Submission

By National Centre for Vocational Education Research (NCVER)

to

The Productivity Commission

Economic Implications of an Ageing Australia

The National Centre for Vocational Education Research Ltd (NCVER) is an independent body responsible for collecting, managing, analysing, evaluating and communicating research and statistics about vocational education and training (VET). The main focus of NCVER's work includes research, the VET student and financial collections, the apprentice and trainee collection, the Student Outcomes Survey, the management of national competitive research grants, and the development of the Vocational Education and Training Research Database (VOCED). NCVER also has a strong international role. In partnership with Adelaide Institute of TAFE, NCVER is a UNESCO Centre of Excellence in Technical and Vocational Education and Training, and has developed strategic links with similar international research agencies. A wealth of experience has been built through undertaking consultancies in a number of countries and, through VOCED, NCVER collects and provides a valuable information service that pools international technical and vocational education and training information via the web. More information about NCVER can be found at http://www.ncver.edu.au.

Information, derived from relevant research undertaken by NCVER, is provided as background to the Productivity Commission's research into the implications of the future ageing of Australia's population, and relates broadly to the first two terms of reference only.

It is widely held that there is a link between education and economic performance and that vocational education and training plays an important role in Australia's economic performance. Our responses provided below are framed, and should be read and understood, in the context of vocational education and training.

NCVER's responses to terms of reference 1 and 2

In responding to these terms of reference, we have attempted to provide information around the central themes arising from the questions posed under each term of reference. Under the first term of reference, we provide information related to training and productivity, and under the second term of reference, we provide information related to training and employment outcomes.

References

The key references referred to in providing our comments are:

Reference 1

Anlezark A, Nguyen N, 2004 (forthcoming), *Australian Vocational Education and Training Statistics: Older learners in VET 2002 at a glance,* NCVER, Adelaide.

Older Learners In VET 2002: At a glance provides information about people (aged 45 years or more) undertaking training within Australia's public vocational education and training (VET) system. Trends and changes over recent years are presented, as well as an overview of older student characteristics (comparing older learners with younger learners and with older non-learners), the nature of training being undertaken, and their motivations for study.

Availability: Expected to be available from November 2004 as a pdf file download from the NCVER website.

Reference 2

Ball, K (2003) *Australia's ageing population and its implication for our future*, NCVER, Adelaide.

This paper looks at the ageing population in relation to the role that the vocational education and training sector can play in assisting the nation achieve intergenerational equity. The paper considers the impact of demographic change in relation to older workers and participation in training.

Availability: Currently available as a pdf file download from the NCVER website at the following URL: http://www.ncver.edu.au/pubs/confs/ageing_pop.pdf.

Reference 3

Cully, M (2004) Older Workers in *Equity in vocational education and training: Research readings*, edited by K Bowman, NCVER, Adelaide, (p.206-224).

The chapter on 'Older Workers' focuses on older workers, summarises the policy background, and reviews the labour market circumstances and vocational education and training (VET) participation of older workers. The evidence that older workers face exclusion from the labour market and barriers to training participation are examined. Also examined is the evidence that employers are beginning to alter their behaviour in relation to older workers. The evidence that training leads to an improvement in the labour market circumstances of older workers is assessed. In this context, older workers are defined as people aged 45 or more who are able-bodied, in the civilian population, and either in paid employment or willing to work if the opportunity presents itself.

Availability: Currently available as a pdf file download from the NCVER website at the following URL http://www.ncver.edu.au/publications/1389.html

Reference 4:

Karmel, T and Woods, D (forthcoming) *Lifelong learning and the older workers*, NCVER, Adelaide.

The research reported in this paper uses a quantitative approach to examine the role education and training has to play in affecting the participation of older persons in the labour market. Current and past levels of education are considered as well as future projections to determine the impact that rising levels of education is having, and will have, on employment rates now and into the future. The relationship between the timing of education and training, and engagement with the labour market, is also examined to consider the pay-off in undertaking education and training as an older person compared to undertaking education and training earlier in the life-cycle.

Availability: Expected to be available from November 2004 as a pdf file download from the NCVER website.

Current relevant research:

NCVER is conducting a systematic review of research of mature age people: skill development and the labour market.

A systematic review of research is a secondary research activity that locates all relevant studies (published and unpublished) on a carefully focused research question and evaluates the material for its information content relative to the posed question and the robustness of its approach.

In terms of process, a systematic review of research follows a structured protocol, and is transparent in its approach. The criteria and reasons why a study has or has not been included is made clear as is the basis for the judgment of its quality and relevance to the policy question.

The systematic review of mature age people: skill development and the labour market is considering what evidence there is that skill development activities for the mature aged lead to:

- Improved attachment to the labour market
- Improved productivity

Availability: Findings from this review of research are expected to be available by November 2004.

1. The likely impact of an ageing population on Australia's productivity and economic growth

We provide information below which focuses on training and the older learner. Older learners are considered to be people aged 45 years or more.

Age profile

Anlezark and Nguyen (2004, forthcoming) [Reference 1] examine the age profile of students in vocational education and training and identify key characteristics that define older learners.

They find that the most important fact about older learners in VET is that the majority of them are closer to middle age than retirement age. In 2002, almost two-thirds (65.3%) of the 334,900 older learners in the public VET system were younger than 55 years. There were over 30,000 students aged over 64 years. They also note that the distribution of public VET students by age peaks at 18 years, and gradually declines after this time, with some stabilisation between 30 and 45 years.

Key characteristics pertaining to older learners include:

- Females comprised 52.6% of all older public VET students, and 45.8% of older apprentices and trainees.
- Older learners, as for older people in general, were more likely than younger people to be self-employed and/or employing others. While all apprentices and trainees are employed, older apprentices and trainees tend to be existing workers.
- Older learners in the public VET system were proportionately more likely to reside in rural areas than their younger counterparts. Older apprentices and trainees were more likely to reside in capital cities than their younger counterparts.
- Students born outside Australia in countries whose main language was English were proportionally better represented in the older age groups, as were apprentices and trainees born in countries whose main language was not English
- A person's gender, labour market status, country of birth and previous education attainment affect their propensity to undertake training later in life.

Age and productivity

Anlezark and Nguyen (2004, forthcoming)[Reference 1] consider older workers in relation to training participation rates and note:

- The number of older students (aged 45 years or more) in the public VET system (including TAFE and other government providers) has increased steadily since 1994, showing a trend that is generally consistent with that of the younger learners. (This analysis is limited to the public VET system).

- 6.6% of the Australian population aged 45-64 participated in the public VET system in 2002. This participation is variable across Australia. By comparison, in 1994 3.4% of Australians aged 45-64 years participated in the public VET system.

- Older learners are more prevalent in the public VET system, where 1 in 5 students are aged 45 years or more. Amongst apprentices and trainees, 1 in 8 are aged 45 years or more, and in the Higher Education sector, 1 in 12 students studying below degree level are aged 45 years or more

Participation rate (%) and total students in public VET by age & state, 2002

Age	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
15-44	15.2%	18.3%	15.0%	15.3%	13.0%	13.6%	18.9%	11.2%	15.7%
45-64	**6.9%**	**8.4%**	**6.1%**	**7.4%**	**4.7%**	**5.4%**	**9.1%**	**3.4%**	**6.9%**
65 or more	1.4%	1.7%	0.6%	1.2%	0.6%	0.5%	1.3%	0.2%	1.2%
15-64	12.3%	14.9%	11.9%	12.4%	10.1%	10.5%	16.1%	8.6%	12.6%
All students (000's)	**557.2**	**497.4**	**298.9**	**127.7**	**133.8**	**32.8**	**22.5**	**19.8**	**1,690.1**

* prorata student data (for age and sex), population data from ABS 3021.0 ERP June 2002
* includes some students aged under 15 years

Implications for older learners are identified as:

- Increases in the proportion of the workforce over 45 years of age, and the decline in the proportion of the workforce aged under 25 years has implications for the provision of education and training. It creates a demand for up-skilling and re-training of the older workforce (particularly in the areas of emerging technologies), balanced against the demand for entry-level training from a declining youth market.
- The working lifecycle typified as the transition from full-time study to full-time employment to retirement is becoming blurred, as increasingly people of all ages take on part-time work and study, which in turn increases training demands.
- As people come to the end of their working lives, training demands take a focus on personal interest rather than work-related training, and older people are often more reluctant to undertake work focused training than they were at the peak of their careers.

Cully (2004) [Reference 3] considers employer provided training for older workers. Findings suggest that access to formal vocational education and training has considerably improved for older people, although participation rates remain strongly inversely associated with age. Because of the changes between 1997 and 2001, Cully suggests it is no longer possible to conclude, on the basis of the two-way association between age and participation, that workers aged 45 to 54 have inferior access to in-house training compared with those aged 35 to 44. However, workers older than 54 continue to have lower participation and have experienced a large decline in average training hours.

Industry and occupation profile

Ball (2003) [see Reference 2] considers age by industry and occupation in relation to training participation rates, and finds that although the age profile does vary by industry, with some industries and occupations having a relatively aged work force, it is not universally the case that industries and occupations with a relatively old work force also have low training participation rates or that industries and occupations with a relatively young workforce also have high training participation rates. It is possible to conclude therefore that the industrial and occupational profiles of older workers do not account for the decline in participation in training with age.

Ball (2003) also notes that apprenticeships and traineeships are becoming increasingly important as a training mechanism for older workers:

- At 31 December 2002, 71,100 apprentices and trainees were aged 40 years and over (accounting for 19% of all apprentices and trainees). By comparison at 31 December 1997, only 6% of apprentices and trainees were aged 40 years and over.

- While over half of all apprentices and trainees aged 25 to 39 years of age are training in trade-related occupations, older apprentices and trainees tend to be employed in non-trade related occupations.
- In general, older apprentices and trainees are enrolled in higher-level courses.
- Apprenticeships are providing a means for employed older workers to upgrade their skills.

Anlezark and Nguyen (2004, forthcoming) [Reference 1] note that older people in an apprenticeship or traineeship were significantly more likely to be employed as managers and administrators, associate professionals or intermediate production and transport workers. Younger apprentices and trainees, on the other hand, were significantly more likely to be intermediate, clerical, sales and service workers.

Motivation

Anlezark and Nguyen (2004, forthcoming) [Reference 1] examined the motivations and reasons for people undertaking training, and note that:

- For both younger and older learners, the reasons for study most often related to employment, whether to get a job, to gain extra skills for their current job, or because it was a job requirement.
- Older learners had a greater focus on personal interest and skill improvement than younger learners.
- One of the most marked differences in reason for study by age is the decreased emphasis on increased earnings with age, indicating a gradual shift away from financial gain and employment motivation as people age, and an increased focus on study for personal interest reasons.

Reasons for study are shown for graduates and module completers in the following table:

Reasons for study, Student Outcomes Survey, 2002 students

Reason for Study	**44 yrs or less**		**45 yrs or more**	
	Graduate	Module completer	Graduate	Module completer
To get a job	25.5%	20.7%	17.3%	11.8%
To develop my existing business	1.3%	2.1%	3.0%	4.1%
To start my own business	3.3%	2.5%	3.1%	2.1%
To try for a different career	10.3%	10.2%	11.0%	6.7%
To get a better job or promotion	8.8%	7.1%	7.0%	3.0%
It was a requirement of my job	13.8%	9.8%	14.1%	11.9%
I wanted extra skills for my job	11.7%	13.9%	19.9%	18.3%
To get into another course of study	7.4%	4.6%	3.0%	1.4%
For interest or personal reasons	14.2%	22.9%	18.3%	35.2%
Other reasons	3.8%	6.3%	3.5%	5.7%
Total (000's)	**194.6**	**110.1**	**36.6**	**145.8**

* excludes missing values, data weighted to represent all TAFE students

2. The potential economic implications of future demographic trends for labour supply

Responses provided under this term of reference are based on the premise that there is a link between being equipped with skills for the work force and employment. Our comments below attempt to illustrate the relationship between training and employment, and the difference that training can make for employment outcomes.

Labour supply

Ball (2003) [Reference 2] considers the proportion of older workers in the work force and training participation rates, including a focus on gender differences. Notable findings include:

- while there is an increasing proportion of older workers in the Australian work force because of demographic change, there has been a notable increase in the proportion of older students studying in VET compared to the early 1990s.
- In 2001, students over 40 years of age comprised around 29% of the vocational education and training student population compared to less than 18% of students in 1990.
- As a group, older women attached to the labour market have lower training participation rates than men; however, there are more older women than men training in vocational courses in the VET system.
- Not all groups of women in the labour force have lower participation rates than men. In general, participation rates for female wage and salary earners are comparable to the training participation rates of men. Self-employed women tend to participate less in training compared with their male counterparts. The group with the largest discrepancies in training participation rates between men and women is the group marginally attached to the labour market.
- Of all people in the labour force, the least likely to access training are those people who are marginally attached to the labour force. By age 45, less than a quarter of each age group participated in training. Over 4 in ever 5 wage or salary earners participated in training. However, akin to the unemployed and to those marginally attached to the labour market, participation declined notably for those in the 45 to 49 year age group and for older age groups compared with younger age groups.
- Participation in training by the unemployed declined for each age group until only 29% of those aged 60 to 64 years participated in any form of training.

The issue of older workers facing exclusion from the labour market and assessment of whether training leads to an improvement in the labour market circumstances of older workers is examined by Cully (2004) [Reference 3]. Key findings include:

- Examined as a whole, older workers (those 45 years or more) can be said to be disadvantaged relative to prime age workers (25 to 44 years) in the labour market. However, older workers are far from a homogenous group. The segment of the older worker population who are genuinely ‘at risk’ are those who find themselves displaced from work. Their chances of regaining work are low compared with younger workers.

- Training can be seen as a form of employment protection insurance for existing older workers, while for displaced older workers it is a potential means of restoring skill differentials against younger workers. Evidence on participation rates in both the formal VET system and employer-provided training shows that older workers saw substantial gains between 1997 and 2001. Access to training has clearly improved for older workers, but what remains in doubt is whether such training helps to redress the problems of the at-risk group. The evidence suggests training, on its own, has limited returns.

- Identifying older workers as an equity group which should be targeted in the provision of VET would not do much to improve the circumstances of those older workers who are genuinely at risk in the labour market. Active labour market assistance to the more narrowly defined group of displaced older workers, for whom re-training would be an important element, would yield greater returns. A number of the state government programs already in place provide potential good practice models.

Employment

Considering the assumption that education and training does make a difference to a person's employment chances, there is some evidence to support this view.

The study undertaken by Karmel and Woods (2004, forthcoming) [Reference 4] focuses specifically on the role of education and training in affecting the participation of older persons in the labour market. The key findings are:

- Modelling the relationship between educational level and engagement with the workforce (using the employment to population ratio as the measure of engagement which captures both labour supply and demand factors), findings indicate that the effect of education on employment to population rates is more pronounced for women than men. However, for both males and females, it is evident that a higher level of education appears to have a favourable impact on employment to population rates. This impact tends to occur for the higher level qualifications of Certificate III and above. For females, it appears that this 'education effect' is amplified when working hour patterns are taken into account, as the more educated tend to work longer hours.

- Examining the changes in employment rates between 1993 and 2003 in order to ascertain the relative importance of education levels and sectoral changes, it was found that the changes in education levels between 1993 and 2003 indicate large increases in the shares of basic and university level qualifications. Using a standard shift-share approach to examine the impact of this increase in qualification on engagement with the work force (on an 'everything else being equal' basis), results indicate that, historically, the education effect has been important in explaining current working patterns. Increased education levels, in an accounting sense, contributed 1.4 percentage points to the increase in the employment rate for men and 5.5 percentage points for women. This compares to 4.2 percent and 7.9 percent, respectively, for changes in employment rates holding education and age constant. When looking at the changes in terms of hours worked, the importance of the education effect increases for both males and females.

- For males, the positive education effect has been against a long-term decline in labour force participation. For females, it has contributed to long term increases in both labour force participation and employment to population rates. In summary, increasing education levels have played a role in increasing employment rates over the last 10 years, especially for women. However, other factors are also important.

- To estimate the impact of changing educational levels on employment rates over the next forty years, three separate projections of educational levels were run, whereby the acquisition of educational levels are based on patterns that occurred between 1993 and 1998, 1993 and 2003, and 1998 and 2003. Projections of educational qualifications for older persons in 2043 suggest that the proportions of older persons with low level qualifications will decline significantly and many persons will have both university and vocational education and training qualifications. Using a shift-share analysis to calculate the impact of the projected qualifications on employment to population rates and hours worked, the calculations suggest that there will be a positive 'education effect' over the next 40 years as better educated cohorts age (and continue to acquire qualifications as has occurred historically). However, when interpreted against the demographic effect, it is evident that the education effect is less than the demographic effect. It also needs to be noted that the positive 'education effect' implicitly assumes that the labour market will continue to change in a way that demands more educated workers.

- Examining the relationship between timing of education and training and the extent to which on-going education and training improves employment rates, results indicate that qualifications acquired later in life have as good, and in some cases, better, pay-off to employment to population rates for older age groups as qualifications obtained at a young age. This is particularly the case for women. This suggests that education is an effective strategy for older individuals seeking employment.

- By adding to the model a series of variables on an individual's engagement with education and training, it was found that gaining an additional qualification is positively associated with engagement with the labour market. However, the evidence on incomplete qualifications and future study intent improving employment rates is mixed.

- In examining the extent to which training might provide some insurance against becoming not employed, everyone who had a wage or salary job in the last 12 months, the number of training courses they completed, and whether they are currently employed or not, was considered. Although standard errors are generally quite high, there is a positive association between current employment status and training.