At a time when the vocational education and training (VET) sector is designing entitlement models and introducing contestability to improve the outcomes of learning, this report identifies a number of key issues.

- Generally, there is a weak link between education and work for students in most mid-level qualifications and fields of education. The exceptions are in occupations where there are licensing requirements or strong regulations.
- Employment outcomes for graduates improve as the level of study increases from certificate I to certificate III. However, only 37% of graduates obtain employment in their field of education, although this result does differ by field.
- Mid-level qualifications have three main roles, either as a labour market qualification (entry or upgrade), a transition to a higher-level qualification, or to widen access to higher-level qualifications.
- Training institutions could play a vital role in constructing and offering qualifications differently, to suit the purpose they serve.
- Improving outcomes requires encouraging industry bodies and intermediaries to focus on improving the relationship between work and education.



Longitudinal Surveys of Australian Youth Program

The Longitudinal Surveys of Australian Youth is a research program that tracks young people as they move from school to post-school destinations. This work has been produced by NCVET on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Department of Education.

The impact of school academic quality on low socioeconomic status students

Patrick Lim, Sinan Gemici and Tom Karmel

The full report can be found on the NCVET Portal <www.lsay.edu.au/publications/2640.html>.

This paper uses data from the Longitudinal Surveys of Australian Youth (LSAY) to investigate the impact of academic school quality on student outcomes. A companion paper by Gemici, Lim and Karmel (2013) describes the measure of school quality used in this paper.

In particular, this paper examines the interactions between students' individual socioeconomic status (SES), their academic achievement at age 15 years and the academic quality of the school they attend and school completion, tertiary entrance rank (TER) and university participation. This paper explores whether students from low socioeconomic backgrounds benefit to a greater or lesser extent from attending high-quality schools when compared with their more advantaged peers.

Key messages

- Academic school quality has a considerable differential effect on school completion for those who come from the lowest socioeconomic band. It also has a differential effect for those with low academic achievement at age 15 years.
- A differential effect is also seen in relation to the impact of academic school quality on tertiary entrance rank and the probability of going to university.
- Coming from a high socioeconomic background insulates students from early school leaving, even if they are weak performers and attend a non-academic school.

The conclusion is that the quality of the school matters and that students from a low socioeconomic background benefit even more from attending a school of high academic quality.

The impact of schools on young people's transition to university

Sinan Gemici, Patrick Lim and Tom Karmel

The full report can be found on the NCVER Portal <www.lsay.edu.au/publications/2541.html>.

The Longitudinal Surveys of Australian Youth (LSAY), in addition to the characteristics of the individual students making up the sample, collect data on a range of school characteristics. This, and the fact that the sample is clustered with the selected schools as the first stage, provides the opportunity to disentangle the impact of the school from the characteristics of students. This report exploits this feature of LSAY to investigate the impact of schools on tertiary entrance rank (TER) and the probability of going to university. While secondary education is about more than these academic goals, there is no doubt that these are of high importance, both from the point of view of the schools and the individual students and their parents.

The school characteristics covered in this report are: simple characteristics, such as school sector and location; structural characteristics, such as whether the school is single-sex or coeducational; resource base, such as class size and student–teacher ratio; and average demographics, such as the average socioeconomic status of students at the school and the extent to which parents put pressure on the school to achieve high academic results.

Key messages

- The attributes of schools do matter. Although young people's individual characteristics are the main drivers of success, school attributes are responsible for almost 20% of the variation in TER.
- Of the variation in TER attributed to schools, the measured characteristics account for a little over a third. The remainder captures 'idiosyncratic' school factors that cannot be explained by the data to hand and that can be thought of as a school's overall 'ethos'; no doubt teacher quality and educational leadership are important here.
- The three most important school attributes for TER are sector (that is, Catholic and independent vs government), gender mix (that is, single-sex vs coeducational), and the extent to which a school is 'academic'. For TER, the average socioeconomic status of students at a school does not emerge as a significant factor, after controlling for individual characteristics, including academic achievement from the PISA test.
- However, the characteristics of schools do matter for the probability of going to university, even after controlling for TER. Here, the three most important school attributes are the proportion of students from non-English speaking backgrounds, sector, and the school's socioeconomic make-up.

The authors also construct distributions of school performance (in relation to TER and the probability of going to university), which control for individual characteristics. The differences between high-performing and low-performing schools are sizeable. There is also considerable variation within school sectors, with the government sector having more than its share of low-performing schools.

Student income support and education and training participation in Australia

Chris Ryan

The full report can be found on the NCVER Portal <www.lsay.edu.au/publications/2618.html>.

Youth Allowance provides financial assistance to young Australians who are studying full-time, undertaking a full-time apprenticeship or traineeship, or looking for work. Public commentary on the adequacy of student income support and the incidence of taking a ‘gap’ year to meet Youth Allowance eligibility criteria gave rise to this research report. It set out to examine the role and impact of Youth Allowance on participation in post-school education and training, course completion, ‘gap’ taking and the financial position of a sample of young Australians over the period 1999–2007.

Subsequent to this research, the Australian Government announced changes to the Youth Allowance policy, including changes to the parental income threshold for maximum payment, the taper rate arrangements for dependent students and independence criteria (workforce participation and age).

This research uses the Longitudinal Surveys of Australian Youth (LSAY). It employs a range of econometric techniques to address the fact that the targeted nature of Youth Allowance means that those eligible have different characteristics from those who are not (and we do not directly observe the eligibility status of non-students), and makes particular use of the equivalent national tertiary entrance rank (ENTER) collected in the survey.

Key messages

- Based on carefully matched student characteristics (other than family income), full-time tertiary enrolment rates following Year 12 are similar, regardless of whether or not students are eligible for Youth Allowance.
- Youth Allowance substantially improves course completion rates.
- The eligibility rules in operation at the time of the research did lead to more students undertaking a ‘gap’ year.
- Youth Allowance does not alleviate financial hardship totally – those on Youth Allowance are the least satisfied about their financial situation.



NCVER Core Research Program

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

NCVER consultancy work

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

Assessment issues in VET: minimising the level of risk

Sian Halliday-Wynes and Josie Misko

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2620.html>.

This report explores some of the key issues associated with assessment in vocational education and training (VET) and reflects on some possible solutions. The authors provide examples from three industry areas where concerns have been raised about the quality of provision and assessment, with some conclusions drawn on the issues raised, specifically relating to childcare and aged care services and the Certificate IV in Training and Assessment (TAE).

Key messages

- Large groups of existing workers in the childcare and aged care services industries have been required to attain or upgrade qualifications to keep abreast of regulatory changes. This has led to some apprehension among training providers and industry about the rigour and consistency of assessments, including the recognition of prior learning (RPL).
- Courses of short duration, coupled with insufficient training, are felt to increase the risk of poor skills acquisition and rigour in assessment, including for entry-level teachers and trainers.
- Inadequate mechanisms for selecting students with the appropriate attributes and motivations for working in the caring occupations (including aged care and childcare) are felt to reduce the quality of training and assessment.
- A lack of systemic validation and moderation processes within and between providers and training systems is reducing the level of confidence in the comparability and accuracy of assessments.
- The tendency on the part of assessors to develop and implement their own assessment tools and materials, as well as system imperatives for assessors to customise assessments to local contexts, may be factors contributing to a reduction in the comparability and accuracy of assessments. The regular use of independent assessors can help to minimise this risk.
- The Certificate IV in Training and Assessment may require more explicit content in relation to assessment if it is to provide teachers and trainers with the levels of underpinning knowledge and practice sufficient for undertaking quality assessments.
- The regular involvement of employers in assessments, including off-the-job assessments, needs to be encouraged.

Does 1 = 1? Mapping measures of adult literacy and numeracy

Michelle Circelli, Shelley Gillis, Mark Dulhunty,
Margaret Wu and Leanne Calvitto

*The full report can be
found on the NCVER Portal
<[www.ncver.edu.au/
publications/2581.html](http://www.ncver.edu.au/publications/2581.html)>.*

Being able to measure the level of proficiency in literacy and numeracy skills, and any changes in the level of skills, is important for getting a sense of how well language, literacy and numeracy programs are working. Among the tools used to measure language, literacy and numeracy proficiency in Australia are the Adult Literacy and Life Skills (ALLS) Survey and the Australian Core Skills Framework (ACSF).

The Adult Literacy and Life Skills Survey measures the skills of adult populations within and across a number of participating Organisation for Economic Co-operation and Development (OECD) countries. It is used by the Australian Government to monitor progress against the National Skills and Workforce Development Agreement. Furthermore, the next iteration of this survey will be used to measure the success of the 2012–22 National Foundation Skills Strategy for Adults. However, the survey has two drawbacks: it is a relatively coarse measure and is designed to provide a summary of literacy and numeracy rather than to act as an assessment tool; and it is only administered every ten years.

Contrasting with the Adult Literacy and Life Skills Survey, the Australian Core Skills Framework – used in two key federal government adult language, literacy and numeracy programs, as well as in a variety of other settings, including the South Australian Certificate of Education – can be applied at the individual level and provides evidence of progress, such that a learner’s performance in a core skill can be assessed, and strengths and weaknesses identified. Further, data about a learner’s performance can be gathered at frequent intervals.

Both these frameworks have five performance levels and it is sometimes assumed that these levels are equivalent. But are they? This paper presents findings from a study that looked at the issue of the equivalence of the frameworks.

Key messages

- Equivalence between the two frameworks at the lowest skill level was found – one does equal one. However, the alignment was not as direct at the higher skills levels, with the numeracy and reading constructs of the Adult Literacy and Life Skills Survey found to be generally more complex than those of the Australian Core Skills Framework. Indeed, Level 3 ALLS – the minimum aspirational target of the National Foundation Skills Strategy for Adults – was similar in complexity to exit Level 4 of the ACSF.
- A definite hierarchical structure within the levels of the Australian Core Skills Framework was confirmed, offering the potential to clearly demonstrate progress within a level.

This research has shown that alignment between the two frameworks is achievable and that this alignment offers the potential for measuring progress against national objectives more regularly. Indeed, the ACSF offers a way of monitoring any improvements in adult literacy and numeracy in a more nuanced manner.

Socioeconomic disadvantage and participation in tertiary education: preliminary thoughts

Tom Karmel and Patrick Lim

The full report can be found on the NCVET Portal <www.ncver.edu.au/publications/2612.html>.

This paper was written in early 2010 to encourage policy-makers to think about how to measure socioeconomic status (SES). It also provides some data on socioeconomic status and tertiary education participation. Finally, it speculates about the likely impact of an expansion in higher education on those from a low socioeconomic background.

Key messages

- Measurement of socioeconomic status is a complex issue. While the concept relates to the characteristics of individuals and their families, for practical reasons, measures based on the Australian Bureau of Statistics Socio-Economic Indexes for Areas (ABS SEIFA) are usually adopted.
- SEIFA measures are very poor in classifying individuals by socioeconomic status. Nevertheless, the SEIFA measures perform quite well in measuring the aggregate relationship between socioeconomic status and educational participation.
- An implication of SEIFA's poor classificatory ability is that any policy that targets funding on the basis of SEIFA will result in the funds being badly misdirected.
- Some simple tabular analyses indicate that vocational education and training (VET) does a good job for low-socioeconomic status individuals and is not overly biased toward lower-level qualifications for this group.
- The group most likely to be affected by an expansion in the higher education sector will be those not currently undertaking post-school study rather than those currently undertaking VET.

The paper also notes that SEIFA would be a very poor measure to implement any expansion in higher education aimed at low-socioeconomic status individuals.

Starting out in low-skill jobs

Tom Karmel, Tham Lu and Damian Oliver

The full report can be found on the NCVER Portal <www.ncver.edu.au/publications/2649.html>.

Many young people start their working lives in low-skill jobs. This report examines whether, for those who have left full-time education, a low-skill job provides them with a good start to their working lives, or whether starting out in a low-skill job can have a ‘scarring’ effect on the individual. Here we define low-skill jobs using levels 4 and 5 of the skill levels allocated by the Australian Bureau of Statistics (ABS) to each occupation.

Key messages

- As expected, starting out in a low-skill job yields lower wages than starting out in a higher-skilled job. Five years after leaving full-time education, the wage penalty (conditioning on education and other characteristics) still exists, but this scarring diminishes over time. However, any job is better than no job, given that the wage penalty after five years of having no job a year after leaving full-time education is worse than taking a low-skill job.
- Not surprisingly, young people who possess high human capital (education, ability, and experience) have more opportunities to move to a high-skill job. Males are more likely to make the transition to high-skill jobs than females. Young people who are part-time workers are likely to remain in low-skill jobs, although part-time or casual low-skill jobs can be a positive pathway for young people to progress into full-time or permanent positions.
- There is no evidence to suggest that young people choose to stay in low-skill jobs for positive reasons such as high job satisfaction or relatively high wages.

The research underlines the importance of good career guidance, by recognition of labour market opportunities, for young people as they make their way through senior schooling and post-school education and training.

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