NCVER

National Centre for
Vocational Education Research

RESEARCH MESSAGES 2018

INFORMING + INFLUENCING
THE AUSTRALIAN VET SECTOR

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This document should be attributed as National Centre for Vocational Education Research 2019, *Research messages 2018*, NCVER, Adelaide.

IMAGES NCVER

ISSN 1838-8515 print edition
1838-8531 web edition

TD/TNC 134.05

Published by NCVER, ABN 87 007 967 311

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Introduction

Research messages 2018 highlights the varied nature of the research activities undertaken by the National Centre for Vocational Education Research (NCVER) in the past year.

This year's publication provides information on:

- the key research findings from our extensive program of research
- infographics and visualisations designed to help users easily understand our data
- conferences, presentations, webinars and other research communications
- information resources that explain the complexities of the VET system and its related policies.

NCVER is an independent national body responsible for collecting, managing, analysing and communicating vocational education and training (VET) research and statistics. Our research program aims to contribute to the enhancement of VET policy and practice for government, training and industry organisations.

As the world of work continues to evolve and rapid advances in technology reshape the skills needed, our research also needs to adapt in order to harness the power of big data, machine learning and analytics to provide comprehensive insights to inform and influence the VET sector. In keeping with the changing education and employment landscape, our research program continues to develop to meet the needs of stakeholders, producing innovative research to support VET policy and practice.

Communicating our work is an important aspect of our research program. During 2018, NCVER researchers participated in, or facilitated, presentations, webinars and forums including the *National VET Data Linkage Roundtable* in Canberra, as well as our flagship conference, the *27th National Vocational Education and Training Research Conference 'No Frills'*.

2018 RESEARCH ACTIVITY

8 reports

4 summaries

2 opinion pieces

6 interactive tools

2917 new titles in VOCEDplus

6 webinars

22 external presentations

4 in-house seminars for external organisations

8 submissions to parliamentary inquiries and public consultations

Key research areas

ncver.edu.au/research-and-statistics/national-research-priorities

The sourcing, prioritising and commissioning of NCVER research continues to be informed by national research priorities under the auspices of the Skills Senior Officials Network. Research published during 2018 encompasses a range of themes and topics categorised according to the three broad areas as described below.

Structures and systems for skilling and learning

Examining the impact of policy, institutional, funding and market frameworks on the provision of education and training.

The VET system in Australia is moving to a demand-driven market. Moreover, the skills and jobs landscape is blurring the boundaries between higher education and VET, making it crucial that the systems are well placed for learning and training.

Key research areas of focus within this topic include:

governance

training markets

models for skill development and funding

compliance and regulation

measuring success, impact and quality outcomes

partnerships

apprenticeships and traineeships

international systems of skilling and learning comparisons with Australia

accredited and non-accredited training

work-based learning and sites of learning, employer use, and employer engagement with training.

The impact of vocational education and training

Ensuring individuals and employers get the highest return on investment in education and training.

Understanding the return on investment (ROI) in education and training helps individuals and enterprises to determine changes in the employability of workers following training or to provide a measure of productivity improvements within firms. For governments, it provides important information on the performance and justification for public expenditure. The VET sector continues to serve a dynamic and diverse group of learners including early school leavers, disadvantaged students and mature-age students.

Primary areas of research in this category aim to capture relevant issues including:

economic and social outcomes

future of employment

learner diversity and trends

social cohesion

foundation skills

labour markets.

Teaching and learning

Understanding the needs of learners to ensure meaningful engagement with the education system and examining what works to ensure quality of outcomes across teaching and learning models, assessment and reporting.

The journey from education and training to employment is not a linear or straightforward pathway. The changing boundaries between education provision (such as schools, VET and higher education), together wth the 'casualisation' of labour markets, adds to the multi-dimensional nature of these transitions. Individuals may access the VET system at different points in their lives for a variety of different reasons. It is therefore important that the VET teaching, learning and assessment practices are meeting their needs.

NCVER research priorities in this category include:

- student aspirations and choice
- outcomes
- pathways and transitions
- VET workforce
- pedagogy
- assessment
- workplace learning.

Structures and systems for skilling and learning

Data linkage in VET research: opportunities, challenges and principles

Kristen Osborne, Craig Fowler and Michelle Circelli

ncver.edu.au/research-and-statistics/publications/all-publications/data-linkage-in-vet-research-opportunities-challenges-and-principles

This discussion paper explores the possibilities and risks that data linkage presents for the vocational education and training (VET) sector. Along with a broad overview of the nature of data linkage, it highlights possible applications for data linkage in the VET sector and examines the key challenges associated with its use.

A number of case studies are reviewed to illustrate the advantages data linkage can offer, as well as the challenges that may arise. In order to better understand the options for data linkage from an education and employment perspective, a 'map' of relevant Australian datasets is presented, along with a list of data sources that may be of use to VET research. As well as selected Australian datasets, the paper reviews some international datasets of potential interest for VET research in Australia.

Using the insights gained from past data-linkage projects and taking into account the privacy and ethics concerns, the paper presents a set of six principles for data linkage. These principles provide researchers with basic steps for guidance when embarking upon a data-linkage project. Finally, future directions for data linkage in VET research are explored.

Key messages

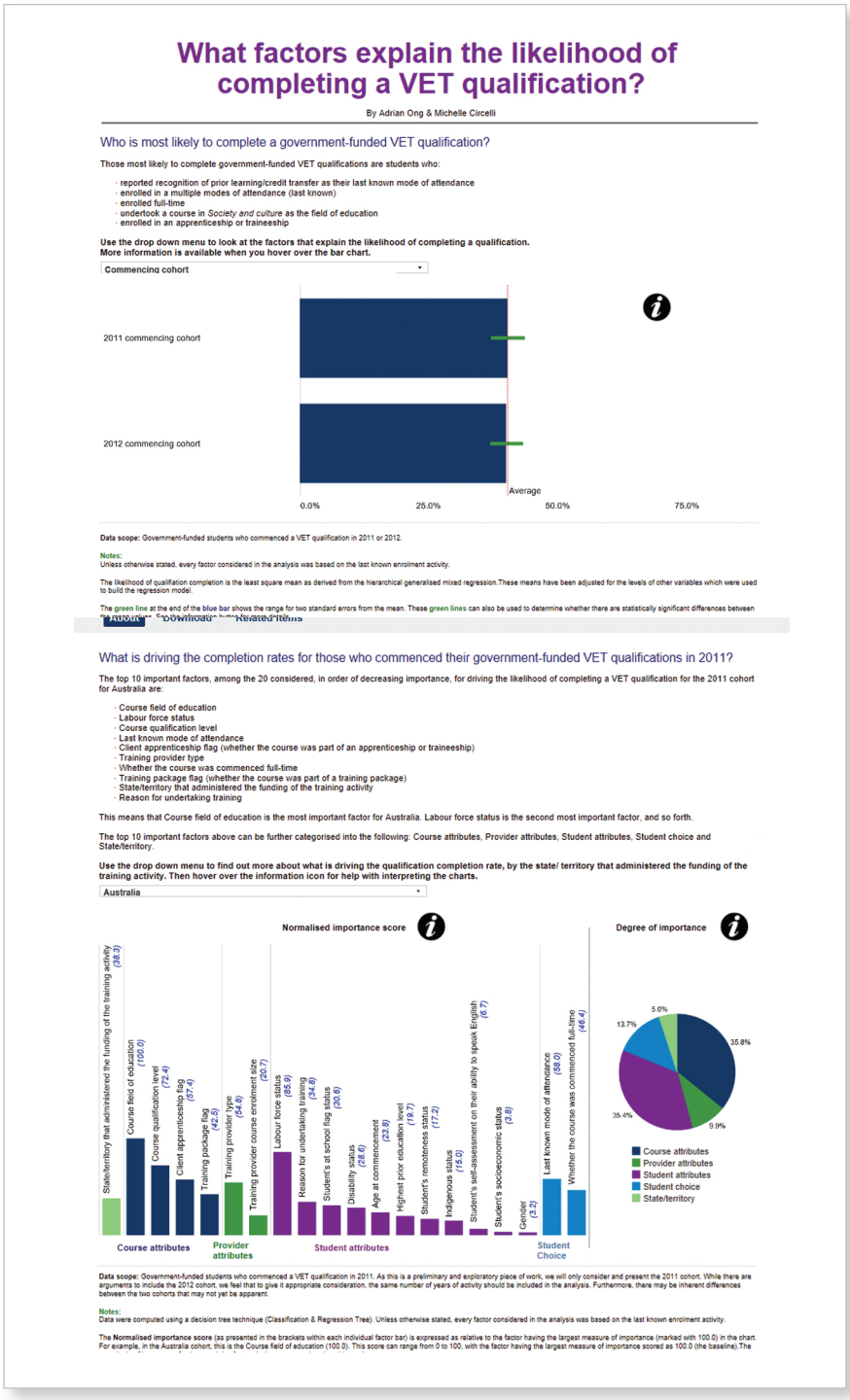
- Data linkage is a powerful tool for research and policy in the VET sector, with a number of past research projects demonstrating its feasibility and utility.
- A number of challenges are associated with data linkage, chiefly privacy and ethics concerns, but additionally issues such as:
  - the various data custodians to be dealt with
  - the legislative environment in the area of data linkage
  - the costs associated with any data-linkage project
  - the availability of technical skills and infrastructure resources.
- Data linkage can be used to capture a more complete picture of an individual's lifelong journey through education and employment, including their pathway through VET. The success of this depends on the cooperation of data custodians to foster linkage.
- Examples of future projects in the VET sector that may benefit from the use of data linkage include investigation of long-term student outcomes, analyses of the return on investment for particular programs, or examination of childhood and youth factors as they relate to VET study.

What factors explain the likelihood of completing a VET qualification? - Interactive tool

Adrian Ong and Michelle Circelli

The full interactive tool is available on our Portal, at https://www.ncver.edu.au/research-and-statistics/data/infographics/what-factors-explain-the-likelihood-of-completing-a-vet-qualification

This interactive data tool presents preliminary findings on the factors affecting the likelihood of completing a government-funded VET qualification (as defined by *Government-funded students and courses 2016)* for those who commenced their training in 2011 and 2012.

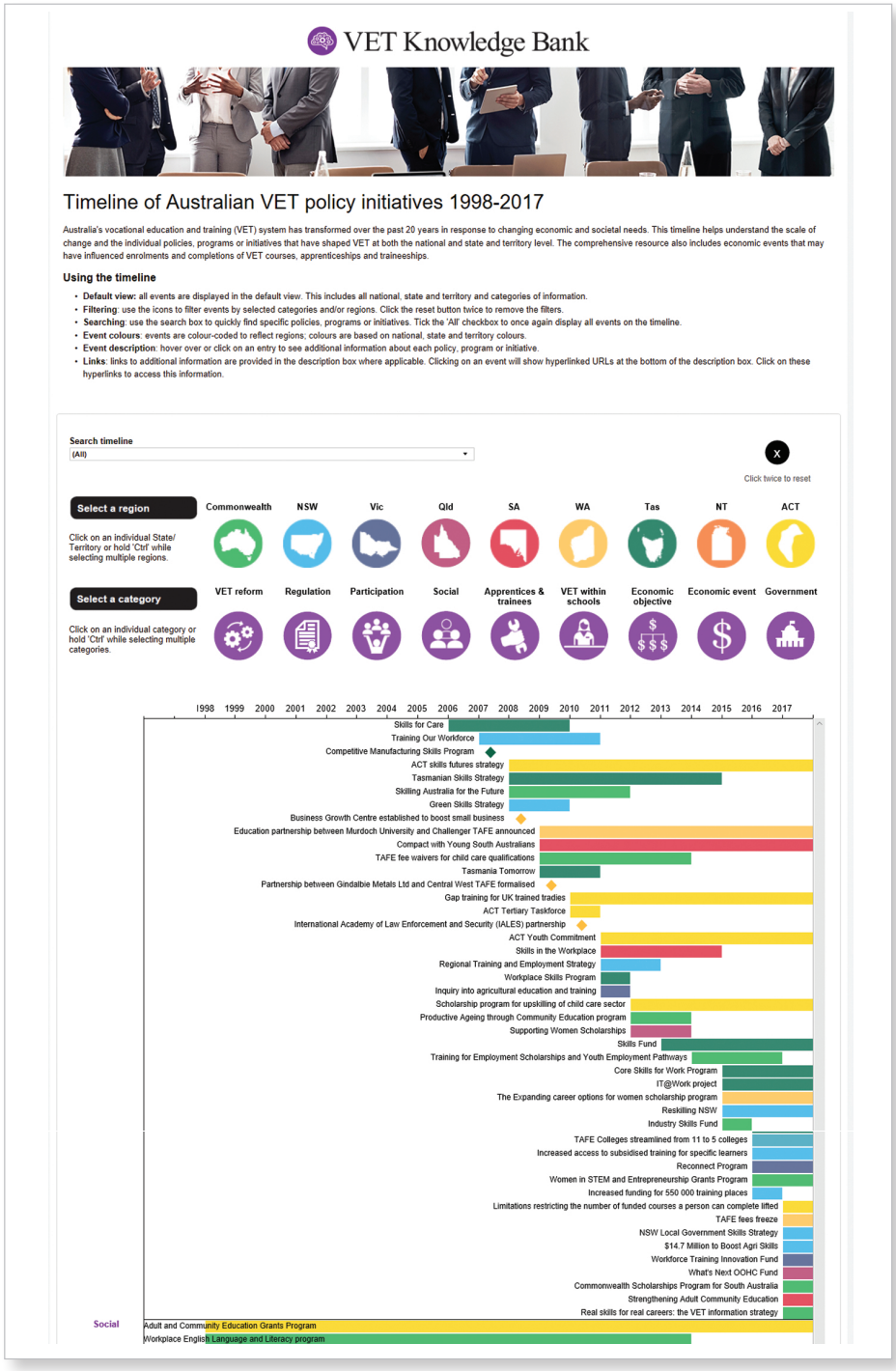


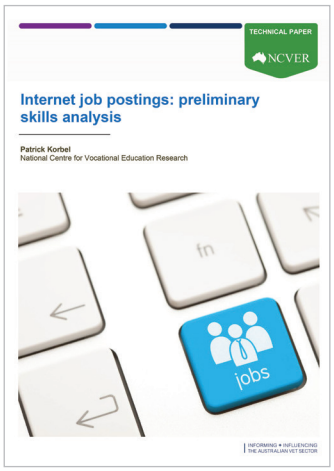
Timeline of Australian VET policy initiatives 1998-2017 - interactive tool

Bridget Wibrow, Radhika Naidu and Anna Payton

The timeline is available on VOCEDplus as part of the VET Knowledge Bank
https://www.voced.edu.au/vet-knowledge-bank-timeline-australian-vet-policy-initiatives-1998-2017

Australia's vocational education and training (VET) system has transformed over the past 20 years in response to changing economic and societal needs. This timeline helps understand the scale of change and the individual policies, programs or initiatives that have shaped VET at both the national and state and territory level. The comprehensive resource also includes economic events that may have influenced enrolments and completions of VET courses, apprenticeships and traineeships.





Internet job postings: preliminary skills analysis

Patrick Korbel

ncver.edu.au/research-and-statistics/publications/all-publications/internet-job-postings-preliminary-skills-analysis

NCVER has licensed access to Australian internet job postings data collected by Burning Glass Technologies. This data is sourced from job ads posted on various websites and provides information on the number and types of jobs available, as well as the required and desirable skills requested by employers.

This data complements NCVER's existing data collections and surveys by providing information about demand in the Australian labour market, including the skills requested by employers.

NCVER has designed this suite of products to demonstrate the utility of these data and the possibilities they offer for further research and analysis. We welcome your feedback on the best ways to use this new data source to inform and influence the Australian VET sector.

These products focus on the skills requested in the internet job postings and how they relate to the skills being provided in training. We also provide examples of the kinds of analyses and insights that can be gained from the data.

The four products are:

Internet job postings: preliminary skills analysis – technical paper, which outlines how these data are collected and analysed, how they compare with other sources of data, and considerations for the use and interpretation of the data.

It is important to read this document to understand this new and different data source.

Internet job postings: employability skills – infographic, which focuses on the general skills and attributes being requested across occupations and industries and has case studies on Hospitality workers and the Child care services sector

Internet job postings: personal care and support skills – infographic, which focuses on the skills being requested for jobs involving personal care and support.

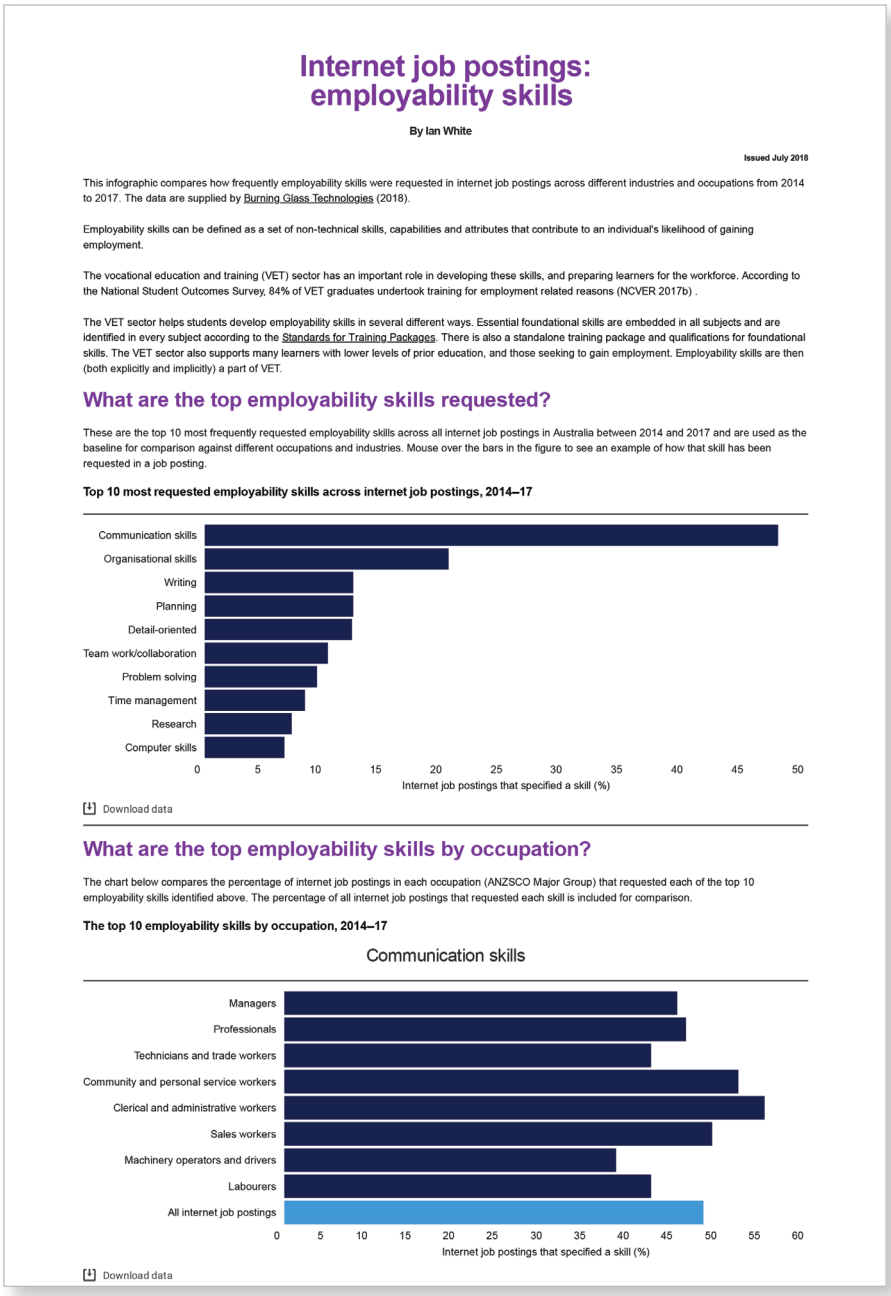
Internet job postings: trending and emerging skills – infographic, which focuses on the skills being requested more often across occupations and industries and has case studies on the ICT and telecommunications sector and Electricians

Internet job postings: employability skills – infographic

Ian White

The full interactive infographic is available on our Portal, at ncver.edu.au/research-and-statistics/publications/all-publications/internet-job-postings-preliminary-skills-analysis/internet-job-postings-employability-skills-infographic

This infographic is part of the release *Internet job postings: preliminary skills analysis* that uses data sourced from internet job postings to see how the skills requested relate to the skills being provided in training. This infographic focuses on employability skills, while the other infographics focus on trending and emerging skills, and personal care and support skills, respectively.



Internet job postings: employability skills

By Ian White

Issued July 2018

This infographic compares how frequently employability skills were requested in internet job postings across different industries and occupations from 2014 to 2017. The data are supplied by Burning Glass Technologies (2018).

Employability skills can be defined as a set of non-technical skills, capabilities and attributes that contribute to an individual's likelihood of gaining employment.

The vocational education and training (VET) sector has an important role in developing these skills, and preparing learners for the workforce. According to the National Student Outcomes Survey, 84% of VET graduates undertook training for employment related reasons (NCVER 2017b) .

The VET sector helps students develop employability skills in several different ways. Essential foundational skills are embedded in all subjects and are identified in every subject according to the Standards for Training Packages. There is also a standalone training package and qualifications for foundational skills. The VET sector also supports many learners with lower levels of prior education, and those seeking to gain employment. Employability skills are then (both explicitly and implicitly) a part of VET.

What are the top employability skills requested?

These are the top 10 most frequently requested employability skills across all internet job postings in Australia between 2014 and 2017 and are used as the baseline for comparison against different occupations and industries. Mouse over the bars in the figure to see an example of how that skill has been requested in a job posting.

Top 10 most requested employability skills across internet job postings, 2014–17

Download data

What are the top employability skills by occupation?

The chart below compares the percentage of internet job postings in each occupation (ANZSCO Major Group) that requested each of the top 10 employability skills identified above. The percentage of all internet job postings that requested each skill is included for comparison.

The top 10 employability skills by occupation, 2014–17

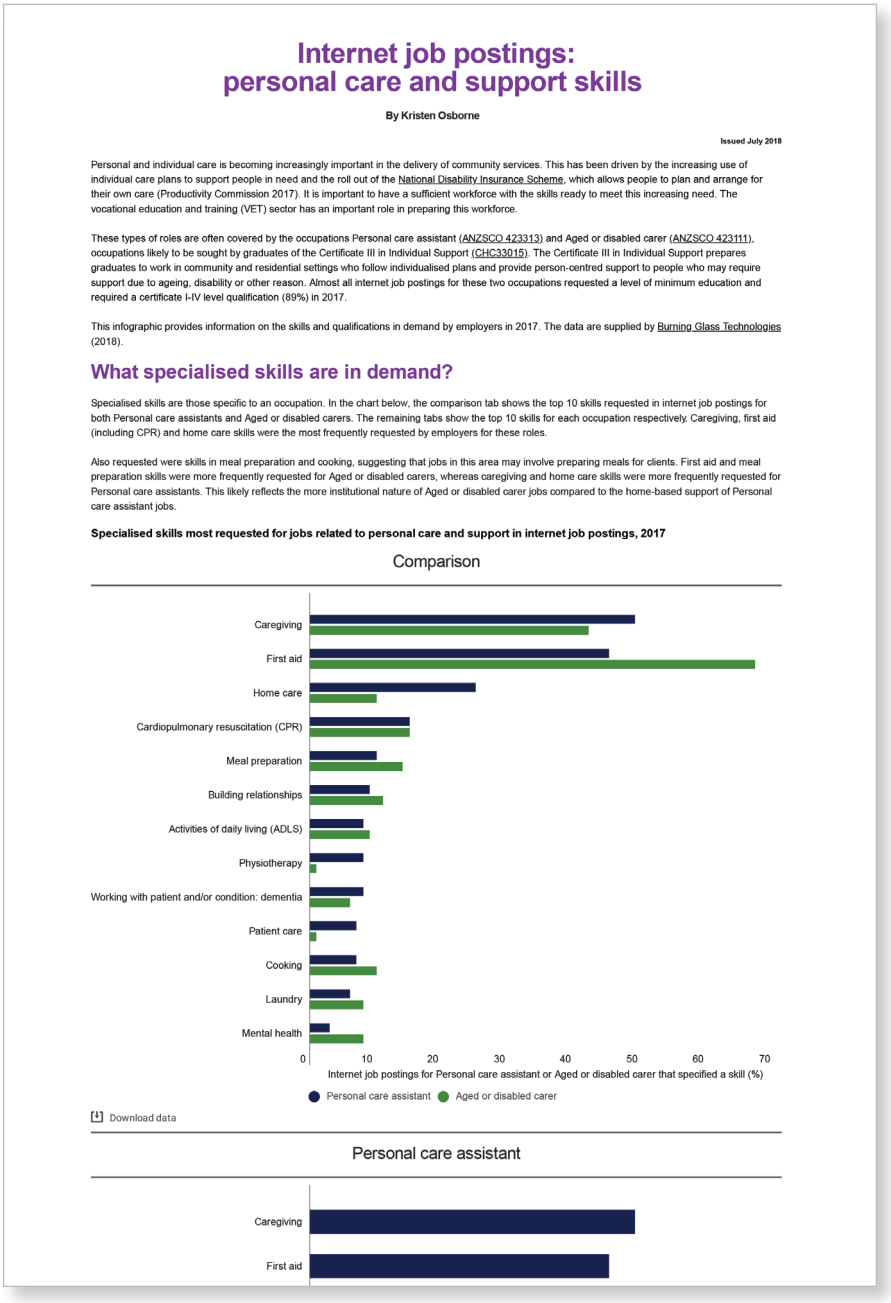
Download data

Internet job postings: personal care and support skills – infographic

Kristen Osborne

The full interactive infographic is available on our Portal, at ncver.edu.au/research-and-statistics/publications/all-publications/internet-job-postings-preliminary-skills-analysis/internet-job-postings-personal-care-and-support-skills-infographic

This infographic is part of the release *Internet job postings: preliminary skills analysis* that uses data sourced from internet job postings to see how the skills requested relate to the skills being provided in training. This infographic focuses on personal care and support skills, while the other infographics focus on employability skills and trending and emerging skills, respectively.



Internet job postings: personal care and support skills

By Kristen Osborne

Issued July 2018

Personal and individual care is becoming increasingly important in the delivery of community services. This has been driven by the increasing use of individual care plans to support people in need and the roll out of the National Disability Insurance Scheme, which allows people to plan and arrange for their own care (Productivity Commission 2017). It is important to have a sufficient workforce with the skills ready to meet this increasing need. The vocational education and training (VET) sector has an important role in preparing this workforce.

These types of roles are often covered by the occupations Personal care assistant (ANZSCO 423313) and Aged or disabled carer (ANZSCO 423111), occupations likely to be sought by graduates of the Certificate III in Individual Support (CHC33015). The Certificate III in Individual Support prepares graduates to work in community and residential settings who follow individualised plans and provide person-centred support to people who may require support due to ageing, disability or other reason. Almost all internet job postings for these two occupations requested a level of minimum education and required a certificate I-IV level qualification (89%) in 2017.

This infographic provides information on the skills and qualifications in demand by employers in 2017. The data are supplied by Burning Glass Technologies (2018).

What specialised skills are in demand?

Specialised skills are those specific to an occupation. In the chart below, the comparison tab shows the top 10 skills requested in internet job postings for both Personal care assistants and Aged or disabled carers. The remaining tabs show the top 10 skills for each occupation respectively. Caregiving, first aid (including CPR) and home care skills were the most frequently requested by employers for these roles.

Also requested were skills in meal preparation and cooking, suggesting that jobs in this area may involve preparing meals for clients. First aid and meal preparation skills were more frequently requested for Aged or disabled carers, whereas caregiving and home care skills were more frequently requested for Personal care assistants. This likely reflects the more institutional nature of Aged or disabled carer jobs compared to the home-based support of Personal care assistant jobs.

Specialised skills most requested for jobs related to personal care and support in internet job postings, 2017

Comparison

Personal care assistant

Internet job postings: trending and emerging skills – infographic

Emerick Chew

The full interactive infographic is available on our Portal, at ncver.edu.au/research-and-statistics/publications/all-publications/internet-job-postings-preliminary-skills-analysis/internet-job-postings-trending-and-emerging-skills-infographic

This infographic is part of the release *Internet job postings: preliminary skills analysis* that uses data sourced from internet job postings to see how the skills requested relate to the skills being provided in training. This infographic focuses on trending and emerging skills, while the other infographics focus on employability skills, and personal care and support skills, respectively.

Internet job postings: trending and emerging skills

By Emerick Chew

Issued July 2018

This infographic provides information on trending and emerging skills requested in internet job postings from 2014 to 2017.

The data are supplied by Burning Glass Technologies (2018). The 200 most requested skills by employers in internet job postings for each year were extracted and ranked accordingly so the trending and emerging skills could be identified.

Trending skills are defined as skills that had an increase of at least 50 ranks between 2014 and 2017 in internet job postings. Emerging skills are skills that were not previously in the top 200 most requested skills, but have since risen into the top 200 most requested skills list. Emerging skills must be within the top 150 most requested skills in 2017, or have risen in the rankings since they entered the top 200 in 2015 or 2016.

These trending and emerging skills are not necessarily new skills, but are an indication of what has been increasingly requested over the last four years. They may also indicate areas of employment in which there is an increasing number of internet job postings. The focus of this work is on specialised skills – that is, skills specific to an occupation.

The vocational education and training (VET) sector has an important role in developing many of these skills and preparing learners for the workforce. This work looks more closely at two occupations closely associated with VET and whether the relevant qualifications are providing the skills requested by employers in internet job postings.

What specialised skills are trending and emerging overall?

Trending skills across all internet job postings, 2014–17

Transportation logistics rose 91 ranks between 2014 and 2017 - the largest percentage increase among all trending skills (up 46%).

The trend in transportation logistics across all internet job postings could likely be attributed to the increasing importance of automation in the transportation industry. More employers are therefore seeking applicants with transportation logistics experience or skills to prepare or advance their organisation in that aspect. Transportation logistics is also a trending skill in internet job postings for three different major occupation groups: Managers, Clerical and administrative workers, and Sales workers – this can be observed in the occupation section below.

Emerging skills across all internet job postings, 2014–17

Child protection emerged as a skill in 2015 and has since risen 70 ranks between 2015 and 2017 (up 35%).

Unaccredited training: why employers use it and does it meet their needs?

Ian White, Navinda De Silva and Toni Rittie

ncver.edu.au/research-and-statistics/publications/all-publications/unaccredited-training-why-employers-use-it-and-does-it-meet-their-needs

The key drivers of employer investment in workforce training include improving the quality of a product or service, the adoption of new technology, and to meet legislative, regulatory or licensing requirements. Various types of training — accredited, unaccredited, informal — are accessed by employers to fulfil their training needs. This report focuses on employer's use of unaccredited training.

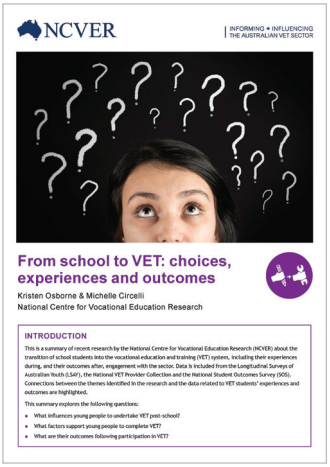
As unaccredited training sits outside the mandatory reporting requirements of the nationally recognised accredited training system, administrative data relating to its use are not systematically collected in the National VET Provider Collection, therefore the true extent of its uptake in Australia is largely unknown. However, we know from the 2017 Survey of Employers' Use and Views of the VET System that around half of employers in Australia are looking outside the nationally accredited vocational education and training (VET) system to provide their employees with training to meet their skill needs.

This study takes a closer look at employers' use of unaccredited training, explores why they use it, why they choose unaccredited training over accredited training, and whether it meets their skill needs.

Key messages

- In 2017, over 90% of Australian employers provided some form of training to their employees: 54% engaged with the VET system; 51% used unaccredited training; and 81% said they provided informal training.
- Employers are looking to develop skills that are highly job relevant or organisation specific with unaccredited training. Cost, the ability to tailor the training and flexibility in provision are the key reasons for employers choosing unaccredited over accredited training. Data linkage can be used to capture a more complete picture of an individual's lifelong journey through education and employment, including their pathway through VET. The success of this depends on the cooperation of data custodians to foster linkage.
- Most employers using unaccredited training are satisfied that it provides the required skills for their workers. Around half of the employers using unaccredited training did not use an external provider, but, for those who did, private training providers and professional/industry associations were the main providers chosen, largely because of their high level of industry knowledge and the suitability of the course content for their employees.
- While both accredited and unaccredited training were selected by employers to meet their skill needs, little research is available on the impact that the type of training has on the employee, particularly with respect to the transferability and recognition of their skills to other occupations or industries. Are the skills and capabilities acquired through accredited and unaccredited training comparable? The upcoming Australian Qualifications Framework (AQF) review may go some way towards formal recognition for unaccredited training. There is also little to no data are available on employers' expenditure on training and whether this influences their training choices.
- We await the 2019 Survey of Employer's Use and Views of the VET System to the gain the latest insights on employer training choices. The results will be available in October 2019.

Teaching and learning



From school to VET: choices, experiences and outcomes

Kristen Osborne, Michelle Circelli

ncver.edu.au/research-and-statistics/publications/all-publications/from-school-to-vet-choices,-experiences-and-outcomes

This is a summary of recent research by the National Centre for Vocational Education Research (NCVER) about the transition of school students into the vocational education and training (VET) system, including their experiences during, and their outcomes after, engagement with the sector. Data is included from the Longitudinal Surveys of Australian Youth (LSAY), the National VET Provider Collection and the National Student Outcomes Survey (SOS).

Connections between the themes identified in the research and the data related to VET students' experiences and outcomes are highlighted.

This summary explores the following questions:

- What influences young people to undertake VET post-school?
- What factors support young people to complete VET?
- What are their outcomes following participation in VET?

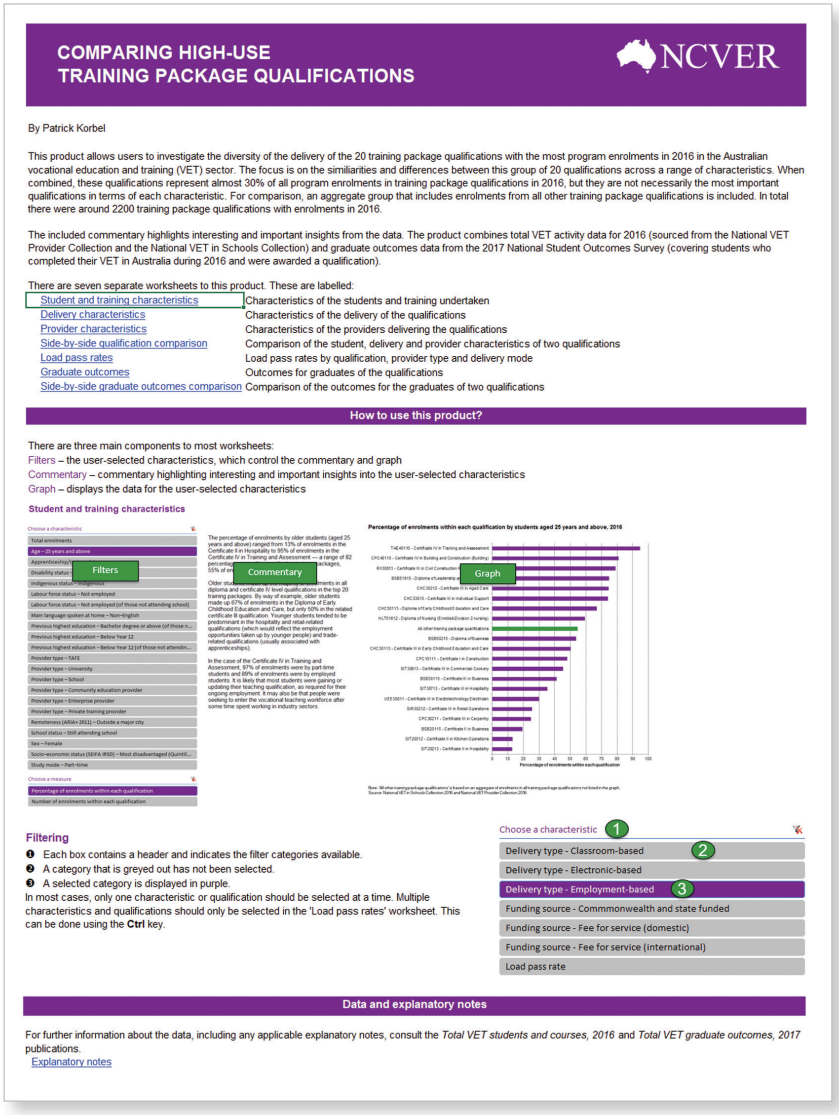
Comparing high-use training package qualifications - interactive tool

Patrick Korbel

The full interactive tool is available on our Portal, at ncver.edu.au/research-and-statistics/publications/all-publications/comparing-high-use-training-package-qualifications

This product allows users to investigate the diversity of the 20 training package qualifications with the most program enrolments in 2016. The focus is on the similarities and differences between this group of 20 qualifications across a range of characteristics. When combined, these qualifications represent 30% of all program enrolments in training package qualifications in 2016 but they are not necessarily the most important qualifications in terms of each characteristic. For comparison, an aggregate group that includes enrolments from all other training package qualifications is included. In total, there were around 2200 training package qualifications with enrolments in 2016.

The included commentary highlights interesting and important insights from the data. Users can also explore for themselves the characteristics of the students in those qualifications, the delivery of the qualifications, the providers delivering the qualification, and outcomes for graduates of those qualifications. It combines total VET activity data for 2016 (sourced from the National VET Provider Collection and the National VET in Schools Collection) and graduate outcomes data from 2017 National Student Outcomes Survey.



COMPARING HIGH-USE TRAINING PACKAGE QUALIFICATIONS

NCVER

By Patrick Korbel

This product allows users to investigate the diversity of the delivery of the 20 training package qualifications with the most program enrolments in 2016 in the Australian vocational education and training (VET) sector. The focus is on the similiarities and differences between this group of 20 qualifications across a range of characteristics. When combined, these qualifications represent almost 30% of all program enrolments in training package qualifications in 2016, but they are not necessarily the most important qualifications in terms of each characteristic. For comparison, an aggregate group that includes enrolments from all other training package qualifications is included. In total there were around 2200 training package qualifications with enrolments in 2016.

The included commentary highlights interesting and important insights from the data. The product combines total VET activity data for 2016 (sourced from the National VET Provider Collection and the National VET in Schools Collection) and graduate outcomes data from the 2017 National Student Outcomes Survey (covering students who completed their VET in Australia during 2016 and were awarded a qualification).

There are seven separate worksheets to this product. These are labelled:

Student and training characteristics	Characteristics of the students and training undertaken
Delivery characteristics	Characteristics of the delivery of the qualifications
Provider characteristics	Characteristics of the providers delivering the qualifications
Side-by-side qualification comparison	Comparison of the student, delivery and provider characteristics of two qualifications
Load pass rates	Load pass rates by qualification, provider type and delivery mode
Graduate outcomes	Outcomes for graduates of the qualifications
Side-by-side graduate outcomes comparison	Comparison of the outcomes for the graduates of two qualifications

How to use this product?

There are three main components to most worksheets:
Filters – the user-selected characteristics, which control the commentary and graph
Commentary – commentary highlighting interesting and important insights into the user-selected characteristics
Graph – displays the data for the user-selected characteristics

Student and training characteristics

Filters

Commentary

Graph

Percentage of enrolments within each qualification by students aged 25 years and above, 2016

Filtering

1. Each box contains a header and indicates the filter categories available.
2. A category that is greyed out has not been selected.
3. A selected category is displayed in purple.

In most cases, only one characteristic or qualification should be selected at a time. Multiple characteristics and qualifications should only be selected in the 'Load pass rates' worksheet. This can be done using the **Ctrl** key.

Choose a characteristic 1
Delivery type - Classroom-based 2
Delivery type - Electronic-based
Delivery type - Employment-based 3
Funding source - Commmonwealth and state funded
Funding source - Fee for service (domestic)
Funding source - Fee for service (international)
Load pass rate

Data and explanatory notes

For further information about the data, including any applicable explanatory notes, consult the *Total VET students and courses, 2016* and *Total VET graduate outcomes, 2017* publications.
Explanatory notes

High-use training package qualifications: childcare

Patrick Korbel

ncver.edu.au/research-and-statistics/publications/all-publications/high-use-training-package-qualifications-childcare

Comparing high-use training package qualifications shows some of the differences and similarities between the Certificate III in Early Childhood Education and Care and the Diploma of Early Childhood Education and Care. Both of these qualifications have the notional occupational outcome of childcare worker, yet there are distinct differences between them in enrolment trends, delivery, student profile and graduate outcomes. This summary further explores the context and causes of some of the similarities and differences between the two qualifications.

High-use training package qualifications: specialised providers

Patrick Korbel

ncver.edu.au/research-and-statistics/publications/all-publications/high-use-training-package-qualifications-specialised-providers

Comparing high-use training package qualifications shows the extent of 'specialised' providers delivering one of the

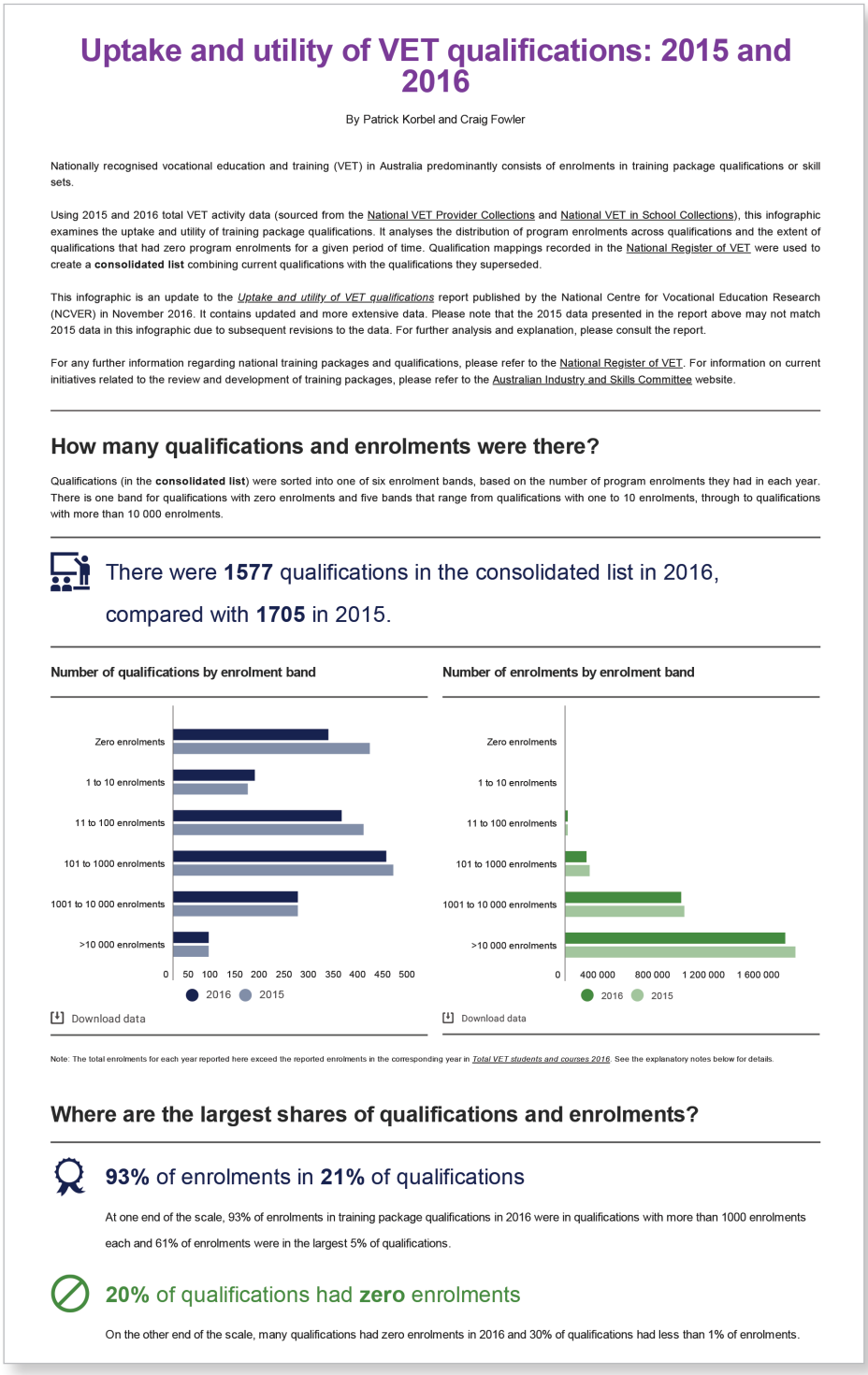
20 training package qualifications with the most program enrolments in 2016. This summary further examines the specialised providers of two particular qualifications: the Diploma of Early Childhood Education and Care and the Certificate IV in Training and Assessment. It compares them across a range of characteristics to non-specialised providers that deliver those qualifications. Characteristics presented include enrolments, student demographics, funding sources and delivery types.

Uptake and utility of VET qualifications: 2015 and 2016 – infographic

Patrick Korbel and Craig Fowler

The full, interactive infographic is available on our Portal, at ncver.edu.au/research-and-statistics/data/infographics/uptake-and-utility-of-vet-qualifications-2015-and-2016-infographic

Using 2015 and 2016 total VET activity data, this infographic examines the uptake and utility of training package qualifications. It is an update to the *Uptake and utility of VET qualifications* report published by NCVER in November 2016 and contains updated and more extensive data.



Uptake and utility of VET qualifications: 2015 and 2016

By Patrick Korbel and Craig Fowler

Nationally recognised vocational education and training (VET) in Australia predominantly consists of enrolments in training package qualifications or skill sets.

Using 2015 and 2016 total VET activity data (sourced from the National VET Provider Collections and National VET in School Collections), this infographic examines the uptake and utility of training package qualifications. It analyses the distribution of program enrolments across qualifications and the extent of qualifications that had zero program enrolments for a given period of time. Qualification mappings recorded in the National Register of VET were used to create a **consolidated list** combining current qualifications with the qualifications they superseded.

This infographic is an update to the *Uptake and utility of VET qualifications* report published by the National Centre for Vocational Education Research (NCVER) in November 2016. It contains updated and more extensive data. Please note that the 2015 data presented in the report above may not match 2015 data in this infographic due to subsequent revisions to the data. For further analysis and explanation, please consult the report.

For any further information regarding national training packages and qualifications, please refer to the National Register of VET. For information on current initiatives related to the review and development of training packages, please refer to the Australian Industry and Skills Committee website.

How many qualifications and enrolments were there?

Qualifications (in the **consolidated list**) were sorted into one of six enrolment bands, based on the number of program enrolments they had in each year. There is one band for qualifications with zero enrolments and five bands that range from qualifications with one to 10 enrolments, through to qualifications with more than 10 000 enrolments.

There were **1577** qualifications in the consolidated list in 2016, compared with **1705** in 2015.

Number of qualifications by enrolment band

Number of enrolments by enrolment band

Note: The total enrolments for each year reported here exceed the reported enrolments in the corresponding year in *Total VET students and courses 2016*. See the explanatory notes below for details.

Where are the largest shares of qualifications and enrolments?

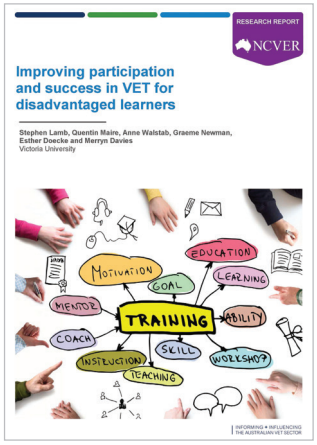
93% of enrolments in **21%** of qualifications

At one end of the scale, 93% of enrolments in training package qualifications in 2016 were in qualifications with more than 1000 enrolments each and 61% of enrolments were in the largest 5% of qualifications.

20% of qualifications had **zero** enrolments

On the other end of the scale, many qualifications had zero enrolments in 2016 and 30% of qualifications had less than 1% of enrolments.

The impact of vocational education and training



Improving participation and success in VET for disadvantaged learners

Stephen Lamb, Quentin Maire, Anne Walstab, Graeme Newman, Esther Doecke, Merryn Davies

ncver.edu.au/research-and-statistics/publications/all-publications/improving-participation-and-success-in-vet-for-disadvantaged-learners

Improving the educational outcomes of the various disadvantaged groups, such as Indigenous Australians, people with a disability, learners with low prior educational attainment and individuals from non-English speaking backgrounds, is a focus of many government policy initiatives centred on social inclusion.

This research takes a regional approach to investigate the educational outcomes for disadvantaged groups, to account for variation in the characteristics of local populations, industries, infrastructure and communities, and then identifies effective practices for improving outcomes for disadvantaged learners.

The research was conducted in three stages. Firstly, a range of data sources was used to identify regions with both high participation and high completion rates of disadvantaged learners in vocational education and training (VET). Secondly, it reports on a national survey of registered training organisations (RTOs) to determine the strategies used to engage and support disadvantaged learners. Lastly, the research more thoroughly explores the high-performing regions through case studies including public, private and community providers, aiming to better understand why they achieve higher-than-average results with disadvantaged learners.

Key messages

- Supporting disadvantaged learners is successful when it is an institution-wide commitment. The institute should have a defined set of initiatives in place, such as providing learning support and matching more experienced staff with high-need learners, rather than relying on ad hoc practices.
- Building strong relationships with employers and other service agencies in the community is important but requires adequate resourcing. These relationships, which help training providers gain a better understanding of the local community, the types of disadvantaged learners within it, and the available employment and labour market opportunities, enable them to better support their students.
- While diverse groups of disadvantaged learners are widely offered support, it is necessary to customise the support to the individual, particularly for culturally and linguistically diverse (CALD) learners and learners with low levels of prior educational attainment. Support includes tailored services to the individual's specific learning needs, such as extra literacy and numeracy support, as well as promoting the benefits of specific outreach programs in the community.
- The development of regional frameworks that coordinate relationships between local community groups, VET providers and regional labour markets would likely benefit all involved. Collaboration helps to develop a comprehensive and coherent approach to the engagement of disadvantaged learners and may help to strengthen the relationship between VET completion and relevant job opportunities.

Future job openings for new entrants by industry and occupation

Chandra Shah, Janine Dixon

ncver.edu.au/research-and-statistics/publications/all-publications/future-job-openings-for-new-entrants-by-industry-and-occupation

This research provides forecasts of job openings by occupation and industry for new entrants to the Australian labour market. It does this by combining two employment-related estimates:

- employment growth (or decline) in the industry or occupation
- replacement needs; that is, the new workers required due to worker retirement or those leaving the occupation.

This information may be useful to various stakeholder groups. Students and career advisors, for example, might use the information to make choices about occupational paths to follow, while policymakers might use the forecasts for long-term planning in education and training, as well as for workforce development purposes.

The researchers use a dynamic general equilibrium model to forecast employment by industry and occupation at high levels of detail. The forecasts from this model, as with forecasts from any other model, have a degree of uncertainty associated with them (Richardson & Tan 2007). That being said, many countries around the world continue to use labour market forecasts to guide planning.

Key messages

- The total number of job openings over the forecast period 2017 to 2024 will be about 516 600 per year (4.1 million in total), with more than half of these resulting from replacement demand.
- The results show employment continuing to shift towards higher-skill jobs in the labour market, with a slight acceleration in this trend with higher productivity growth.
- The highest number of job openings, 121 700 per year (973 600 in total), will be in professional occupations. The second highest, 71 300 per year (570 600 in total), will be for managers. These figures reflect the demand in higher skill levels.
- In some occupations, a high proportion of the job openings is due to replacement demand rather than employment growth. Very high replacement demand is seen in occupations with low entry requirements and low wages, which to date have typically attracted young people, who stay in the occupation for short periods. Examples due to replacement demand include hospitality workers, checkout operators and cashiers, and food preparation assistants (75.6%. 89.4% and 80.9%).
- Replacement demand is high for occupations with relatively older workforces, a consequence of workers' proximity to retirement. An example of high retirement-replacement demand includes farmers and farm managers, with 63.3% of the 80 900 job openings (10 100 per year).
- Reasonably high proportions of job openings due to replacement demand are also found amongst technicians and trade workers (for example, 60.4% for bricklayers, carpenters and joiners and 61.1% for automotive electricians and mechanics). This can have training implications. As experienced workers leave, there are fewer available to supervise apprentices. Additionally, as apprenticeship training takes time, and completion rates can be low, sufficient recruitment is needed to avoid future shortages.
- The analyses demonstrate the importance of considering replacement demand when assessing job openings for new entrants. Job openings can reflect future job opportunities; they can also provide a way to assess future training needs where training is required in an occupation.

Richardson, S & Tan, Y 2007, *Forecasting future demands: what we can and cannot know*, NCVER, Adelaide, viewed 6 November 2017, ncver.edu.au/research-and-statistics/publications/all-publications/forecasting-future-demands-what-we-can-and-cannot-know.

The Fourth Industrial Revolution: the implications of technological disruption for Australian VET

Pi-Shen Seet, Janice Jones, John Spoehr, Ann-Louise Hordacre

ncver.edu.au/research-and-statistics/publications/all-publications/the-fourth-industrial-revolution-the-implications-of-technological-disruption-for-australian-vet

Much discussion has occurred about the impact that technological disruption will have on the Australian workforce. A recent paper by the National Centre for Vocational Education Research (NCVER), *Skilling for tomorrow* (Payton 2017), examines the various ways by which the growth in technological advance is reshaping the labour market, workforce and jobs. Despite uncertainty about the scale and nature of the effect, there is a growing consensus that Australia's tertiary education system needs to change to meet the requirements of a future labour force focused on innovation and creativity. This research examines the relationship between emerging — or disruptive — technologies and the skills required, with a focus on the anticipated necessary skills from the perspective of both the innovators (technology producers) and industry (technology users). In this research the term 'disruptive technologies' refers to large-scale technology/market changes occurring through technological advances such as automation, advanced robotics and virtualisation.

The research finds that disruptive technologies are influencing the demand for both technical and soft skills in many occupations, with some skills in decline and others in higher demand. The impacts of disruptive technologies on firms are likely to differ according to firm size, stage of development, and their capability and capacity to innovate. The effects will also differ depending on the purpose for which the disruptive technologies have been introduced

Key messages

- The demand for digital skills is expected to rise. Larger firms use in-house training to help fill gaps, including those identified in vocational education and training (VET) courses. Smaller firms, however, tend to hire workers with the required skill set, demonstrating the importance of the VET and higher education sectors in adequately skilling workers for digital disruption.
- Specialist technology-related skills are, unsurprisingly, important to disruptive technologies. However, generic non-technical skills, such as teamwork, problem-solving, continuous learning and creativity are also integral to the uptake and implementation of disruptive technologies in the workplace.
- Firms in this study view university graduates with technology-related skills, particularly higher-level technological skills, as more valuable than employees with VET qualifications. This probably reflects the sectors in which the firms are concentrated.
- Several barriers prevent the VET sector from better developing the skills required for emerging, disruptive technologies. These impediments include:
  - the lack of strong integration between the VET and higher education sectors. Stronger integration would assist in the development of both the theoretical knowledge and skills (technical and soft) that workers need
  - resourcing constraints and frequent restructuring in the VET sector, hampering the sectors ability to plan and execute the changes required to prepare itself and students for disruptive technologies
  - the limitations of training packages, impeding the flexibility of training to respond to rapidly changing disruptive technologies.

The Industry 4.0 Industry Reference Committee (IRC), recently announced, will help to ensure that vocational education provides students with the future-focused skills they will need as a consequence of increased automation and digitalisation in the workplace, demonstrating that some steps are already being made to address some of the issues highlighted in this research.

Payton, A 2017, Skilling for tomorrow, NCVER, Adelaide, viewed 15 June 2018, ncver.edu.au/research-and-statistics/publications/all-publications/skilling-for-tomorrow.

27th National VET Research Conference 'No Frills'
Skills for a global future
Anna Payton and Genevieve Knight, NCVER
NCVER
Innovation: in simple terms, it's about new ideas being put into practice, and it underpins human progress, while in economic terms it can drive long-term productivity growth (Australian Department of Industry, Innovation and Science 2017). It can also provide the opportunity for the nation to claim a bigger share of global wealth estimated to be worth $1.6 trillion, '...better jobs, and the best access to the products of innovation, such as new health treatments', according to Australia 2030: prosperity through innovation (Innovation and Science Australia 2017, p.1).
The opportunities underpinning the largest growth 'will come from knowledge-intensive companies that innovate and export, as they are the most profitable, competitive and productive' (Innovation and Science Australia 2017, p.1). To be able to do so, these companies will require a workforce whose skills can match, or are better than, our global competitors.
This year's theme Skills for a global future reflects the international nature of the 27th National Vocational Education and Training Research Conference 'No Frills' and the New Zealand Vocational Education and Training Research Forum. This theme also signals the pivotal role that vocational education and training (VET) plays in preparing people for an increasingly globalised workforce.
Last year we looked at Skilling for tomorrow (Payton 2017), which took a broad view of the trends changing the world of work, the skills employers seek and the ways in which VET providers can respond. A year on, we return to the topic of future skills, but this time we explore skills within the increasingly interconnected world in which Australia and New Zealand not only operate, but in which they seek to succeed. This paper explores findings from recent research into the future of work and skills to prompt questions and discussion at this year's conference, co-hosted by NCVER and its New Zealand partners, Industry Training Federation and Ako Aotearoa.
What do we mean by 'skills for a global future'?
Skills for a global future are the skills people will require for work in the increasingly globalised, interconnected world of work. But, what is a skill? It's a concept that can be hard to pin down and define (Lowry, Molloy & McGinnson 2008). The Organisation for Economic Co-operation and Development also refers to the challenge of defining a skill and states it refers (2016, p.17):
to the ability or capacity of an agent to act appropriately in a given situation. Both [skills and competencies] involve the application of knowledge (explicit and/or tacit), the use of tools, cognitive and practical strategies and routines, and both imply beliefs, dispositions and values (e.g. attitudes).
In simple terms, a skill is both the knowledge used and the tasks undertaken to achieve something.
In the workplace, skills are one of the three factors that many employers seek in potential employees, with values and behaviours in the 'work readiness' mix (Business Council of Australia 2016).
The skills we require for work are changing. A cursory scan reveals numerous research reports, papers and media stories detailing the skills workers now require or will likely require in the future. See the
NCVER
1

Skills for a global future

Anna Payton, Genevieve Knight

ncver.edu.au/research-and-statistics/publications/all-publications/skills-for-a-global-future

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The opportunities underpinning the largest growth 'will come from knowledge-intensive companies that innovate and export, as they are the most profitable, competitive and productive' (Innovation and Science Australia 2017, p.1). To be able to do so, these companies will require a workforce whose skills can match, or are better than, our global competitors.

This year's theme *Skills for a global future: working and learning together* reflects the international nature of the *27th National Vocational Education and Training Research Conference 'No Frills'* and the *New Zealand Vocational Education and Training Research Forum*. This theme also signals the pivotal role that vocational education and training (VET) plays in preparing people for an increasingly globalised workforce.

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Australian Department of Industry, Innovation and Science 2017, *The digital economy: opening up the conversation*, Department of Industry, Innovation and Science, Canberra, viewed 28 September 2017, industry.gov.au/sites/default/files/isa_submission_to_digital-economy-opening-up-the-conversation.pdf.

Innovation and Science Australia 2017, *Australia 2030: prosperity through innovation*, Department of Industry, Innovation and Science, Canberra, viewed 30 January 2018, industry.gov.au/data-and-publications/australia-2030-prosperity-through-innovation.

Payton, A 2017, *Skilling for tomorrow*, NCVER, Adelaide, viewed 15 June 2018, ncver.edu.au/research-and-statistics/publications/all-publications/skilling-for-tomorrow.

Promotions, resources and events

27th National Vocational Education and Training Research Conference ‘No Frills’

‘No Frills’ is a well-known annual national conference where researchers, practitioners, providers and industry representatives come together and share knowledge, ideas, insights and solutions surrounding Australia’s VET sector.

The conference also provides valuable professional development opportunities through a program of interactive pre-conference workshops incorporating activities on data and research analytics, and research practice.

The *27th National Vocational Education and Training Research Conference ‘No Frills’* was NCVER’s first international conference in partnership with New Zealand co-hosts, the Industry Training Federation and Ako Aotearoa.

Held in Sydney on 15—17 August 2018, the theme ***Skills for a global future: working and learning together*** reflected the international nature of the conference and signalled the pivotal role VET plays in preparing people for an increasingly globalised workforce.

The ‘No Frills’ 2018 discussion paper *Skills for a global future* (page 24) explores the skills required for a more interconnected, global world and aimed to encourage conversation and discussion on this topic throughout the conference.

Program highlights included dynamic international researcher **Professor Lene Tanggaard from Aalborg University, Denmark**, who presented with great passion and vigour on how ‘creativity’ is considered one of the necessary competencies for the future. Lene talked about how more attention to creativity in VET may require a paradigm shift in teaching and also discussed ideas about how to define creativity and where it fits in VET to bring about that shift. Professor Tanggard’s presentation is available here: youtube.com/watch?v=me1NwNeQO9k.

The Hon Karen Andrews MP, Federal Assistant Minister for Vocational Education and Skills, opened the second day of the conference with her vision for the VET sector to be restored to its traditional status as one the pillars of our tertiary education system. The Hon Karen Andrews’ presentation is available here youtube.com/watch?v=gYw26611Q7k&t=928s.

Leading economist **Dr Andrew Charlton** presented convincing empirical evidence of the increasing need for ‘human skills’ in a presentation about the future of work and the skills Australians will need to succeed. He spoke about now being the time to consider the challenges and opportunities for industry training and apprenticeships, as the VET system grapples with profound societal and technological changes.

Dinner speaker **Kevin Sheedy** inspired delegates with his stories of common sense, creativity and the need to think ‘outside the box’ in business, jobs, training the workers of the future, and football…of course!

Images (top to bottom): Genevieve Knight (Acting National Manager Research, Knowledge Management and Communication, NCVER) with Professor Lene Tanggaard, Dr Andrew Charlton with The Hon Karen Andrews MP and Dr Mette Creaser (National Manager Statistics and Analytics, NCVER), and dinner speaker, Kevin Sheedy.

Scholarship recipients

Scholarships were offered for the second year running. This initiative, which is part of our commitment to build capacity and capability in VET research, is designed to facilitate attendance and widen participation from across the VET sector.

VDC Practitioner Scholarship:
Ms Xenia Girdler, Global Reconciliation
Presentation: *Delivering a diploma of community services (alcohol and other drugs and mental health) in the remote town of Katherine (NT): a case study*.

AAIR Early Career Researcher Scholarship:
Mr Daniel Jolley, Curtin University
Presentation: *Is vocational training failing to prepare fitness students for employment and future study?*

NCVER Early Career Researcher Scholarship:
Dr Stacey Jenkins, Charles Sturt University
Presentation: *Skills for a global future for women in regional Australia.*

Presentations from the *27th National VET Research Conference 'No Frills'* are available at voced.edu.au/10707/462272.

28th National Vocational Education and Training Research Conference 'No Frills'

NCVER is delighted to co-host the *28th National Vocational Education and Training Research Conference 'No Frills'* with TAFE SA in Adelaide on 10—12 July 2019. The 2019 conference program will focus on **The student journey: skilling for life**.

More information: ncver.edu.au/nofrills2019.

CONFERENCE PRESENTATIONS

54 presentations on the following topics:

- **6** apprentices & trainees
- **4** digital learning
- **6** employability & foundation skills
- **2** industry
- **5** international
- **3** policy
- **6** practitioner
- **3** rural & remote
- **5** skill needs
- **4** skills
- **4** young people
- **6** others including:

completion rates, VET funding, adult and community education, migrant support, and coaching for student success

VOCEDplus

voced.edu.au

2018 ACTIVITY

2917 titles added to VOCEDplus

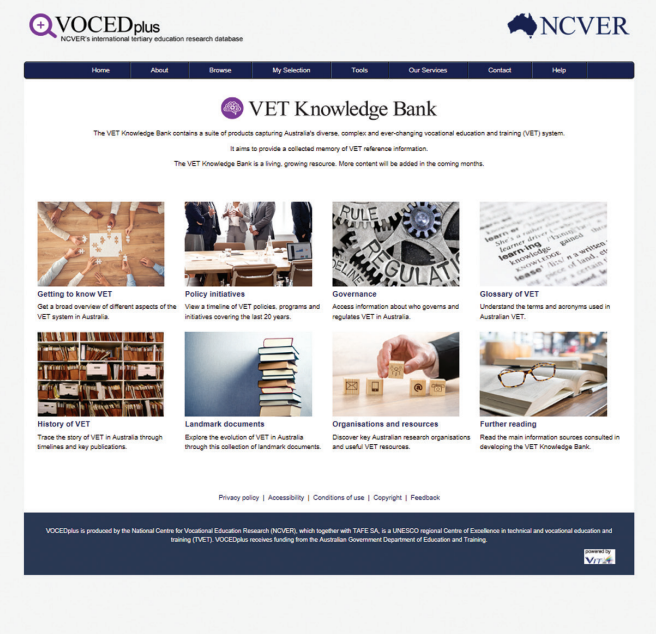
79 517 total items in VOCEDplus

294 944 visits to VOCEDplus

221 countries used VOCEDplus

The VET Knowledge Bank

voced.edu.au/vet-knowledge-bank



Understanding the VET system in Australia has been made easier with a new resource developed by NCVER. The complementary suite of products within the VET Knowledge Bank provide a valuable resource for those in the VET sector, whether they are researchers, trainers, students or working in the policy arena. The VET Knowledge Bank is one of the most used items on the VOCEDplus website. Following are resources included within the VET Knowledge Bank.

Getting to know VET

voced.edu.au/vet-knowledge-bank-getting-know-vet

Australia's VET system is complex and ever-changing. Getting to know VET aims to explain the system with a chart of the key components, useful not just to newcomers, but also to update those who've been in the sector a while. It includes overviews that provide more detailed explanations about the different components, including:

- training products
- industry's role
- provider peak bodies
- VET pathways
- VET regulators.

> "Thank you for providing this as a website. It's just what's needed to capture VET infrastructure information. I will use this as a trainer of training and assessment."
>
> *Helen Cameron, Bendigo TAFE*

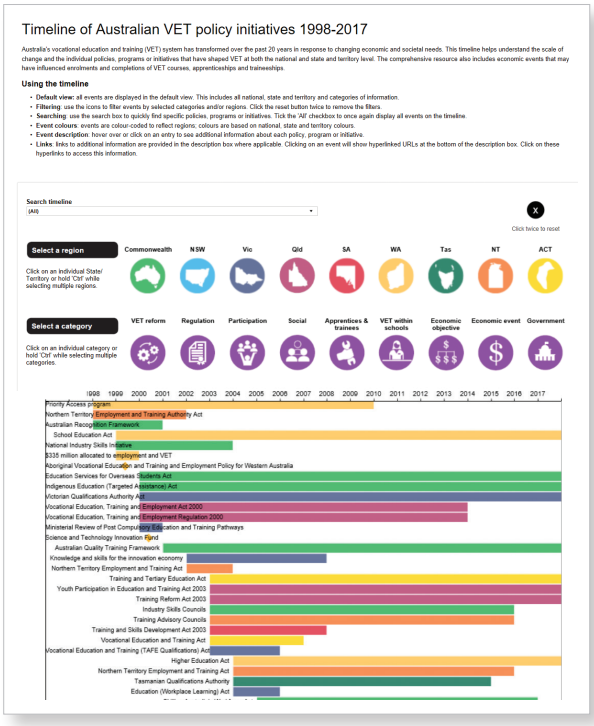
Timeline of Australian VET policy initiatives 1998-2017

voced.edu.au/vet-knowledge-bank-timeline-australian-vet-policy-initiatives-1998-2017

Over the past 20 years, changing economic and societal needs have transformed Australia's VET system. This timeline provides a useful snapshot of state and federal VET policies, programs and initiatives over that period, along with economic events that may have influenced enrolments and completions of VET courses, apprenticeships and traineeships. Features such as filters to focus on jurisdictions and topics and a search tool make it easier to navigate the wealth of information in this timeline.

Other timelines in the VET Knowledge Bank include:

- From MINCO to CISC - COAG ministerial councils, committees and advisory bodies: 1992—2018
- Landmark documents: 1954—2010
- Milestones in the history of VET: 1952—2018
- Prime ministers, federal ministers and the Commonwealth departments responsible for skills and training: 1992—2018
- VET legislation: 1946—2018.



Governance

voced.edu.au/vet-knowledge-bank-governance

This provides information about who governs and regulates the VET system, from Ministers, government departments and budgets to regulators and training authorities. Links to related timelines, such as the *From MINCO to CISC* timeline which captures the different Ministerial Councils and their committees and advisory bodies from 1992 onwards, are also provided.

Glossary of VET

voced.edu.au/glossary-vet

A much-used tool that is useful for navigating the maze of VET jargon as it explains and defines the terms and acronyms found in VET literature.

History of VET

voced.edu.au/vet-knowledge-bank-history-vet

A comprehensive overview of Australia's VET story is available on this page. A core reading list is complemented by links to a selection of timelines that together explore and trace the story of VET in Australia.

> "I would like to congratulate NCVER on the production of the interactive timeline – a great facility for all employed within the sector."
>
> *Judy Hocking, North Regional TAFE*

Landmark documents

voced.edu.au/vet-knowledge-bank-landmark-documents

Key documents that have influenced the development of Australia's VET system over the years are provided here. From the Commonwealth—State Apprenticeship Inquiry (the Wright report) in 1954 to the Skills Australia discussion paper *Creating a future direction for Australian vocational education and training in 2010*, these important historical documents chronicle the evolution of VET in Australia and are all available in digital form in VOCEDplus.

Organisations and resources

voced.edu.au/vet-knowledge-bank-organisations-and-resources

This informs about some of the main VET-related organisations and research centres.

Further reading

voced.edu.au/vet-knowledge-bank-further-reading

This contains an extensive list of the main sources used in developing much of the content on the VET Knowledge Bank.

National VET Data Linkage Roundtable

NCVER hosted a one-day *National VET Data Linkage Roundtable* in Canberra on 17 May 2018 with a group of data custodians, governments and researchers to discuss methods and opportunity for the implementation of a set of best practice principles in data linkage.

The roundtable started with an opening address from Dr Michele Bruniges, Secretary, Australian Government Department of Education and Training who spoke about the importance of collaboration and the strong potential of data linkage to give multifaceted insights that will better inform policy decisions.

This was followed by case studies, expert presentations and open discussion aimed at encouraging further data linkage projects drawing on both VET and other statistical collections that would benefit the VET sector.

View video and PowerPoint presentations via the link below
ncver.edu.au/news-and-events/past-events/national-vet-data-linkage-roundtable.

Jim Kormas, Office of the Australian Information Commissioner (OAIC), presents on privacy and ethics in data linkage.

Webinars

ncver.edu.au/news-and-events/events/webinar-series

NCVER hosted webinars on a broad range of topics relevant to the tertiary education and training sector. The following webinars were presented during 2018.

Exploring the benefits of social media in VET programs

register.gotowebinar.com/recording/5582824555036905985?assets=true

Presented by Victor Callan, Callan Consulting Group and Queensland University Business School on 22 February 2018.

There has been tremendous growth in the use of social media in almost every area of our lives, and the potential for its use in education and training settings is increasingly being explored.

Based on the insights of teachers, students and employers, this webinar examined the forms of social media being used as part of VET programs (particularly Facebook and YouTube), the outcomes from its use and how it is being integrated into VET assessment. Elements of good practice for both institutions and teachers was also touched on.

This webinar was mainly for registered training organisations and VET teachers amongst others who were interested to learn more about how social media is being used in VET courses.

The accompanying research report is *Social media and student outcomes: teacher, student and employer views* ncver.edu.au/research-and-statistics/publications/all-publications/social-media-and-student-outcomes-teacher,-student-and-employer-views.

Comparing high-use training package qualifications

register.gotowebinar.com/recording/6535002725442318594

Presented by Patrick Korbel, NCVER on 19 April 2018.

The *Comparing high-use training package qualifications* tool is a new form of research product produced by NCVER. A hybrid of a research report and a data slicer, it provides easy and intuitive access to the data while also providing additional insight and analysis not usually included in a statistics or data product.

This work is a follow up to three 2017 publications that were all about making the most of the new data available from Total VET activity:

- Making sense of total VET activity: an initial market analysis
- VET provider market structures: history, growth and change
- Uptake and utility of VET qualifications.

This innovative tool allows users to explore the top 20 VET training package qualifications with the aid of insightful research commentary, allowing users to make their own comparisons and draw their own inferences and conclusions.

View the research product here ncver.edu.au/research-and-statistics/publications/all-publications/comparing-high-use-training-package-qualifications.

Data linkage: unlocking the benefits for the VET sector

register.gotowebinar.com/recording/2582480526175090178

Presented by Kristen Osborne and Patrick Korbel, NCVER; Tenniel Guiver, Australian Institute of Family Studies; Cain Polidano, Melbourne Institute of Applied Economic and Social Research on 14 June 2018.

Data linkage is a powerful research tool that is now being used by governments and other organisations across the country. By linking datasets from different sources, researchers can create a more complete picture of a system or sector to determine its effectiveness, leading to more informed policy decisions.

Chair Michelle Circelli and graduate researcher Kristen Osborne drew on elements of the NCVER publication Data linkage in VET research: opportunities, challenges and principles to provide a broad overview of what data linkage is, the opportunities and challenges it presents for VET research, and a set of best practice principles.

Dr Patrick Korbel, Dr Cain Polidano and Tenniel Guiver shared their own experiences and expert knowledge from working on data linkage projects, including the advantages and challenges data linkage brings.

This webinar accompanies the discussion paper *Data linkage in VET research: opportunities, challenges and principles* ncver.edu.au/research-and-statistics/publications/all-publications/data-linkage-in-vet-research-opportunities-challenges-and-principles.

Skilling for digital disruption and the future of work

www.ncver.edu.au/__data/assets/pdf_file/0035/2948129/Webinar_SkillingForDigitalDisruptionAndTheFutureOfWork_PresentationSlides.pdf

Presented by Anna Payton, NCVER; Pi-Shen Seet, Edith Cowan University; John Spoehr, Flinders University on 19 June 2018.

This webinar explored the vocational education and training implications of digital disruption in our future workplaces. The presenters discussed the drivers changing the world of work, the skills we're predicted to need in the future and what this means for training.

The presentation considered a forthcoming NCVER research report that investigates the training implications of disruptive technologies associated with Industry 4.0, from the perspective of technology producers (innovators) and technology users (industry).

Student transitions: from school to VET

register.gotowebinar.com/recording/7296255099884203011

Presented by Kristen Osborne, NCVER; Kira Clarke, The University of Melbourne; George Myconos, Brotherhood of St Laurence on 21 June 2018.

The transition from school to further education and work is a milestone in the life of a young person. For some young people, part of that transition may involve vocational education and training (VET). This panel discussion explored what influences young people to undertake VET post-school; the factors that support them to complete VET; and their outcomes following their participation in VET. The presenters discussed the key learnings from recent research commissioned or undertaken by NCVER on the transition of school students into VET, their experiences and their outcomes.

This webinar accompanies the research summary *From school to VET: choices, experiences and outcomes* ncver.edu.au/research-and-statistics/publications/all-publications/from-school-to-vet-choices,-experiences-and-outcomes.

The future of work: continuity and change in the employer's investment in training

register.gotowebinar.com/recording/5236788459830321409

Presented by Erica Smith, Federation University; Andrew Smith, Federation University; Anna Payton, NCVER on 18 October 2018.

Skills and jobs in demand in workplaces have changed considerably as a result of major global trends, of rapid technological innovation, and increasing global trade.

How employers' have used training to prepare their workforces over the last decade can give clues to how to meet the evolution of training into the future.

This panel session explored recent NCVER evidence on the role of employers in training, what influences employers to train, the continuity and change in the training employers are using, and use of skill sets. It touched on the role of skill sets in enabling lifelong learning and how this might shape the form of future training. The discussion drew out the nexus between the employer, what they want and the forms of training that have met this.

This webinar discusses topics included in the research report *Continuity and change: employers' training practices and partnerships with training providers* ncver.edu.au/research-and-statistics/publications/all-publications/continuity-and-change-employers-training-practices-and-partnerships-with-training-providers.

NCVER presentations

External presentations by NCVER researchers

Month	Presenter	Event/stakeholder	Topic
February	Phil Loveder	Abu Dhabi VET Leaders' Forum	Understanding the return on investment in technical and vocational education and training
May	Alison Anlezark	WA Training Providers Forum 2018	The world of work is changing: reshaping training to meet future skill needs
May	Craig Fowler, Kristen Osborne, Ian White, Emerick Chew	Burning Glass Technologies	Internet job postings infographics ncver.edu.au/research-and-statistics/publications/all-publications/internet-job-postings-preliminary-skills-analysis
May	Phil Loveder	UNESCO-UNEVOC International Learner's Forum	The return on investment in technical and vocational education and training – A guide
July	Phil Loveder	Bangladesh TVET leaders' delegation	Key features of the Australian VET sector and reform agenda
August	Michelle Circelli, Genevieve Knight	NCVER 'No Frills' Conference	Research and Statistics at NCVER: The who, what and how
August	Michelle Circelli	NCVER 'No Frills' Conference	From School to VET: how students transition and how when can help them
August	Patrick Korbel	NCVER 'No Frills' Conference	Demand for vocational skills - insights from internet job vacancies
August	Radhika Naidu	NCVER 'No Frills' Conference	VOCEDplus: telling the VET Story
August	Mandy Mihelic	NCVER 'No Frills' Conference	Environmental sustainability skills and how qualifications providing these skills influence employment outcomes
August	Phil Loveder and Marilyn Lawley	Griffith University	Workforce development planning
August	Phil Loveder and Brian Harvey	Department for Education (South Australia)	Future of Australian Apprenticeships
September	Phil Loveder and Marilyn Lawley	Bhutan technical managers VET development program	Predicting skills development needs

Month	Presenter	Event/stakeholder	Topic
September	Genevieve Knight, Phil Loveder and Lisel O'Dwyer	Department of Education and Training	Return on investment at certificate III and above
October	Gitta Siekmann	2018 World Congress - Preparing for the Skills Future, Now	Identifying future work skills for teaching and learning – international approaches
October	Gitta Siekmann	Australian Vocational Education and Training Research Association Research Forum	Does training provider type make a difference? Findings from the National Student Outcomes Survey
October	Kristen Osborne and Emerick Chew	AVETRA (NCVER-run OctoberVET event)	Right-skilling: using online job vacancy postings to identify skills requested by employers and industry
October	Ian White, Gitta Siekmann, John Stanwick	AVETRA (NCVER-run OctoberVET event)	Up-skilling and right-skilling: the role of unaccredited training and skill sets
November	Kristen Osborne	Community Colleges Australia Annual Conference	From school to VET: supporting and engaging recent school leavers in vocational education
December	Rose-Anne Polvere & Michelle Circelli	AARE annual conference 2018	Research and resources for tertiary education
December	Rose-Anne Polvere & Michelle Circelli	4th Annual Conference on VET Teaching and VET Teacher Education	VOCEDplus Teaching and Learning Pod: resource discovery to support practitioners
December	Rasika Ranasinghe	ACSPRI Social Science Methodology Conference 2018	School to work transitions of youth in Australia: a sequence analysis approach using the LSAY

Patrick Korbel, Research Officer, NCVER, presenting at the 2018 NCVER 'No Frills' conference

Phil Loveder, Manager, Stakeholder Engagement, NCVER, presenting at the Abu Dhabi VET Leaders' Forum

In-house seminars by external organisations

The VET sector and industrial transformation

By Professor John Spoehr, Australian Industrial Transformation Institute

Recent automotive closures have shone a spotlight on the changing nature of manufacturing in Australia. This seminar covered the vocational education and training response to these changes, and the role VET will have going forward in Australia's industrial and manufacturing space.

Apprenticeships developments in the G20 countries

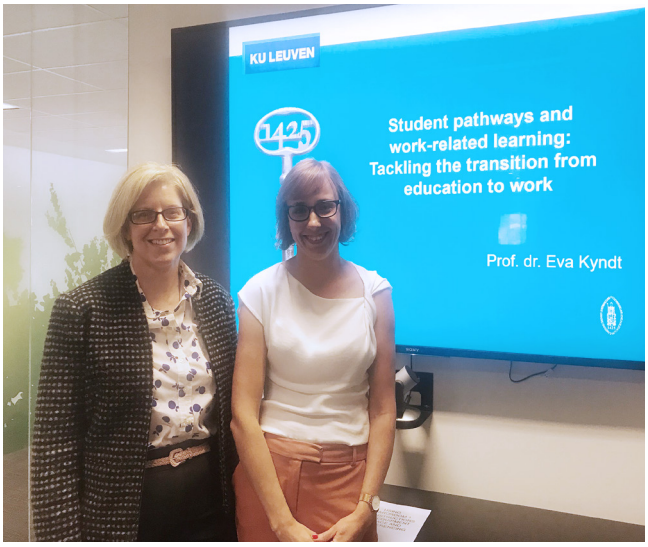
By Professor Erica Smith, Federation University Australia

Based on an ILO survey, designed to find out what contribution governments, trade unions and employers had made towards the G20's Ten Actions on Quality Apprenticeships, this project, considered all G20 countries and provided well-rounded international insights. It also identified facilitators and barriers to the development of apprenticeship systems internationally. The research concluded by suggesting key areas for policy action.

Student pathways and work-related learning: tackling the transition from education to work

By Professor Dr Eva Kyndt, University of Leuven, Belgium

This presentation was an overview of student pathways in Belgium as well as transition outcomes of vocational education and higher education students. Special attention was given to the relationship between education and work-related learning.



Right: Michelle Circelli, Acting Manager, National Research, NCVER with Professor Dr Eva Kyndt.

The state of apprenticeships and traineeships

By Peta Skujins, Australian Apprenticeships and Traineeships Information Services

The seminar focused on the state of apprenticeships and traineeships in Australia, the latest research in the area, issues around engaging people in apprenticeships and traineeships and what the Australian Apprenticeships and Traineeships Information Services (AATIS) has been doing over the past year. Peta Skujins discussed

- what the public and industry perception of apprenticeships and traineeships is
- what questions people often ask the AATIS about apprenticeships and traineeships
- how the recent public policy shifts have affected the apprenticeships and traineeships
- how to deal with the issue of defining an apprenticeship versus a traineeship.

Opinion pieces

ncver.edu.au/news-and-events/opinion-pieces

NCVER published the following opinion pieces during 2018:

VET's role in mitigating disadvantage

Kristen Osborne

ncver.edu.au/news-and-events/opinion-pieces/vets-role-in-mitigating-disadvantage

Supporting disadvantaged students is central to the future of vocational education and training in Australia, writes Kristen Osborne, Research Officer, NCVER. She states that vocational education and training (VET) helps people grow personally and professionally, and provides a range of skilled workers for every industry.

Osborne highlights the benefits for students in choosing to study, including personal development and building confidence and self esteem. She believes that VET needs to be offered to all students, including those from disadvantaged backgrounds.

Other topics Osborne covers include:

- Who are the disadvantaged students and where are they located?
- Disadvantaged students arising from socioeconomic equality
- Availability, accessibility and affordability of VET courses for regional, rural and remote students
- Affordability of VET courses for disadvantaged students
- Suggested Government policies and support options that may assist with equitable access to VET study options.

Work skills information – lots of data, too little coordination

Gitta Siekmann & Craig Fowler

ncver.edu.au/news-and-events/opinion-pieces/work-skills-information-lots-of-data-too-little-coordination

In this opinion piece Siekmann and Fowler look at the coming decade and the importance of providing targeted training and up-skilling existing employees to face an uncertain yet profound shift in job skills requirements.

To navigate this environment, vocational education and training (VET) students and graduates, especially those at the low- and middle-skills-level, need access to sound job and career advice linked with training that is based on up-to-date skills information, writes Siekmann and Fowler.

In this piece they explore the following topics:

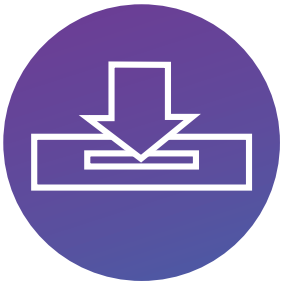
- Young job seekers face significant challenges in the future with many being unemployed or underemployed and machines are being trialled to replace human occupations. What can we do to help? What skills are needed?
- Skill information is disjointed and hard to find in one place. How can we bring all the data sources together for students, employers, educators and policymakers so that tomorrow's needs of 'on-the-job skills' is anticipated in today's training and education content?

Submissions

ncver.edu.au/news-and-events/submissions/submissions-2018

NCVER's submissions to parliamentary inquiries and public consultations

Future-proofing the South Australian apprenticeship and traineeship system: discussion paper



Submitted on 21 September 2018 to the Future-proofing the South Australian apprenticeship and traineeship system: discussion paper.

New Australian Government Data Sharing and Release Legislation - Issues Paper

Submitted on 27 July 2018 to the New Australian Government Data Sharing and Release Legislation.

Training Product Reform - Issues for Discussion

Submitted on 9 March 2018 to the Australian Government Department of Education and Training.

Select Committee on the Future of Work and Workers

Submitted on 23 February 2018 to the Select Committee on the Future of Work and Workers.

The impact of technological and other change on the future of work and workers in Australia.

Submitted on 23 February 2018 to the Select Committee on the Future of Work and Workers.

Proposal to remake the Statistical Determination 1983

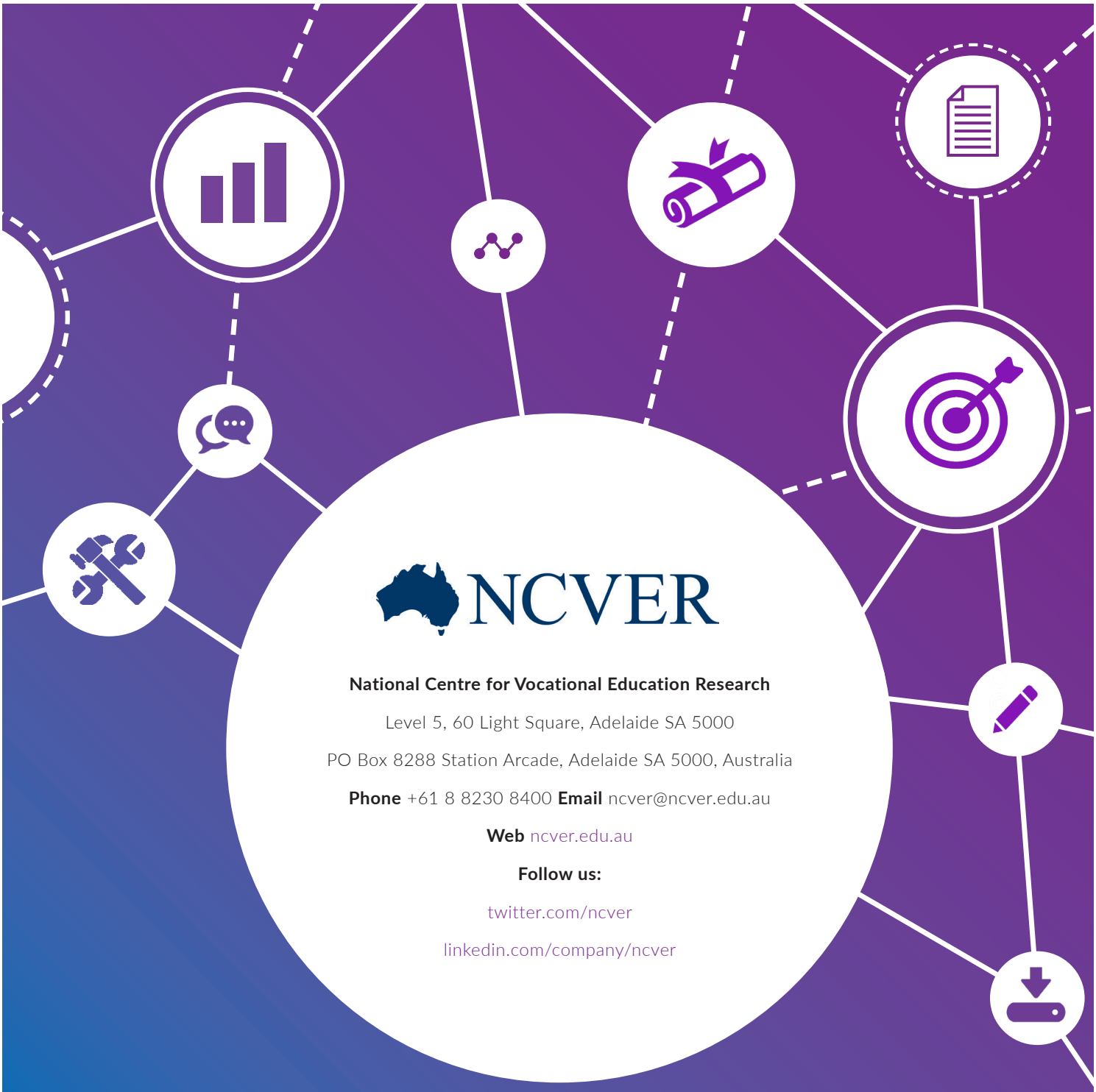
Submitted on 16 February 2018 to the The Treasury.

Redevelopment and audit of the Higher Education Data Collection

Submitted on 7 February 2018 to the Department of Education and Training.

Future proof: protecting Australians through education and skills.

Submitted on 18 January 2018 to the Business Council of Australia.



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