



The role of labour market information systems and research in workforce development in Australia

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Australia has a model of workforce development which is highly reliant on individual workers and firms making decisions about whether to participate in skill formation, and what form this should take. For effective workforce development to occur, highly sophisticated labour market information systems are required to provide signals to workers and firms so they can make optimal choices, and to allow governments to monitor and evaluate labour market policies and programs. The National Centre for Vocational Education Research through its roles as the official statistical agency for TVET, manager of the strategic research priorities program, and maintainer of a TVET research literature database, plays a central role in promoting workforce development in Australia.

Introduction

Australia, like many other advanced economies, finds itself for the first time in several decades facing the situation of a relatively low unemployment rate (under 5%, a rate not seen since for over 30 years) and sustained skill shortages for some professions and most of the trades. Overlaid on this has been the growing recognition by policy makers and industry of the impending ageing of the workforce as the result of a long run decline in the fertility rate, below the natural replacement rate.

In short, labour appears to be in short supply and is likely to remain that way for many years to come. Not surprisingly, policy makers see workforce development as one of the main ways to redress this situation. For example, the objective of increasing the proportion of the population with post-school qualifications is lauded, not (necessarily) as an end in itself, but because it is estimated to have the consequence of raising the labour force participation rate, thereby partially offsetting the decline that will occur as a result of ageing.

It is important to understand from the outset, however, that the philosophy of workforce development, as it is understood in Australia, differs from that in many of its neighbouring countries. Ashton et al. (2002) present Singapore, Taiwan and South Korea as following the “developmental model of skill formation”. This comprised three components:

- the state assumed centralised control over the education system;
- a clearly articulated trade and industry policy to drive the process of industrialisation; and,
- institutional mechanisms to enable the skill requirements of the economy to inform planning of the outputs of the education and training system.

This last point is the most salient. In all three countries, super-ministries were created to collate the necessary demand and supply information, and to direct the activities of education and training institutions. Ashton et al. argue that had these countries “relied on the market to perform this function there was a real danger that skill shortages would have been created” and go on to describe market adjustment as “a slow process which took generations to work through in the West” (2002: 15).

The Australian model of workforce development is quite different. One recent State government inquiry defined it as “those activities which increase the capacity of individuals to participate effectively in the workforce throughout their whole working life and which increase the capacity of firms to adopt high performance work practices that support their employees to develop the full range of their potential skills and value” (Skills for the Future 2003: 20).

This model of workforce development puts the onus much more on individual actors (i.e. workers and firms) making decisions in pursuit of their own interests. In this respect, it should be noted that Australia has one of the highest participation rates for adults in education and training among OECD countries. For workforce development to function effectively requires sophisticated labour market and education and training data, research and analysis to inform actors’ decision-making and to enable governments to monitor the impact of their policies and program.

The paper outlines the main features of TVET in Australia, the labour market information systems which support it, and the role of NCVER as the country’s principal workforce development research agency.

Main features of TVET in Australia

In Australia, the planning and delivery of TVET is a joint responsibility of the national government and the eight State and Territory governments.

Around \$5 billion is invested annually by governments in funding the delivery of TVET in Australia. In 2005, there were 1.6 million students in the public TVET system, made up of 0.87 million whose place was publicly funded and who trained with a public provider, 0.33 million whose place was also publicly funded but the training was delivered by a private or community education provider, and 0.39 million who trained in a publicly owned training institution but whose (marginal) course costs were not met by the state.

Public TAFE institutes are now required to compete with private providers for some of the total available government training dollars. The opening up of the training market has significantly changed the way publicly-funded institutions operate as they are now required to be competitive in terms of both price and quality. The reforms have fundamentally changed the orientation of providers of training away from education and training toward providing a business service.

The quantum of training delivered by private training providers is unknown but is believed to be significant.¹ There are several thousand private training providers who are registered to deliver courses and issue qualifications under the Australian Qualifications Framework. Recent survey evidence suggests there are more students enrolled with private than with public training providers (Harris et al. 2006). Private training providers are also known to dominate the provision of unaccredited training, such as that delivered by product vendors.

This mixed model of public and private funding and delivery constrains the ability of governments to structure the provision of TVET to meet the needs of the economy, irrespective of whether this was thought to be a desirable approach or not. The other factor mitigating against that is the national government is not itself responsible for the delivery of training, that being the role of State and Territory governments, and this limits the capacity for a co-ordinated national approach (along the lines of Singapore, Taiwan and South Korea).

In short, there is a significant public investment in skill formation but with strong reliance on market mechanisms in its delivery. As important as the public provision of training are the institutional arrangements designed to facilitate an effective national training system. The two main elements of this are the Australia Qualifications Framework, which establishes a hierarchy of recognised skill attainment (and, thereby, facilitates the operation of market forces by providing clear signals to employers) and quality assurance arrangements so that all accredited training purchased is known to meet certain quality standards.

Labour market information systems

Mangozho (2003) describes the evolution of labour market information systems from the early days of conventional manpower planning to labour market analysis. There are three main aspects of labour market analysis:

- labour market signalling – information that enables actors and other decision makers to make informed decisions
- analysis of labour market operations – to understand the dynamics of how the labour market functions

¹ There is no obligation on private training providers to report their level of training activity.

- monitoring and evaluation of labour market policies and programs – to identify the impact of policies and programs

Manpower planning fell out of favour in the 1970s because its quasi-engineering approach turned out to have low predictive value. Blandy and Freeland (2000: 13) argue that manpower planning is “ambiguous and even illusory as a methodology”. From time to time, especially during periods of skill shortage, industry bodies attempt to deploy this methodology as a means of demonstrating that there is a need for a targeted uptake in training levels or migration levels. This can backfire through over-correction of changes already induced by market forces. A recent Australian example has been an over-supply of specialist information technology skills in the wake of the dotcom collapse in the early 2000s, the scale of the over-supply exaggerated because of changes that had been made to call forth supply following industry lobbying. Currently, TVET graduates in information technology are experiencing well below average employment rates following their training.

There is, in fact, a relatively poor correspondence between the area of TVET graduates training and their subsequent employment. Cully et al. (2006) show that, at the broadest possible level, just one in four TVET graduates are employed in the same major occupational group as intended by their training. The occupational destination of TVET graduates bears a much closer relation to the occupational distribution of employment than it does to the occupational area of the training. This reflects the degree of flexibility in the Australian labour market, one which makes it highly adaptive to dynamic change. The Australian workforce is highly mobile – around 3 million people a year change employers or move in and out of unemployment or the workforce out of a total workforce size of just over 10 million people. Many people experience several changes in occupation over the course of their lifetimes.

For markets to operate efficiently requires information to enable (prospective) clients to make economically rational decisions. Over time, Australia has evolved a highly sophisticated set of labour market information systems. The Australian Bureau of Statistics is the agency responsible for collecting and reporting on economic and labour market statistics. Arrangements in education and training, where the information requirements do not readily lend themselves to the household or business surveys in which the Bureau specialises, are different. For the TVET sector, as outlined below, NCVER has become the official statistical agency.

Australia’s National Centre for Vocational Education Research

The National Centre for Vocational Education Research (NCVER) commenced operations in 1981 as the TAFE National Centre for Research and Development. The centre was originally established to conduct research and evaluation of training curricula and programs of national significance. Over the past 25 years its remit has grown to encompass a number of complementary roles such that it now occupies the information apex at the centre of Australia’s VET system. NCVER’s vision is that Australia’s VET policy and practice are informed by a sound base of quality information.

NCVER is owned by the State, Territory and Australian Government ministers responsible for vocational education and training. Although owned by government, as a legal entity it is a privately owned company, overseen by a board of eight directors representing its owners, industry and unions. This arms-length arrangement provides the company with a degree of independence in the conduct of its business, including what to research and the freedom to publish.

The company's six broad areas of activity are:

- collecting and analysing national TVET statistics and survey data, as the official statistical agency on Australian VET
- undertaking a strategic programme of TVET research, including the management of a national VET research competitive grants programme
- collecting and providing research findings on TVET from across the world through the VOCED research database
- publishing and communicating the results of research and data analysis
- building links with similar international organisations to foster comparative analysis and collaborating on issues of mutual interest
- undertaking commercial consultancies.

Official TVET statistical agency

NCVER has been the official TVET statistical agency for over ten years, and oversees a number of ongoing statistical collections and surveys (as summarised in Table 1). Its work here is done under contract for the Australian government and State and Territory governments, and is underpinned by a strategy, *Mapping the Future: a forward plan for Australian VET statistics 2004-10*, which has three objectives:

- provision of a comprehensive and high quality information base to support policy development, research and evaluation in TVET
- to use that information base to underscore public accountability and measurement of the national TVET system, including the key performance measures
- to maximise the opportunity for the information base to be analysed, by exploiting data linkages and making the data more widely available in a variety of formats.

The centrepiece of the collections and surveys is the annual provider collection. Unit record data is held on every subject undertaken by each student in the public TVET system, currently running at around 12 million subject enrolments per year. This is married with information taking from student enrolment records, and details of the providers themselves, to provide a rich relational data base. The data base is used to provide tabulations and reports on the characteristics of students and their courses for policy makers, industry and providers themselves. As it is an administrative collection there are no statistical limits (although there are privacy limits) on the extent to which the data can be disaggregated, enabling NCVER to meet hundreds of fine-tuned data requests each year.

The collection also provides the sampling frame for NCVER's annual survey of students exiting from the TVET system. This serves as both a destination survey, to monitor the value to students of participating in TVET, and a satisfaction survey, to enable TVET providers to monitor the quality of their teaching and training.

The collections and surveys are also used as source data in statistical analysis and research, to investigate questions as diverse as:

- what impact does socio-economic status have on TVET participation?
- what are the economic returns to attaining a TVET qualification?
- what are the determinants of non-completion among apprentices and trainees?

Table 1: Outline of NCVER's ongoing statistical collections and surveys

Collection/Survey	Description	Frequency
VET Provider Collection	Administrative collection of information on students, the courses they undertake and achievement.	Annual collection, dates back to 1994.
Apprenticeships and Traineeships Collection	Administrative collection on apprentices and trainees and their employers.	Quarterly, dates back to 1994 as a national collection.
Student Outcomes Survey	A survey of students who completed or part-completed a qualification in the preceding year, covering their views on the training they received and their current activity.	Annual, dates back to 1997. Previously known as TAFE Graduate Destination Survey. Renamed in 1999 as Student Outcomes Survey.
VET Finance Collection	Administrative collection of information on the finances of state training authorities, and Department Of Education Science and Training/ Australian National Training Authority (Commonwealth).	Annual, accrual reporting dates back to 1997.
VET in schools collection	Administrative collection of courses undertaken by school students in recognised VET qualifications, as part of a senior secondary certificate.	The VET in schools collection is an annual collection of training activity in a calendar year. It was collected for the first time in 2005.
Survey of Employer Use and Views of the VET System	A telephone survey of employers covering their satisfaction with aspects of the VET system. Surveys conducted prior to 2005 also included satisfaction with the skills of recent VET graduates.	Last conducted in 2005, previously in 2001 and before then on a biennial basis back to 1995. Previous Surveys not comparable to 2005. The survey was called Survey of Employer Views prior to 2005.

TVET research activities

Since 1997, NCVER has also been responsible for managing a national program of commissioned research on priority research areas determined by government Ministers. This is over and above its own in-house research capacity which is funded through contributions from NCVER's owners and supplemented by research activity done under commercial arrangements.

The objectives of the managed research program are to:

- provide high quality research;
- encourage collaboration and foster partnerships between researchers, industry policy makers and practitioners in progressing the research agenda;
- develop and maintain two-way flows of information between researchers and the users of the research in a way which stimulates relevant research and makes resource outcomes accessible to potential users; and,
- build the capacity, in terms of human resources and the knowledge base, necessary for substantial ongoing research effort, and enhance the ability of users to engage with and use research.

Around 20 reports are published each year under the program. Management of the research program follows a number of principles and protocols that are outlined in Attachment A. These are important buttresses to the rigour and independence of the program.

The VOCED database

NCVER maintains a research literature database on TVET research, known as VOCED. VOCED indexes research reports, monographs and individual book chapters, journal articles, conference papers, policy documents, government reports and publications, published statistics, theses, bibliographies, unpublished reports, papers and electronic documents from web sites. Access to the site is free, through www.voced.edu.au.

VOCED is international in scope, with an emphasis on Australia and the Asia Pacific region, and presently contains over 30,000 high quality abstracts, many with links to full text documents about TVET research, policy and practice. VOCED aims to provide comprehensive coverage of Australian TVET resources and to include all key international TVET English language documents.

VOCED is supported by UNESCO's International Centre of Technical Vocational Education and Training in Bonn, Germany and by a network of clearinghouses throughout Australia and in New Zealand. Its international profile, enhanced by its UNESCO endorsement, enables the VET community to showcase its research and policy information to an international audience.

NCVER as knowledge broker of Australia's TVET sector

Put together, these three functions of NCVER – official statistical agency, manager of the strategic priorities research program, maintainer of a world-class research literature database – make it a distinct entity that sits at the centre of Australia's TVET sector, and central therefore to workforce development. It is uniquely positioned to play an authoritative role in channelling and interpreting information within the sector, and to explain how the sector functions to those outside it.

This gives rise to the final point: the utility of any information is dependent on how it is deployed. NCVER devotes considerable efforts to the dissemination of its statistical and research activities. All publications are made freely available via the NCVER web site (www.ncver.edu.au) and file downloads are presently running at well over 400,000 per quarter. There are high levels of engagement with policy makers, industry bodies, TVET providers and practitioners. Our future direction is to take advantage of new information and communication technologies to allow us to target nuanced messages and services to distinct audience segments.

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Attachment A: principles and protocols for the management of the national VET research and evaluation program

NCVER recognises that a vibrant and critical research community is a fundamental element in developing evidence-based policy and extending good practice. The following principles and protocols are essential to the successful management of the national VET research and evaluation program.

1. NCVER is to lead the development of research capacity in Australia's VET sector by:
 - actively participating in researcher forums and networks
 - building research capacity, including specific funding for early career researchers and developing research skills for non-university based researchers
 - hosting research staff on secondment or sabbatical leave
 - hosting an annual conference of VET researchers
2. Research should inform policy and practice in Australia's VET sector
 - the NCVER Board, following a consultative process with stakeholders, provides advice to Ministers on research priorities
 - research priorities, as agreed by Ministers, provide the framework under which calls for project proposals are made, with allowance also made for an open category where the research is of demonstrable value to the sector
 - advocacy research is not funded
 - researchers are to, as appropriate, engage with stakeholders and practitioners in the conduct of their research (e.g. through formulation of steering committees) to ensure that the work is relevant
3. Research is to represent good value for money
 - research should extend knowledge
 - secondary analysis of existing data is encouraged
 - researchers have access to NCVER held information and data (see NCVER's information and data policy) and are charged at marginal cost only for the provision of such information and data
 - researchers' time is to be valued fairly and costed appropriately
 - NCVER has responsibilities for managing the program, quality assurance and disseminating the findings (including through preparation of synthesis products) but is not itself eligible for competitive research funds
4. The selection of research projects is to be independent and transparent
 - advisory panels, chaired by senior NCVER staff and comprising representative stakeholders, are used to assess project proposals
 - conflicts of interest are required to be declared by panel members
 - the criteria for selection are made available to applicants
 - all recommended proposals are signed off by NCVER's Managing Director
 - details on the number of successful and unsuccessful applicants are made publicly available
5. Research conforms to ethical and other guidelines
 - university-based researchers are to seek authorisation from Ethics Committees before proceeding

- other researchers are to abide by the Code of Practice of the Australian VET Research Association
 - additional guidelines may also need to be observed in some circumstances (e.g. for research involving Indigenous people)
 - privacy principles are to be observed
 - surveys which involve 50 or more organisations must obtain authorisation from the Australian Government Statistical Clearing House before they can proceed
6. All research is to be published subject to the work being of sufficient quality
- reports will be peer reviewed and edited by an editor prior to finalisation
 - NCVER has the responsibility to ensure that key messages and executive summary are in language appropriate for policy makers and practitioners
 - the methodology of the project is to be clearly documented so that readers can assess the validity of the findings
 - all statistical tables and figures contained in reports are to be sourced and documented sufficient for them to be independently verified
 - work in progress is to be distributed only with the permission of NCVER
 - NCVER reserves the right to not publish a report, but permission for the authors to publish elsewhere will not be unreasonably withheld by NCVER
7. Research findings are to be effectively communicated
- reports are to contain a page of key messages, a short executive summary up to three pages, and the body of the report is to be kept to 25 pages (with supplementary material published in companion documents)
 - NCVER will prepare synthesis documents and other products which draw together findings from commissioned research projects and other relevant material
 - abstracts of completed reports are available on the VOCED database
 - all reports are available free-of-charge via the NCVER web site
 - NCVER will actively promote the findings of research at conferences and forums and in face-to-face briefings with selected stakeholders
 - an annual report will be produced highlighting key points relating to the NVETRE program