



**11th Annual National Conference 1 November 2007 Ascot Vale**  
**Education and training for new entrants and existing workers**  
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This presentation draws on *Industry demand for higher education graduates in Victoria 2008 to 2022*, a report prepared for the OTTE, DIIRD by Chandra Shah, Lenore Cooper & Gerald Burke (October 2007).<sup>1</sup> A summary of the paper is provided below.

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**Industry demand for higher education graduates in Victoria 2008 to 2022**  
**Summary**

This report assesses supply and demand for people with higher education qualifications in Victoria from 2008 to 2022.

In particular, it estimates the shortfall or surplus of people with higher education qualifications in Victoria over the next 15 years.

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**Context**

Victoria's economy has changed over the last thirty years with traditional industries such as agriculture and manufacturing increasingly making way for service industries. Its recent economic performance is all the more remarkable in the context of the resources boom that has resulted in strong competition for investment and labour from resource rich states like Queensland and Western Australia.

In mid 2006, Victoria's unemployment rate fell below 5 per cent for the first time since 1990. The lower unemployment rate has been driven by a strong economy, and this has occurred despite a rise in the labour force participation rate, particularly amongst older workers.

Private sector surveys indicate labour and skills shortages constraining business activity in some areas. Demand for skilled workers is likely to grow, and the types of skills needed by industry, will also change. This reinforces the importance of the Victorian Government's ongoing commitments to workforce training, support and development, to ensure the evolving needs of businesses and industry can be met.

The major drivers of economic change that will impact on Victoria are a complex blend of domestic and international issues—globalisation, competition and population, climate, social and technological changes.

As environmental sustainability becomes critical, Victoria's future prosperity will depend on its workforce's ability to adapt to new technologies and innovative approaches to work organisation. It will require development of more sustainable ways to live, work, travel, produce and consume. Education and training will be critical in this adaptation process. The role of higher education qualifications will be critical in this process.

This study assesses supply and demand for people with higher education qualifications in Victoria over the next 15 years.

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<sup>1</sup> Available from: [www.eduweb.vic.gov.au/edulibrary/public/voced/industry-demand-higher-ed-grad-vic-2008-2022\\_web\\_version.pdf](http://www.eduweb.vic.gov.au/edulibrary/public/voced/industry-demand-higher-ed-grad-vic-2008-2022_web_version.pdf)

The report, *Qualifications and the future, labour market in Australia*, prepared for the National Training Reform Taskforce by Shah & Burke, November 2006, focuses on VET qualifications at the national level. ([www.eduweb.vic.gov.au/edulibrary/public/voced/research-CEET-quals-labour-market.pdf](http://www.eduweb.vic.gov.au/edulibrary/public/voced/research-CEET-quals-labour-market.pdf))

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## **Victoria's workforce is changing**

Victoria's employment is projected to grow almost 14 per cent from 2.53 million in 2007 to 2.88 million by 2022.

As the state competes in the global economy, the industrial structure of its economy has been transforming from a manufacturing base to services and activities emphasising innovation. This is also causing a shift in the occupational structure of Victoria's workforce.

Employment is increasing faster in occupations requiring people with qualifications, particularly at the higher level. In many occupations, there is evidence of *skills deepening*; meaning the growth in the number of people with qualifications is faster than employment growth.

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## **To remain competitive, Victoria's workforce must become more qualified**

If the trend in skills deepening continues, 78 per cent of employed people in Victoria will have qualifications in 2022, compared to 59 per cent in 2006.

Workers with higher education qualifications will be in particular demand.

To meet the requirements for people with higher education qualifications resulting from employment growth, turnover in jobs and skills deepening within occupations, an estimated 411,000 new entrants and 283,000 existing workers will need to acquire qualifications from 2008 to 2022.

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## **A shortfall of 49,000 people with higher education qualifications is projected**

At current levels of higher education course completions and migration, a shortfall in the number of people with bachelor and postgraduate (masters and doctorates) degrees is projected in the next 15 years. The net shortfall in graduates will be 49,000. A surplus in the number with graduate certificate and diplomas is projected.

The supply of science and engineering graduates will be short of requirements.

Projections in this report are based on Victoria's employment growing at 0.9 per cent year to 2022. If labour force participation rate increases above the level it assumes, higher employment growth is likely and could mean a bigger shortfall in people with higher education qualifications.

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## **Victoria must increase course commencements by more than 10,000 per year**

Most new entrants completing a postgraduate degree or a graduate certificate or diploma also complete a bachelor degree. This means 96,000 additional bachelor degrees must be completed from 2008 to 2022. This translates to raising the level of annual *commencements* by about 9,000 above the 2005 level over the next 15 years.

The number of additional postgraduate degree completions required is projected to be 10,000. This translates to raising the level of annual *commencements* by about 1,200 above the 2005 level over the next 15 years.

The number of additional commencements required to address the shortfall can be reduced if course completion rates improve. Moderating the net drain each year of Victorian graduates to interstate and overseas destinations will also help.

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## **Industry stakeholders believe skills gaps are looming**

Many stakeholders consulted for this report expressed concern about Australia's technological capacity if recent trends are not reversed. For example, they believe demand for science and engineering graduates will increase as the focus on climate change strengthens.

Innovative strategies are needed to encourage more young people into science and engineering. A nationally coordinated approach may be preferable as other states are likely to be facing similar problems.

Stakeholder consultations suggest a preference for locally trained graduates among employers.

Alternative modelling by the Victorian Government, using different data, suggests possible shortfalls in specific health-related occupations. These models assume higher demand in the health sector than assumed in this study. If higher employment growth is also assumed in this study, then the shortfall projected in the number of people with qualifications will be higher.