



Australian Government

# *Review of Australian Higher Education*

## *Discussion Paper June 2008*







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**Note:** All data included in the documents is sourced from the Department of Education, Employment and Workplace Relations (DEEWR) Higher Education Collection Datasets unless otherwise referenced.

The Higher Education Statistics Collections are available at:

[http://www.dest.gov.au/sectors/higher\\_education/publications\\_resources/statistics/publications\\_higher\\_education\\_statistics\\_collections.htm](http://www.dest.gov.au/sectors/higher_education/publications_resources/statistics/publications_higher_education_statistics_collections.htm)

University revenue data has been sourced from the Financial Reports of Higher Education Providers publication as issued by DEEWR and its predecessors. These publications include the Selected Higher Education Finance Statistics publications from 1996 to 2002 and the Financial Reports of Higher Education Providers from 2003 to 2006. These publications include all Table A providers and the University of Notre Dame from 2000 to 2006, Avondale College from 1996 to 2001 and Marcus Oldham College from 1996 to 2001. Unless explicitly stated, figures are for the higher education sector only and specifically exclude vocational education and training operations at dual sector institutions.

# Introduction

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The Deputy Prime Minister and Minister for Education, the Hon Julia Gillard MP has asked us to undertake a major review of Australian higher education. The terms of reference for the review are provided at Appendix A.

We have prepared this discussion paper as a vehicle to hear your views on the key issues identified by our terms of reference. The issues outlined in this paper have been informed by the preliminary input we received and we would like to thank those respondents for their contribution.

The paper has been structured around nine key challenges and issues for higher education in Australia over the coming decades.

We would welcome your comments on the questions raised in this paper or on other matters that relate to the terms of reference. The details for making a submission are at Appendix B.

The review will be conducted on a strong evidence base and we would ask that you provide any evidence that you have to support your views.

Professor Denise Bradley, AC

Mr Peter Noonan

Dr Helen Nugent, AO

Mr Bill Scales, AO





# 1. Higher education in modern Australia

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## 1.1 *The place of higher education in modern Australia*

Australia's society and economy are changing in ways that will increase the importance of higher education to the nation.

Our future national prosperity must be built in the competitive, knowledge-based global economy. Australia's capacity for innovation and adaptability in industry and society will be a key determinant of our success. We will need to make the most of our 'human capital' – our people – by encouraging individuals to upgrade their skills and knowledge and by providing education and training opportunities for people from all backgrounds.

There will be new social and economic challenges, and new opportunities, arising from international transformations such as the rise of China and India, from social changes such as the ageing of the Australian population, and from environmental transformations such as climate change. In the face of rapid global change, the cohesion of Australia's democratic society and the strength of our social and cultural institutions, including our education system, will be great national advantages.

While education is at the core of any national agenda for change, it is higher education with its twin functions of teaching and research which will make a distinct difference between simply adjusting to the forces which press upon us or establishing a new economic, social and environmental order.

Higher education is the site for the production and transmission of new knowledge and for new applications of knowledge. It is here that the most highly skilled members of the workforce are educated and here too that the intellectual base for new knowledge intensive industries is formed.

But higher education in a modern democracy does more than this. By deepening our understanding of health and social issues, and by providing access to higher levels of learning to people from all backgrounds, it can enhance social inclusion and reduce social and economic disadvantage. By engaging with scholars from other countries and educating people from other countries it helps to create a nation confident and engaged both with its geographic region and the wide community of nations. By helping sustain and renew other institutions through its capacity to develop knowledge and skills, higher education acts as a cornerstone of the institutional framework of society.

Finally, its traditional role remains critical and relevant. Higher education can transform the lives of individuals and through them their communities and the nation by engendering the love of learning for its own sake and the passion for intellectual discovery.

## 1.2 *The functions of higher education in modern Australia*

The central place of higher education in modern Australia derives from the two core functions of contemporary universities:

- Developing high level knowledge and skills
  - for self-fulfilment, personal development and the pursuit of knowledge as an end in itself throughout an individual's life; and
  - to prepare a highly productive, professional labour force, alongside the vocational education and training (VET) sector, appropriate to the needs and opportunities of the economy and its component industries and sectors, including the preparation of graduates in relevant fields for professional practice.
- Generating new knowledge and developing new applications of knowledge
  - by undertaking research and developing high level research skills; and
  - by exchanging and transferring knowledge and its applications with industry and society.

Through the exercise of these two core functions and related activities, the higher education system in modern Australia also makes essential contributions to:

- Developing and maintaining a civil and sustainable society
  - by playing a key role in the development and maintenance of the nation's culture and social structures;
  - by assisting to develop the capacity of Australia to function effectively in the community of nations and of individual Australians to be global citizens; and
  - by helping develop and maintain civil and sustainable regions and communities.
- Building the national economy and regional economies within Australia as a major knowledge-based industry in its own right.

## 1.3 *The characteristics of higher education in modern Australia*

If it is performing these functions effectively, then Australia's higher education system should be marked by a capacity to:

1. Meet the needs of the labour market and industry for high level skills
2. Provide opportunities for all capable students to participate
3. Provide students with a stimulating and rewarding higher education experience
4. Connect effectively with the other education and training sectors
5. Play a vital role in the national research and innovation system
6. Operate internationally
7. Contribute effectively to the development of Australia's social and cultural structures and its national and regional economies

In order to develop and sustain these capacities, Australia's higher education system needs to be:

8. Appropriately, effectively and efficiently resourced to perform its functions
9. Appropriately, effectively and efficiently governed and regulated

These nine factors form the basis for the issues identified and the consultation questions asked in Chapter 3 of this paper.

### **Question for discussion**

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1. How adequate is the statement of functions and characteristics of higher education in modern Australia?
-

## 2. The strategic context

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### 2.1 *The scale and diversity of the sector*

In 2008, the Australian higher education system comprises:

- thirty nine universities of which 37 are public institutions and two are private;
- one Australian branch of an overseas university;
- three self-accrediting higher education institutions; and
- approximately 150 non-self-accrediting higher education institutions (including TAFE institutes) which have been assessed by state and territory government accreditation authorities as meeting the relevant requirements set out in the National Protocols for Higher Education Approval Processes. Sixty-six of these institutions have been approved under the *Higher Education Support Act 2003* (HESA) to offer their eligible students income contingent loans (FEE-HELP).

There are higher education institutions located in all states and territories, with the majority of the non-self-accrediting higher education institutions based in Sydney and Melbourne.

Australia's higher education providers range in scale from under 30 students to over 54,000 students. The average number of students in approved non-university higher education institutions is 400, while the average number of students at an Australian university is 25,000.

The larger universities in the capital cities provide a comprehensive set of courses to both undergraduate and postgraduate students. The other universities are specialised by discipline to varying degrees, but all offer courses up to and including research degrees. The other higher education providers are highly diverse, including both public and private industry-focussed or profession-specific colleges, faith-based institutions, and colleges that provide preparatory courses for students going on to further study at university.

In total over 980,000 people were enrolled in Australian higher education institutions in 2006, including over 250,000 students from overseas<sup>1</sup>. Over the previous decade total enrolments increased by 50 per cent and overseas student numbers trebled.

Higher education is now a major component of the economy and a major export earner:

- In 2006, the sector employed around 92,000 people and generated total revenue of \$15.5 billion.
- Overall education export earnings in 2007 were \$12.5 billion, making it Australia's largest services export and third largest export sector (behind coal \$20.8 billion and iron ore \$16.1 billion). Higher education's share was over \$7 billion in education export earnings, predominantly from onshore earnings.

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<sup>1</sup> This is not the complete picture. Until 2007, the Department of Education, Employment and Workplace Relations (DEEWR) did not collect data on all students at private higher education providers. Students at private higher education providers which have been approved by the Commonwealth are able to access FEE-HELP and those providers were required to report on only their FEE-HELP students until 2007. DEEWR does not collect data on other private higher education providers. The total number of students studying at higher education level, therefore, is unknown.

- Gross expenditure on higher education research and development (R&D) was \$4.3 billion in 2004-05, representing 27 per cent of the nation's R&D effort. Higher education research and development counts for over 83 per cent of pure basic research expenditure.

## 2.2 *The environment for higher education*

The national and international environment for higher education continues to change in profound ways. Many of the drivers of change arise from global factors rather than the policies of individual governments or the actions of individual institutions. These changes interact in complex ways on the Australian higher education sector but, in general terms, they combine to produce an environment which is:

- increasing the importance of high levels of knowledge and skills as key determinants of success for individuals, enterprises, regions and nations;
- increasingly global, with growing flows of students, staff, money and ideas across national boundaries;
- characterised by the development of higher education as an industry in its own right; and
- less certain in terms of future revenue streams and financial outcomes for any individual Australian higher education provider.

## 2.3 *The growing importance of high levels of knowledge and skills*

Australia is a sophisticated society with a highly developed and well functioning economy. The nation's prospects will be determined by the efficient and effective use of all of its resources – particularly its human resources. Long run success cannot be based solely on making the best use of Australia's natural endowments, it will also require a sophisticated capacity to generate extra value from a wide range of knowledge-intensive industries, especially in the services sector.

To do this the higher education sector and the vocational education and training sector must find effective ways to work together to produce the knowledge and skills that the nation requires.

### **Educational participation and productivity**

There is evidence to suggest a positive relationship between levels of education attainment<sup>2</sup> and productivity. This is difficult to quantify. However, Access Economics has estimated that a combined increase in formal training and in the average length of education will boost both productivity and participation, leading to a lift in Gross Domestic Product (GDP) of 1.1 per cent by 2040. Access Economics suggests that a 0.15 year increase in the stock of education would have two effects:

The addition of 0.15 years raises average years of education/training in the total workforce, meaning that the average stock of formal education/training in the economy

<sup>2</sup> The OECD definition for educational attainment is: "Educational attainment is expressed by the highest completed level of education, defined according to the International Standard Classification of Education (ISCED)" (OECD 2007b). Attainment in this document, therefore, refers to the completion of a qualification.

rises by 1.1% by 2040. In turn, higher participation in education and training, (and the resultant impact on the 'stock' of education) leads productivity to increase by 0.62%.

And ... a more highly skilled workforce will have higher rates of participation. By 2040 the boost to participation in education and training is sufficient to raise participation by 0.48%. (Access Economics 2005, p. ii)

Internal work by the Department of Education, Employment and Workplace Relations, suggests that a one percentage point increase in the proportion of the working age population with post-school qualifications (0.5 percentage points each for university and for vocational education and training qualifications) would, all other factors being equal, increase both productivity and labour force participation, and therefore raise annual GDP by about 0.9 per cent. In recent years, Australia's qualifications profile has been increasing but its impact on productivity has been difficult to separate from other influences.

Demographic projections indicate little increase in domestic demand for education and training from the traditional school-leaver cohort over the medium to longer term if current participation patterns continue. The *Intergenerational Report 2007* (Australian Government 2007) projected that university participation rates will remain fairly static over the longer term. This suggests a need to broaden the base of participation if overall levels of educational attainment are to be increased. The decline in the traditional student group could be offset by increased participation of older adults (that is, those 25 years and above) who are entering or returning to higher education. The number of older domestic adults enrolled in postgraduate coursework programs has continued to increase (from over 95,000 in 2001 to over 114,000 in 2006). On the other hand, the number of older undergraduate students has decreased by about 10,000 during the same period (from around 147,600 in 2001 to just over 137,400 in 2006).

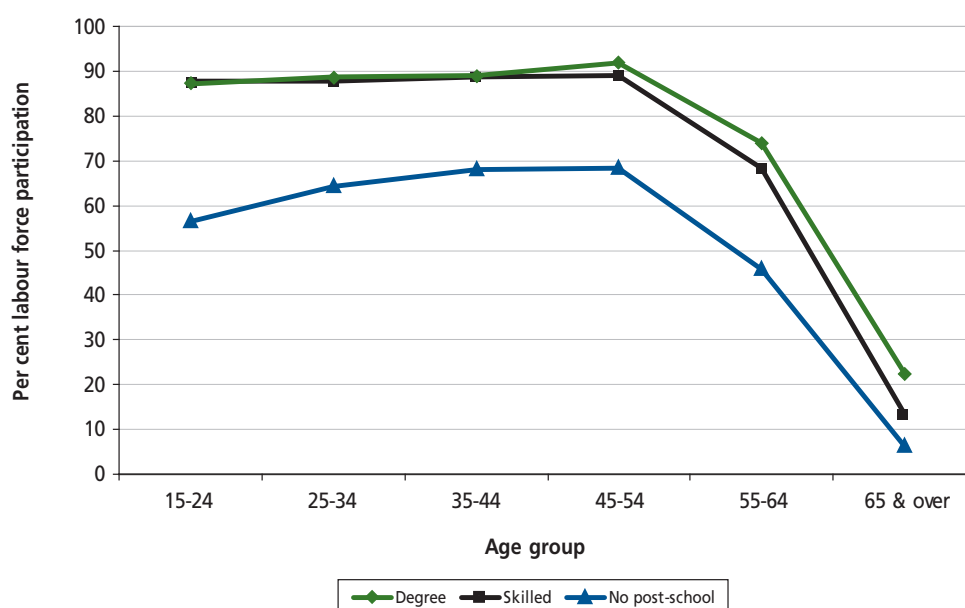
Longer working lives with more career changes mean older adults are choosing to upgrade to professional qualifications or re-train or upgrade existing qualifications. These students often want or need shorter courses, more flexible delivery, greater recognition of prior learning and tailor-made courses.

Given the demographic outlook in Australia, any significant increases in educational participation and attainment will inevitably require concentration on those groups that currently have relatively low levels of engagement with post-school education and training. As shown in Figure 1 below, a significant number of existing workers have no post-school qualifications. To remain actively engaged existing workers will need to re-train and upgrade their skills.

## Workforce participation and productivity

The ageing of the population will pose particular problems for workforce participation and productivity. At an industry level, skills shortages will be exacerbated over the next decade as large numbers of experienced workers retire. For the overall economy, as the population ages, there is a risk that the rate of participation in the workforce will fall, reducing output and productivity. This could occur at the same time as ageing increases certain social costs, in particular health care. Boosting the levels of educational participation and attainment will be an important part of the response to this challenge. Research shows that people with higher educational attainment are more productive and participate in the workforce at higher rates, whatever their age (see Figure 1).

Figure 1: Workforce participation by higher level of qualification by age



Source: ABS Census 2006 data

Higher levels of education also correlate strongly with better health outcomes (OECD 2007a) and are increasingly important for individuals if they are to participate fully in economic and social life in the modern world.

## The generation and the application of knowledge

The international evidence is clear on the positive links between research and development, industrial innovation and economic growth. As the global knowledge economy expands, the role of the higher education sector in research and research training will be crucial. There is a strengthening focus in many countries on the importance for innovation of basic research and on the public good role of research in universities.

It is also clear that universities have an important role to play in the transfer of knowledge into industry and the community, not just through the education of individuals, but also through the dissemination of knowledge by engagement with enterprises, government agencies and community groups. The Productivity Commission noted the importance of this role in its study of public support for science and innovation in 2007:

Universities' core role remains the provision of teaching and the dissemination of high quality, openly disseminated, basic research. Even where universities undertake research that has practical applications, it is the transfer, diffusion and utilisation of such knowledge and technology that matters in terms of community well-being. (Productivity Commission 2007, p. xxiii)

This is seen by some countries as more than just an economic issue. The United Kingdom Science and Innovation Investment Framework 2004 – 2014, which summarises the economic case for investment in science and research, also notes more broadly that:

Modern economies recognise the importance of a strong public science base to support improvements in welfare. The outputs we get from the science base, which includes new knowledge, skilled people, new methodologies, and new networks, have contributed to improvements in the things that matter to us, such as our wealth, education, health, environment, and culture. They have also improved decision-making about the governance of these things, including better public policy. (HM Treasury, Department for Education and Skills and Department of Trade and Industry 2004, p. 149)

At a fundamental level Australia's higher education sector needs to have a sophisticated and flexible capacity to produce highly educated graduates, generate new knowledge, and transfer applications of knowledge. The need for this capacity is heightened by our requirement to tackle the enormous challenges of issues like climate change.

## 2.4 *Globalisation and internationalisation*

Higher education, like many other industries, has been fundamentally changed by the processes of globalisation, defined by the OECD as “the widening, deepening and speeding up of worldwide interconnectedness” (Held et al 1999, cited in OECD 2008, vol. 3, p. 53) and the emergence of increasingly networked people and institutions (Marginson 2004, cited in OECD 2008, vol. 3, p. 53). The process of globalisation will continue as national economies become even more interconnected and sophisticated information, communications and transport systems transcend national boundaries, allowing ever more rapid flows of goods, services, information and people around the world.

Closely related to the impact of globalisation has been the rapid internationalisation of our higher education institutions, that is “the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of tertiary education” (Knight 2003, cited in OECD 2008, vol. 3, p. 53).

### **Globalisation**

The higher education system is at the forefront of many of the processes of globalisation. Higher education now involves intensive global networking among institutions, academics and students, as well as with business and industry.

Across Europe for example, higher education is very much part of the drive to a fully integrated economy, with moves towards harmonisation of standards and approaches to enhance mobility and students and graduates. Australian higher education cannot be not isolated from such global developments.

Research and development (R&D) activities and resources are increasingly distributed internationally. Research in many fields is now a global enterprise relying on international funding, large collaborating teams and networks, shared datasets and infrastructure. R&D can be located anywhere in the world where the people, resources and costs are right. In an interconnected world these networks contribute “to the efficiency of tertiary education systems in research – and by extension, to the national innovation capacity – as a result of externalities in knowledge production. Academic exchanges allow for faster circulation and



dissemination of research results produced elsewhere and provide a significant impetus to research and innovation that would not occur in isolation” (OECD 2008, vol. 3, p. 55).

While Australia performs well on many international measures of R&D performance, it faces challenges including the limited scale of its research teams and facilities, the small number of its major enterprises and, with some important exceptions, the relatively low international visibility of its university research enterprises.

Global mobility of staff, students and resources, is also increasing the level of international competition in the higher education industry. There are growing numbers of higher education providers offering services internationally, major institutions from the United States, United Kingdom and Europe establishing campuses and partnerships in Asian countries and elsewhere in direct competition with Australian providers, and rapid development of higher education capacity within the countries which have been key markets for Australia.

## Internationalisation

Australia has been an acknowledged success in one aspect of the internationalisation of higher education—the recruitment of students from other countries. Australia has been able to compete effectively in the global market place for students because it has the advantages of well-established and well-regarded providers, relatively good educational infrastructure, tuition in English, and because it is attractive as a safe destination for study, migration and investment.

Nationally, fee-paying overseas student numbers have risen dramatically – giving Australia some of the most cosmopolitan campuses in the world. According to the OECD, Australia has the highest proportion (19.3 per cent in 2005) of international students of any OECD country (OECD 2007b, p. 317). International students are distributed widely across higher education institutions in Australia, unlike the United States where international students are highly concentrated in the Ivy League institutions.

Australian students, on the other hand, appear to be less mobile than students from many other countries and the up-take of the income contingent loan OS-HELP to help students with the costs of studying overseas for a semester or two has been lower than expected. Many universities are seeking to make their programs more internationalised through increased opportunities to study abroad, curriculum development and collaboration with overseas partner universities.

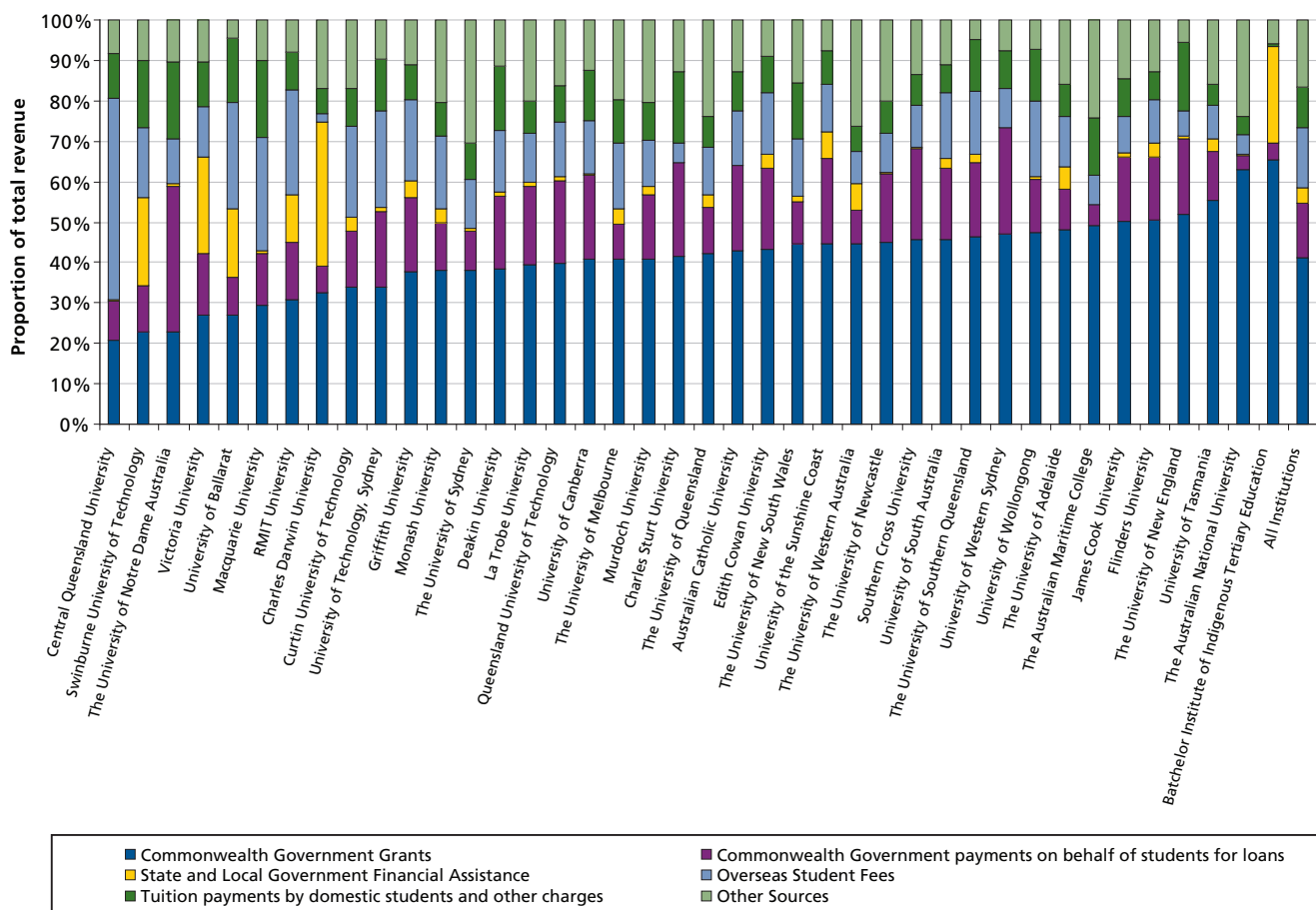
Academic mobility is also an important aspect of internationalisation – unfortunately data on this is not readily available and the number of Australian academics working overseas or overseas academic staff working in Australian universities is not known. There is now a global labour market for academic and research staff and commentators have frequently raised concerns about the ability of Australian institutions to attract and retain high quality academic staff in the face of increasing global competition. Competition for staff is increasing as universities expand and new institutions are established in many countries, and as universities seek to recruit staff capable of attracting competitive research funding from national and international sources.

## 2.5 The development of higher education as an industry in its own right

Over the last twenty years, the higher education sector has increased in scale and complexity and has markedly reduced its reliance on government funding. It is increasingly appropriate to comprehend the sector as an industry in its own right.

The higher education industry now generates much of its revenue from sources other than government grants, as shown in Figure 2. The scale of this change is not widely understood in the community.

**Figure 2: Comparison of revenue by higher education institution and source (VET revenue included), 2006**



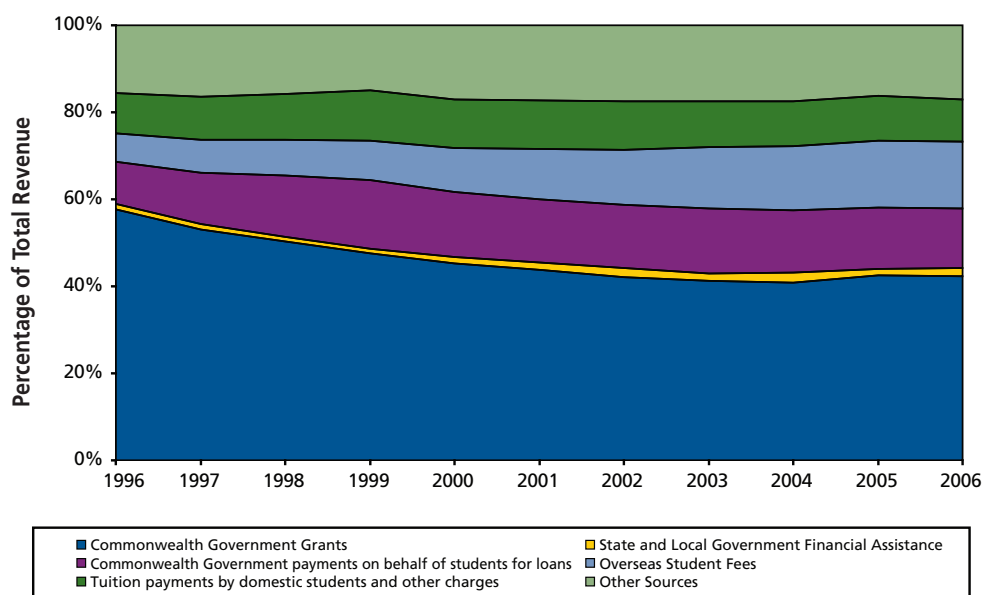
Source: DEST 2007a, Finance 2006, Financial Reports of Higher Education Providers

When the Higher Education Contribution Scheme (HECS) was first introduced in 1989, there were few private higher education providers, and the publicly funded universities received the vast majority of their revenue from the Commonwealth Government. Today, there are around 150 private providers operating in Australia and the public universities receive less than half of their revenue from the Commonwealth. Income from student fees and charges now represents an average 39 per cent of institutional income. Indeed the term 'public' university now refers more to the historical circumstances at the time of foundation rather

than the nature of institutional financing. For example, one of Australia's public universities received only 30 per cent of its operating revenue from the Commonwealth (including the Higher Education Loan Program - HELP) in 2006. A substantial number of 'public' universities have 'private' arms that are either wholly owned or operated in partnership with private organisations.

Revenue from HECS, HELP, fees and charges rose strongly over the decade to 2006, as did aggregate revenue from all sources other than direct Commonwealth funding. In real terms, direct Commonwealth funding fell from 1997 to 2001 before beginning to grow again.

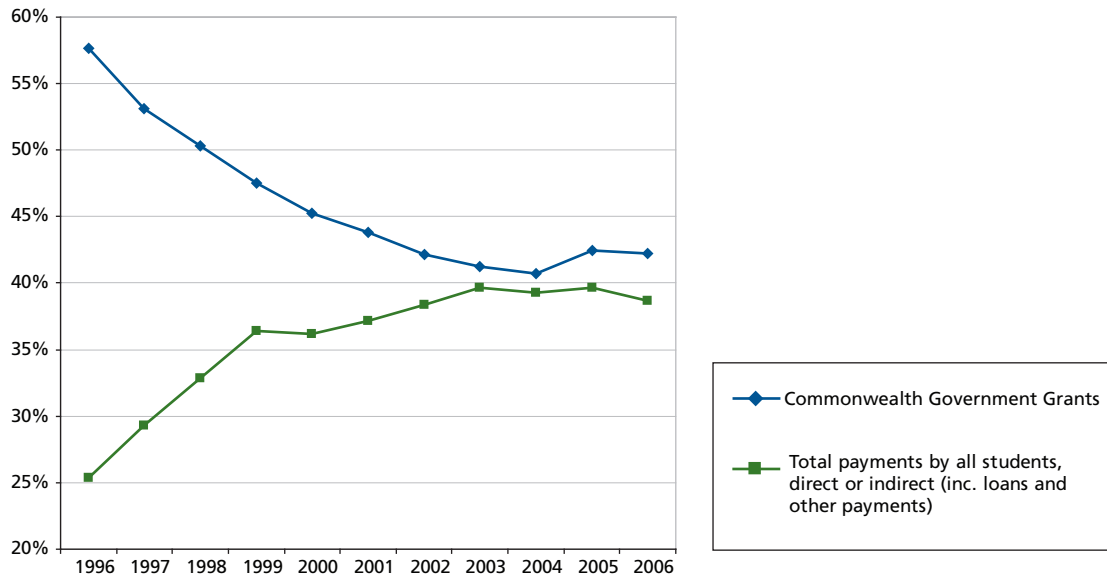
**Figure 3: Higher education revenue sources as a percentage of total revenue, 1996-2006 (constant prices)**



Source: DEEWR 2008 (based on Finance Selected Higher Education Statistics, various years)

As a result of these different rates of growth from different revenue sources, there has been a marked change in the composition of funding for the Australian higher education system, as shown in Figure 3. The proportion of funding from direct Commonwealth grants fell from 53 per cent in 1997 (and 58 per cent in 1996) to 42 per cent in 2006, while the proportion of funding, directly or indirectly, from predominantly student sources (HECS, HELP, fees and charges) rose from 29 per cent in 1997 (25 per cent in 1996) to 39 per cent in 2006 (see Figure 4). International student fees alone rose from 7 per cent to 15 per cent of total revenue.

**Figure 4: Proportion of total revenue from direct Commonwealth funding and from HECS, loans and charges, 1996-2006 (constant dollars)**



Source: DEEWR 2008 (based on Finance Selected Higher Education Statistics, various years)

This shift means that:

- universities are less reliant on government and more able to determine their own futures (although the Commonwealth still remains the largest single source of university income);
- universities' incomes are increasingly contingent on their ability to compete for non-government sources of revenue; and
- students are increasingly demanding consumers, focussed on the cost and outcomes of their courses and the quality of the student experience.

Part of the shift away from public funding in Australia has been a gradual de-regulation of the higher education market through reforms, such as the introduction of international fee-paying students, postgraduate fee-paying students, and the recent extension of government funding and government supported student loans (FEE-HELP) to private providers. At the same time, the sources of public funding for research have been made more contestable. These changes have increased the level of competition in the sector.

Like other industries, higher education is also facing increased competitive pressures from factors such as the ageing of the workforce and global competition for skills.

The academic workforce is on average older than the total workforce with more than 30 per cent of staff aged 50 and over. The ageing of the academic workforce is a significant concern for the sector with its implications for the loss of experience, subject specialties and future recruitment needs. There was a period of rapid growth in the number of academic staff in Australian universities during the 1960s and 1970s – mostly young, early career academics. Since then there has been a slowing of growth and recruitment in the academic workforce with a consequent increase in average age. A key researcher in this area notes that only a third of lecturers and tutors were aged under 40 in 2006 compared to half of the total workforce

and half of professionals. Nearly a quarter of university lecturers and tutors were aged over 55 years (Hugo 2008). Similarly, research has found that 40 per cent of academics in the United Kingdom are aged 45 or over, and nearly one-third of all full-time faculty in the United States are 55 or older (Stuart 2000).

Australian universities over the next decade will be faced by their largest recruitment task for three decades. This task will have to be addressed in a context of the most competitive international labour market for the skilled academics, scientists, technologists and researchers that has ever existed. If Australian universities are to maintain their current levels of excellence, let alone enhance them, a range of innovative human resource strategies will need to be initiated. (Hugo 2008, p. 26)

This situation clearly poses a range of potential challenges beyond immediate recruitment and retention issues, in terms of the ongoing viability of some fields of study, due to staff shortages and possible disruption to the operations of some institutions.

These issues all interact to increase the competitiveness of the operating environment for higher education providers. Overall, the direction of change has been toward a more complex, de-regulated higher education industry in which the providers operate in competition with each other both within Australia and internationally. This has at least two important consequences for the dynamics of the sector and the role of government.

First, attempts by governments to mandate change or to intervene in operational matters in public universities may not be well received or effective unless there is mutual benefit. In a competitive environment, any effective and sustainable strategy for higher education needs to be founded on a recognition that universities will behave as enterprises in a market, albeit enterprises that still have a strong sense of their public benefit role.

Second, any comprehensive approach to higher education must take account of the growing role of the private sector as well as recognising the increasing 'private' activities of all universities. There are now a large number of small not-for-profit operators and some larger, very well resourced for-profit education providers seeking expansion opportunities in higher education in Australia. Future policy, regulatory and financing arrangements for the higher education industry must be developed taking into account the role that high quality provision through the private sector can play.

There are some challenges here to historical understandings about the higher education sector. For example, Australia has traditionally had a public and highly collaborative higher education sector with a very direct relationship with government. Competition between higher education institutions and the developing private dimensions of the sector are shifting the nature of these established relationships and ways of operating.

## **2.6 Resource pressures and uncertainties**

The rapid growth in revenue for almost all higher education providers has enabled rapid expansion in the scale and complexity of their operations. However, higher education is a very labour intensive industry, university research carries very high cost overheads for facilities and equipment, and costs for teaching infrastructure have also been rising rapidly.

In the public universities, resources have been under increasing pressure for some time as student numbers have outstripped Commonwealth funding for teaching. Student-staff ratios have grown markedly, from 12.9 in 1990 to 20.3 in 2005 (Universities Australia 2007a).

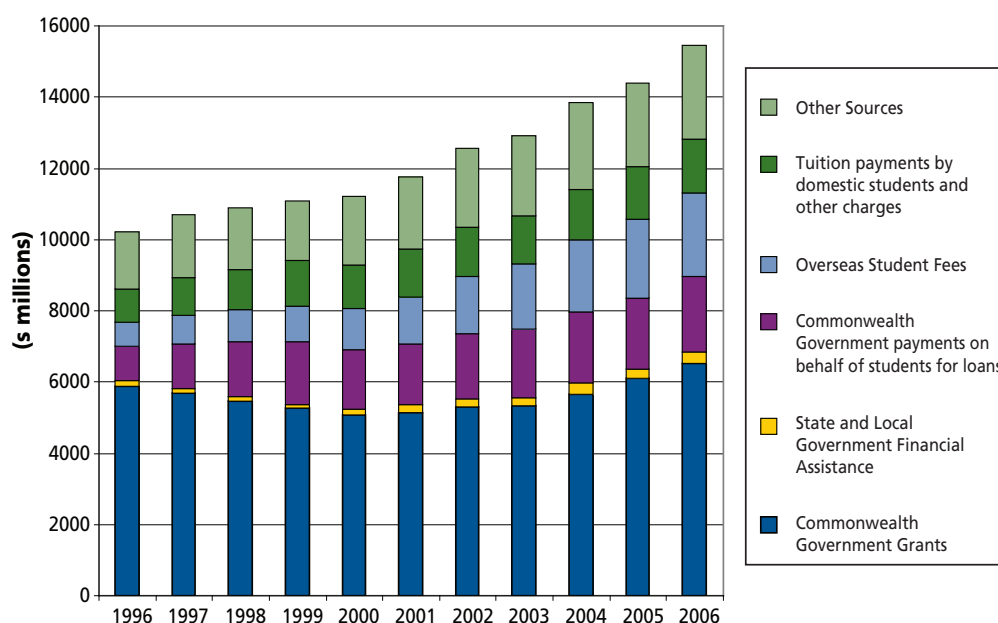
## Sources of Income

In 2006, the higher education sector generated income of \$15.5 billion. The major sources of income were Commonwealth Government grants (42 per cent), overseas tuition fees (15 per cent), upfront payments by domestic students (6 per cent) and Higher Education Loan Program (HELP) payments (14 per cent).

In addition, some institutions are able to generate quite substantial amounts of income from philanthropic sources although there is a wide variation between institutions. (See also section 3.8 and Figure 18.)

Total income in the sector increased from \$10.2 billion to \$15.5 billion between 1996 and 2006 in real terms<sup>3</sup>, a growth of 51 per cent. Funding from both the Commonwealth Government and other sources increased over this period, although the growth in income from other sources increased at a faster rate than did income from Commonwealth Government sources (see Figure 5).

**Figure 5: Higher education revenue by source, 1996-2006 (constant dollars)**



Source: DEEWR 2008 (based on Finance Selected Higher Education Statistics, various years)

However, the balance between these sources of income has changed quite substantially over the last decade. The result of this shift is that across the sector there is now less reliance on government funding and a greater reliance on student contributions and other more contestable sources of income. The extent of institutional dependence on Commonwealth Government funding varies widely across the sector from just over 30 per cent to over 70 per cent (including HELP payments).

For most domestic undergraduate student places, the amount of income available to a higher education institution is determined by the amount of funding the Commonwealth Government provides and the amount that the Commonwealth allows the institution to source

<sup>3</sup> Constant prices 2006, using the Australia Bureau of Statistics, Consumer Price Index

from students (the maximum student contribution amount for Commonwealth supported students) either directly or through HECS-HELP loans. Some postgraduate places are funded in the same way. Research training places are funded primarily through the Research Training Scheme.

The income per student place (for those places directly subsidised by the Commonwealth) is made up of the combination of these factors, that is, the Commonwealth funding and the student contribution (previously HECS). From 1989 to 2004, income per student place declined from \$14,070 to \$13,422 (in real terms<sup>4</sup>), a reduction of 4.6 per cent. The amount of income per place fluctuated over this period with declines in a number of years offset by increases in others. The lowest points in income per place occurred in 1991 and 2002, which were respectively 9.8 per cent and 7.2 per cent below the 1989 level (in real terms). From 2005, income per place has increased and in 2006 was \$15,090, or 7.2 per cent above the 1989 level (in real terms).

The trend in Commonwealth funding per place (which excludes HELP payments) also fluctuates across the period 1989 to 2006 but shows the impact over time of policy changes that altered the balance of funding sources to increase the contribution from students. In 2006, the amount of Commonwealth funding per place in real terms remains substantially below 1989 levels. Commonwealth funding per place has declined from \$11,525 in 1989 to \$9,998 in 2006 (in real terms).

(Note that the calculation of funding per place across a long time span is difficult because of changes in data collections and funding arrangements, see explanatory note at Appendix D.)

## Costs

Both the staff and non-staff costs of teaching and research are rising sharply. The escalation in research costs is said to arise from, among other factors, the increasing costs and rapid obsolescence of research equipment and facilities, the expense of participation in international research projects and access to international facilities, and the dramatic increases in the costs of research journals.

Very similar issues apply in relation to teaching. In 1995, the Commonwealth Government ended the longstanding practice of adjusting its grants to universities to cover the impact of agreed salary movements. Since that time, universities have carried the cost of increases in salary levels arising from enterprise bargaining, beyond any minimal 'safety net' adjustment in basic wages. The significance of this issue is likely to increase further as the university workforce ages and international competition in the academic labour market places upward pressure on salaries in higher education.

Universities are also confronting the very major costs of moving to computer-mediated, electronic and flexible delivery modes, while at the same time attempting to sustain, as far as possible, their campus-based and face-to-face teaching approaches. While there may arguably be some downstream savings from increased use of 'e-learning', there are enormous transitional costs in creating digital libraries, converting existing courses and developing new ones, and establishing new electronic infrastructure. International evidence also suggests that these costs will recur frequently due to the rate of change in technology and student expectations for both e-learning and face-to-face teaching.

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4 Constant prices 2006, using the Australia Bureau of Statistics, Consumer Price Index



Universities have met these cost pressures through increased income from all sources, especially student fees, and through productivity gains and increased efficiency (as seen most starkly in the growth of student-staff ratios). However, as noted in the previous section, government funding has become increasingly contestable and there is growing competition in the fee-paying student market. The risks to revenue have been highlighted in the last few years as the rate of growth in overseas student fee income has slowed.

### *Infrastructure*

There have been some moves to address the capital issues facing universities. The previous Government introduced the Higher Education Endowment Fund last year for capital works and research facilities. The Higher Education Endowment Fund is being rolled into the Education Investment Fund by the current Government to support capital expenditure and renewal and refurbishment in universities, vocational institutions, research facilities and major research institutions. As there will be no funding from the Education Investment Fund in 2008-09 the Government is providing universities \$500 million for capital expenditure in 2007-08.

### *Operating margins*

Many universities in Australia have been operating on very thin margins and failing to allow adequately for the risks inherent in the more competitive sources of income on which all universities now depend. While operating results improved following increases to Commonwealth base funding from 2004 – 2006, 11 public higher education institutions recorded operating margins of less than 4 per cent in 2006 and one was operating in deficit. Some universities have been unable to invest adequately in the maintenance and development of their physical resources. For example there is a large range in the extent of deferred maintenance in the sector with several universities showing deferred maintenance of over 10 per cent and one at over 20 per cent. Some estimates put the backlog as high as \$2 billion. All universities are already struggling to retain and recruit staff. These pressures will become particularly acute for institutions with limited and uncertain revenue streams, especially if there were to be any significant shocks such as an unforeseen decline in demand from international or domestic students.

## **Outlook for student demand**

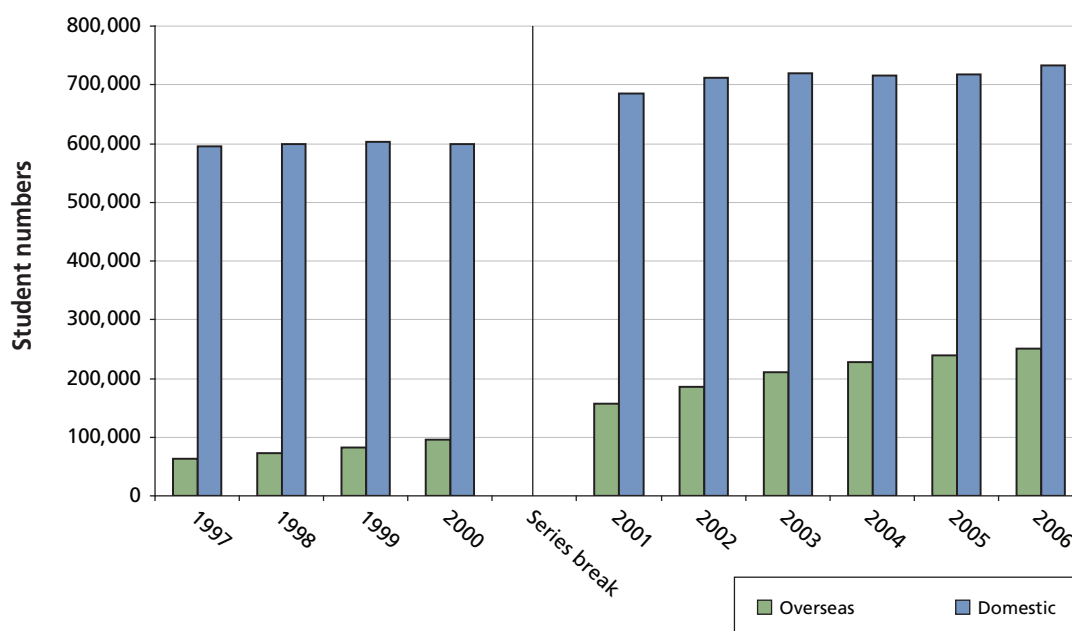
International and domestic student numbers are the key drivers of revenue for higher education institutions. There are some uncertainties in the outlook for student demand that could have significant implications for institutional revenue. The implications will differ between institutions, depending on the demography of their catchment areas for domestic students, the source countries for their international students, and their competitive positioning.

### *Domestic students*

In 2006, there were around 730,000 domestic students studying in Australian higher education institutions. Between 1997 and 2000 there was only a 0.7 per cent growth in domestic students but from 2001 to 2006 there was an increase of 48,377 or 7.1 per cent.



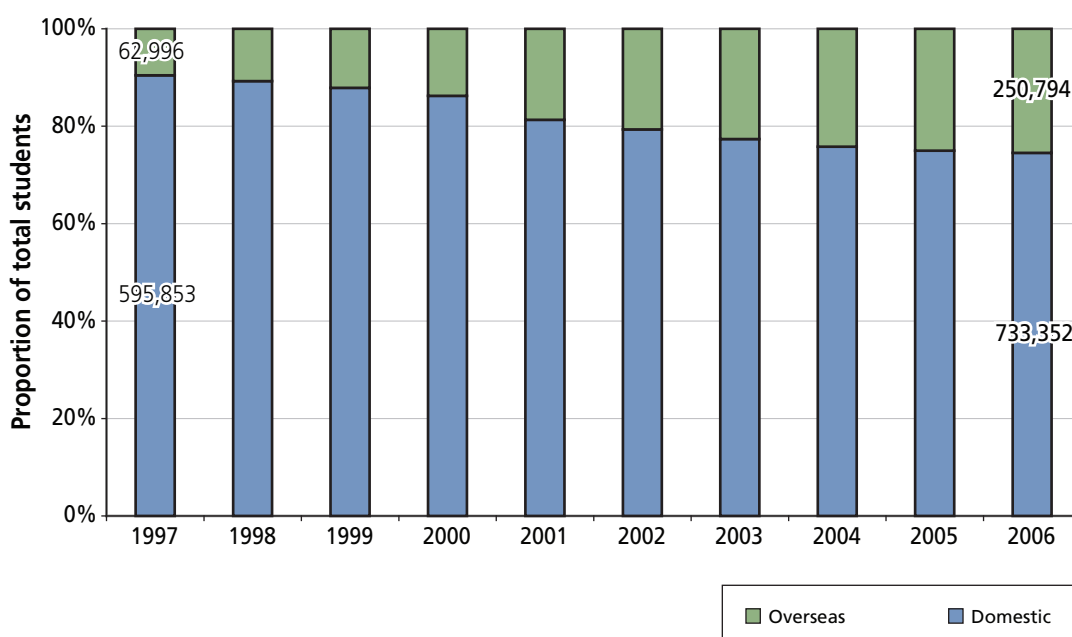
**Figure 6: Numbers of domestic and overseas students in higher education, 1997–2006<sup>5</sup>**



Source: DEEWR 2008 (based on Students Selected Higher Education Statistics, various years)

There has been an increase in the proportion of international students from 9.6 per cent in 1997 to 25.5 per cent in 2006, as shown in Figure 7.

**Figure 7: Comparison of domestic and overseas student, 1997-2006**



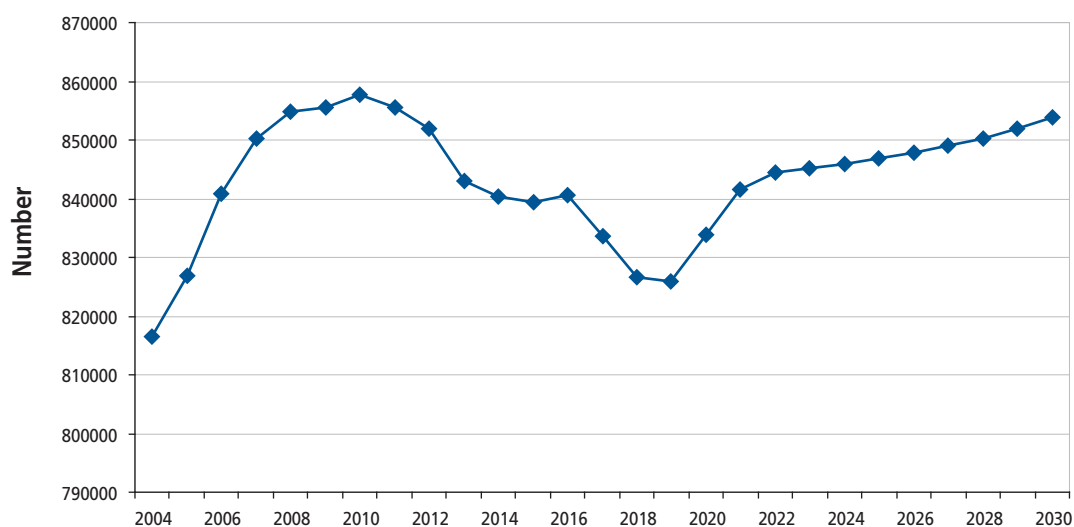
Source: DEEWR 2008 (based on Students Selected Higher Education Statistics, various years)

<sup>5</sup> Due to significant series break in Higher Education Statistical Collection data in 2001, comparison between domestic student data prior to 2001 and after this time is not consistent.

There are two factors that are likely to impact negatively on demand for and participation in higher education in the short to medium term: demographics and the strong labour market.

Demographic projections indicate little increase in demand for education and training over the medium term although the main feeder population, 15-17 year olds, is projected to build again from 2020 (Figure 8).

**Figure 8: The future school leaver population**



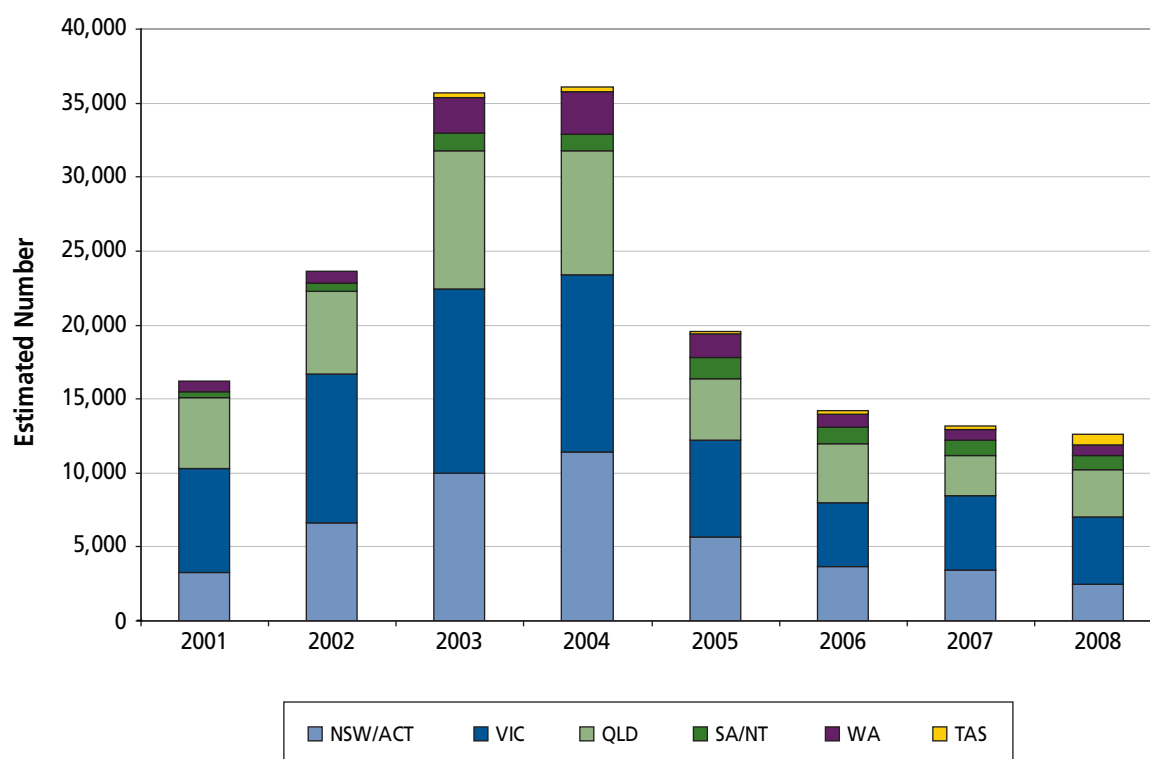
Source: ABS 2006a, *Population Projections Australia*, Cat. no. 3222.0

This general demographic picture is not evenly distributed around the country. Some states and some regions are experiencing strong population growth which will drive demand for higher education while in other areas demand is likely to remain static or decline. This raises challenges for the distribution of resources and produces different outlooks for universities in different parts of the nation.

In recent years, the strong labour market appears to have led to a decline in domestic student demand at some higher education institutions. The decline appears to have been most marked for mature aged students, but some universities have also experienced significant declines in demand from school leavers. There is also some evidence of increased student attrition rates. These demand effects are most obviously explained by the current strength of the labour market and the very high salaries that are available for workers without completed tertiary qualifications in the resources sector and associated industries.

As a result of these factors, plus some increases in the number of higher education places, overall demand for university places has essentially been met at a national level. There is now little aggregate unmet demand for university places following a period of record levels of unmet demand in the early part of this decade (Figure 9). According to Universities Australia, the estimated unmet demand for 2008 is 12,600. This is five per cent lower than the 2007 estimate of 13,200 and a 65 per cent reduction since the peak estimated unmet demand of 36,100 in 2004 (Universities Australia 2008a, p. 2). This is not to suggest, though, that demand is fully met in every region or institution of Australia or that individual students are able to do a course of first preference.

Figure 9: Estimated unmet demand, 2001-2008 by state



Source: Universities Australia, 2008a

### International students

The global education market is changing. Population demographics are shifting in many countries (ageing populations in Europe, Japan, United States, United Kingdom, Canada and China and youth bulges in South East Asia, the Middle East and Africa), skills needs are constantly evolving, students are becoming better informed about their options for education, competitor countries are developing strategies to challenge Australia's market position, and education is becoming more globally connected. It is difficult, therefore, to predict with any certainty the long term trends.

Over the period 1997 to 2006 the number of international students at Australian higher education institutions rose from 62,996 to 250,794, an increase of nearly 300 per cent. Around 70,000 international students in 2006 were studying offshore.

Data from Australian Education International (AEI), the Commonwealth Government's international education arm, shows that in 2007 higher education was still the major international education sector, with 39.1 per cent of total international enrolments by student visa holders and a growth of 3.8 per cent on 2006 figures. This growth was driven largely by increases of 6.2 per cent and 6.8 per cent in enrolments from China and India respectively. However this growth is the slowest experienced in recent years, although a strong commencement growth of 6.6 per cent was recorded in 2007, compared to -0.3 per cent and +3.6 per cent in the previous two years. This turnaround, along with OECD forecasts for international student mobility, suggests that international student demand for higher education, while changing in some important ways, is likely to continue to grow, albeit at a slower rate than experienced over the last two decades.

IDP Education Pty Ltd (IDP) forecast global demand for international higher education will grow from 2.173 million students in 2005 to 3.720 million students in 2025 (Banks, Olsen and Pearce 2007). This is growth of 71 per cent over 20 years, or compound growth of 2.7 per cent per year. Demand for international higher education places in Australia is predicted to grow 4.25 per cent per year to 2010, then slow to three per cent per year to 2015, then slow further.

### 3. Key challenges and issues for higher education

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This chapter proceeds from the review of the strategic context for higher education to examine key challenges and issues for Australian higher education. It also sets out the consultation questions on which the Review Panel invites feedback and submissions.

The key challenges and issues are grouped according to the desired characteristics of higher education in modern Australia identified in chapter one:

*Australia's higher education system should be marked by a capacity to:*

1. Meet the needs of the labour market and industry for high level skills
2. Provide opportunities for all capable students to participate
3. Provide students with a stimulating and rewarding higher education experience
4. Connect effectively with the other education and training sectors
5. Play a vital role in the national research and innovation system
6. Operate internationally
7. Contribute effectively to the development of Australia's social and cultural structures and its national and regional economies

*In order to develop and sustain these capacities, Australia's higher education system needs to be:*

8. Appropriately, effectively and efficiently resourced to perform its functions
9. Appropriately, effectively and efficiently governed and regulated

#### 3.1 Meeting labour market and industry needs

One key expectation of the higher education sector is that it will assist in meeting Australia's needs for highly skilled and capable people. This is a significant challenge in all modern developed societies, where the labour market is dynamic and individuals can have a number of careers in a lifetime. It is particularly challenging in countries such as Australia where an ageing population is likely to reduce the demand for higher education from the traditional school-leaver cohort in the longer term. As noted in section 2.3, this is likely to require concentration on older adults who are seeking to upgrade their skills or to retrain and groups with relatively low rates of participation in post-compulsory education and training.

The Organisation for Economic Co-operation and Development (OECD) notes that:

The shift towards more knowledge intensive employment has been accompanied by some labour shortages. Since the end of the 1990s, shortages in different sectors and occupations have been identified as the main factor hampering economic growth in many countries, being especially acute at both ends of the labour market (among the unskilled and the highly skilled, ranging from ICT workers to agriculture and retail workers). (OECD 2008, vol. 3, p. 16)

Australia has experienced persistent shortages in a range of professional areas served by the higher education sector. This is not just a recent phenomenon arising from the resources boom. Demand for skills has been strong and shortages have become more widespread over the past decade. The number of professions included on the Migration Occupations in Demand List increased from 11 to 53 between 1999 and 2008. Persistent areas of skill shortages in the past 20 years include the following professions: nursing, physiotherapy, pharmacy, occupational therapy, accounting and some engineering specialisations.

As noted in section 2.5, the higher education sector, as a major industry sector in its own right, is facing its own skill shortages due to the ageing of the academic workforce (Hugo 2008). Universities Australia has identified a number of disciplines most at risk. These include agriculture (60 per cent of the academic workforce over 50 years old), general and teacher education (60 per cent each), mathematics (53 per cent) and nursing (51 per cent) (cited in Healy 2008).

## Total numbers

Forecasting future demand for high-level skills is not an easy task. While researchers seem to agree on the need for additional university-trained graduates in the future, they differ on the extent to which they believe Australia's future skill needs should be met by the higher education or by vocational education and training systems. For example, one researcher has recently argued that future skills shortages will be mainly in occupations requiring university training (Birrell, Healy and Smith 2008). Others consider that the labour market will need significantly more people to acquire vocational education and training qualifications over the next decade than higher education qualifications (Shah and Burke 2006).

## The match between graduate outputs and industry needs

Under our current system, student choices about whether to study and what to study are the primary determinants of how much and what sort of higher education is provided. Student demand is influenced by a wide range of labour market factors including current and future employment prospects. Australian research shows that, while employment prospects are an important consideration for students, interest in and perceived competence in the field of study and the opportunities for interesting and rewarding careers are more important influences on students' decision-making (James, Baldwin and McInnis 1999).

Traditionally, Commonwealth Governments have used a number of 'control' levers to influence the number of students in each field of study, including establishing tuition prices for different undergraduate courses, targeting additional places for some high demand fields, requiring institutions to seek approval before closing programs judged to be critical to national requirements and providing labour market information to prospective and enrolled students. In addition, some state governments have also sought to respond to local skill shortages. For example the Queensland and South Australian governments have funded medical places in their states.

Because student choice is the primary driver of funding, both through the Commonwealth Grant Scheme and through tuition fees, higher education providers vary their course mix and student profile in response to changing student demand. In this process the institutions consider industry requirements and the likely employment outcomes for graduates, but these tend to be secondary considerations after student demand. While it is difficult to precisely match demand and supply of graduates, there is evidence that students are making rational

choices, evidenced by the fact that they are finding employment in the areas in which they studied. For example, over 95 per cent of nursing graduates are employed as nurses four months after they completed their courses (GCA 2007a).

## Upgrading skills or retraining

As noted in section 2.3, higher education is a central means of upgrading or refreshing skills of older adults. It is expected that participation in higher education by older adults will grow to meet the demands for new and increasingly complex work tasks and in response to increased job mobility. Higher education institutions are being called upon to provide opportunities to meet these demands throughout a worker's life.

Population ageing also increases the need for opportunities for lifelong learning. Workforce ageing means that a larger share of the working population will need to refresh their skills and knowledge during their career. Countries will increasingly rely on mid- and late-career workers in order to meet evolving skill needs. (OECD 2008, vol. 1, p. 44)

The OECD (2008, vol. 1, p. 35) notes that a prominent development in higher education in recent years "is the growing participation of more mature students leading to a rise in the average age of student bodies. Among the 20 OECD countries for which data are available in 1998 and 2005, the median age of new entrants into tertiary-type A education increased in half of them (most notably in Australia from 19.5 to 20.9; Belgium from 18.7 to 19.5; and Iceland from 22.3 to 23.1)."

It has also been noted that these students have different demands to the younger cohorts.

Learners increasingly seek courses that allow them to update their knowledge throughout their working lives. In addition, as learners seek to acquire particular knowledge or skills to satisfy labour market needs, more and more prefer to pick and choose courses from the most suitable providers, rather than studying a traditional clearly defined programme at one institution. As a result, TEIs [tertiary education institutions] have started to extend their lifelong learning offerings and, accordingly, the organisation of learning is increasingly adapting to include: the assessment of prior learning; a wider range of programmes; part-time learning; module-based curricula and credit systems; competence-oriented, student-centered organisation of studies; provision of non-degree students and continuing education. (Schuetze and Slowey, 2002 cited in OECD 2008, vol. 1, p. 34).

## Responsiveness to skills needs

The sector does seem to have been responsive to changing labour market opportunities for graduates, for example, through the growth of 'purpose-built' vocationally-oriented degrees directed at specific labour markets in the professions and para-professions.

However some commentators have noted that there are constraints on the flexibility and responsiveness of universities. The cost of introducing major new programs or moving into new fields that require changes to staffing profiles, development of new curricula, establishment of new infrastructure or creation or purchase of new learning materials may inhibit rapid change. Internal quality assurance processes can delay the approval of new programs and professional accreditation requirements may impose rigidities or introduce

delays. In addition, shifts in student profile between high and low cost disciplines can have an impact on funding for the university as a whole and this could pose limits on faculties that want to be able to respond to emerging skills needs.

The structure of university qualifications itself may be a constraint on flexibility. At the undergraduate level, courses are typically structured as multi-year programs of between three and six years duration for a full time student, often with a specified sequence of subject requirements. Accreditation is typically structured around the completion of the entire course, rather than around modules or the achievement of specified outcomes. While there appear to be sound academic and pedagogical reasons for these approaches, they limit the speed and agility with which universities can respond to changes in either student demand or industry requirements. It is argued by some that Australian universities have been slow to innovate to meet these changing skills needs.

As noted above, demand for education and training that provides higher level qualifications for work purposes has increased demand for tailor-made and flexible courses for older adults. These students also seek to have their existing knowledge and skills, which they have attained through work, recognised and credited in professional programs.

## What skills?

While government and industry express concern from time to time about the supply of graduates in particular professional areas, there have also been criticisms from some employer groups about the adequacy among recent graduates of generic skills like interpersonal and problem solving skills, entrepreneurial skills, creativity or capacity to work in a team (Precision Consultancy 2007).

Others have suggested that these generic skills might be more adequately developed by a broad generalist qualification which forms the foundation for the development of more vocational skills through either another qualification or mentoring in the workplace.

Universities Australia recently released a position paper, *A National Internship Scheme: enhancing skills and work-readiness of Australian university graduates* (Universities Australia 2008b). The paper calls for collaborative action between universities, governments, industry and community organisations to enhance the employability skills of students and graduates. The paper reports broad support for a national scheme from stakeholders based on feedback during consultations.

Some initial respondents to this review have suggested that Australian universities should also provide better support to international students to ensure they are more work ready, both here in Australia and in their home countries, and that there needs to be better alignment between migration, employment and education policies to facilitate the enhancement of international students' employability skills.

The Review Panel has noted with interest the recent consultation paper, *Higher Education at Work*, released by the United Kingdom Department for Innovation, Universities and Skills on 14 April 2008. Key points from the paper are summarised in the text box below. The panel would welcome views on the relevance and applicability of the findings and approaches proposed in the United Kingdom paper to Australia.



***Higher Education at Work: High Skills, High Value***  
**Department for Innovation, Universities and Skills (DIUS)–(UK)**

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On 14 April 2008, the United Kingdom Minister of State for Lifelong Learning, Further and Higher Education released a consultation paper, *Higher Education at Work: High Skills, High Value*, to consult employers, learners and higher education providers on possible approaches to increasing skills levels in the workforce. It complements the *Innovation White Paper* and the *Enterprise Strategy*, to help position Britain as a key knowledge economy. The consultation process will run until July 2008.

The Government has committed to an overarching target for higher education ('level 4 and above'): that more than 40 per cent of the adult working population is qualified to level 4 or above by 2020. The proportion of adults of working age with level 4 and above qualifications is currently 31 per cent. A number of intermediate milestones have been set on the route to achieving the target.

The paper canvasses a range of issues identified as potential challenges to meeting workforce needs. While supply of graduates has increased, employer demand remains high. Employers are generally happy with the quality of graduates, but have some concerns about 'employability' skills and the shortage of graduates with science, technology, engineering and mathematics skills. Both employers and students consider the quality and availability of information, advice and guidance inadequate. The paper notes government initiatives to address these challenges, and poses a range of consultation questions.

Demographic changes mean that workforce demand for more people with high level skills will need to be met largely by people currently in the workforce. Three-quarters of the 2020 workforce have already left compulsory education. The paper suggests that higher education providers develop new ways of working to meet the needs of employers and employees, and suggests ways to encourage employees to upgrade their skills, including the use of Foundation Degrees; accreditation of employers' in-house training by higher education institutions; improving information, advice and guidance through a new adult careers service; ensuring relevant and flexible learning is available; and promotion of credit transfer.

It suggests that higher education providers work with employers, local and regional groups to address local and sectoral skills needs. This could include business secondments from academic staff to industry, and movement from business to higher education so business staff contribute directly to course content, design and teaching.

A new Commission for Employment and Skills with an employer-led board will provide advice to Ministers. The Government will encourage employer demand through other measures which: empower Sector Skills Councils; ensure small to medium enterprises have access to management and leadership support; and ensure there is an effective brokerage service for higher level skills. It will develop a new funding model which involves co-financing of higher education with employers.

The paper poses a series of consultation questions on these issues which will inform development of a framework and incentives at national and sub-national levels.

(DIUS 2008a)

## Questions for discussion

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2. Are there impediments to the higher education sector being able to innovate in the development of courses and programs? What are these impediments and how could they be removed?
  3. What are the appropriate mechanisms at the national and local level for ensuring higher education meets national and local needs for high level skills? What is the role of state and territory governments in this area?
  4. How adequate are the mechanisms for aligning supply and demand of graduates? How do pricing and labour market signals impact on student choices?
  5. Are there particular examples of good practice where you can demonstrate either rapid response to skill shortages or successful initiatives to improve generic skills?
  6. How effectively are Australian higher education institutions responding to demographic change, especially in providing lifelong learning to meet the challenge of the ageing population and the need for upgrading of skills and re-training?
  7. What is the relevance and applicability of the findings and approaches proposed in the United Kingdom paper, *Higher Education at Work*, for increasing skills levels in the workforce to Australia?
- 

## 3.2 Opportunities to participate in higher education

### Overall higher education participation and attainment levels

The Australian population has a relatively high level of university attainment<sup>6</sup> compared with other OECD countries although it is not in the highest group (Denmark, Iceland, the Netherlands, Norway and the United States) (Table 1). Australia is improving in all categories faster than the OECD average and faster than the average of the top six countries. The proportion of the working population with the highest attainment of university qualifications has grown significantly (Figure 10). As noted in section 3.1 there will be continuing pressure on older age groups to develop new skills or upgrade existing qualifications to meet changing workforce needs.

It should be noted that attainment of lower level qualifications, as measured by the proportion of the population with Year 12 or equivalent, falls well below top ranking OECD countries, and there has been little change in the proportion with the highest attainment of vocational education and training qualifications over time (Figure 10).

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<sup>6</sup> The OECD definition for educational attainment is: “Educational attainment is expressed by the highest completed level of education, defined according to the International Standard Classification of Education (ISCED)” (OECD 2007b). Attainment in this document, therefore, refers to the completion of a qualification.

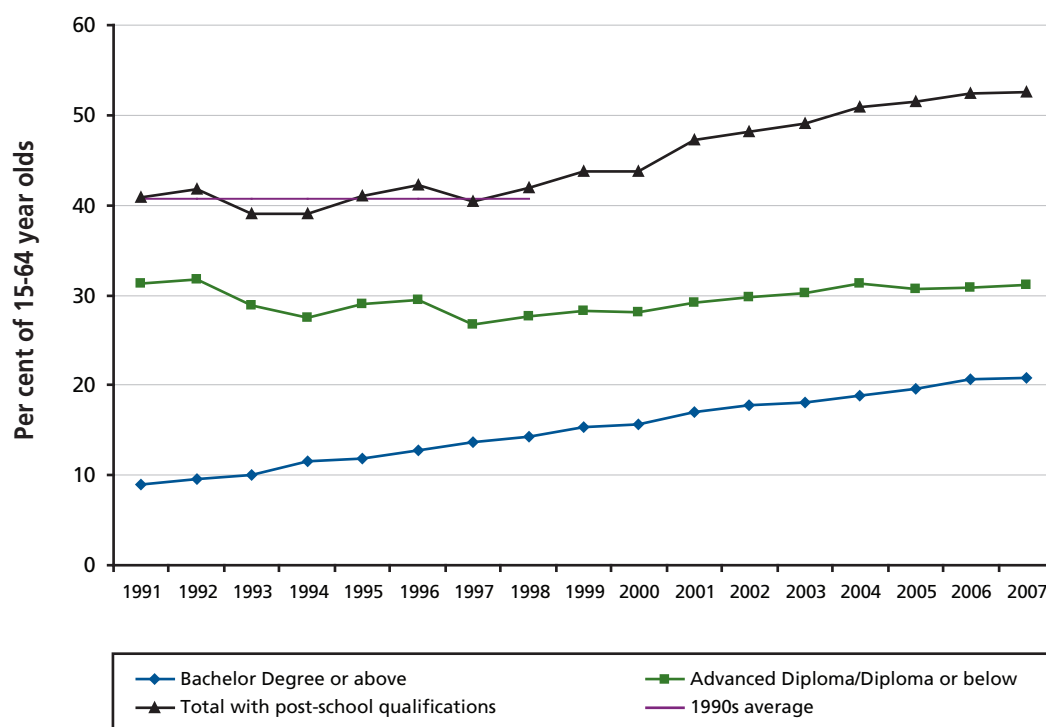
**Table 1: Educational attainment, Australia and OECD top 6**

	Australian score %	OECD top 6 Average %	OECD top 6 median %	Australian trend
University qualified (age 25-64)	22.7	27.2	18	↑
University qualified (age 25-34)	29.2	33.0	26	↑
Year 12 or equivalent (age 25-64)	65.0	85.9	72	↑
Year 12 or equivalent (age 25-34)	78.6	92.5	81	↔ <sup>a</sup>

Note: (a) has grown historically, but flat since 2001 on data in the Productivity Commission Report on Government Services and ABS Education and Work publications.

Sources: OECD 2007b, Education at a Glance: OECD Indicators

**Figure 10: Highest educational attainment of the working age population**

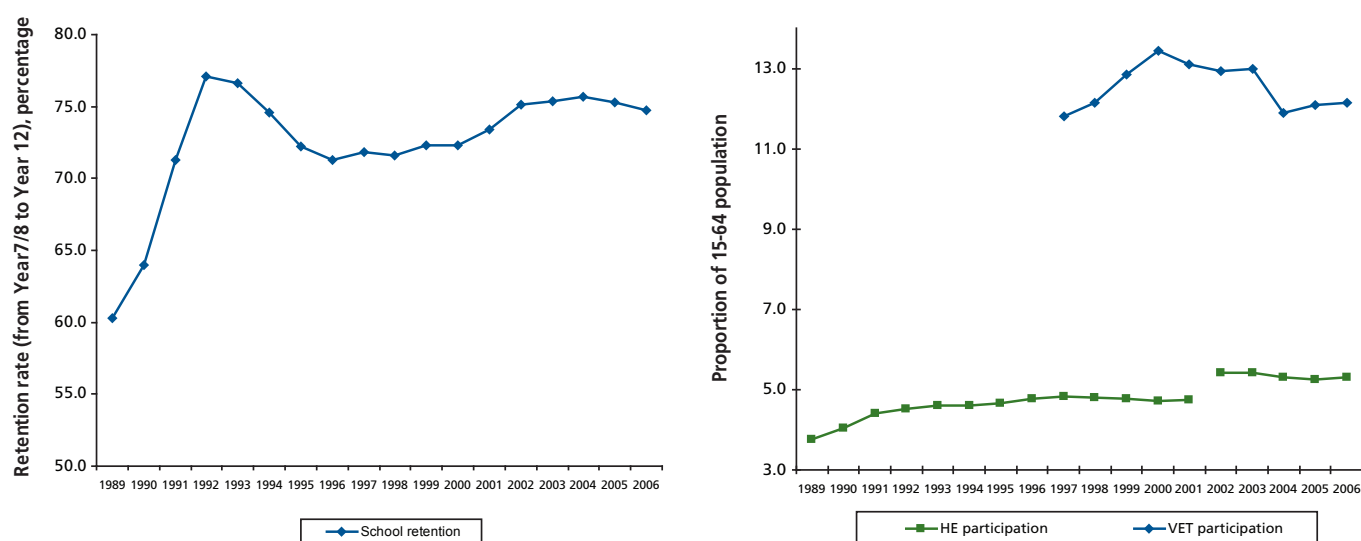


Source: ABS Survey of Education and Work, Cat No. 6227.03, various

Among young people, attainment of Year 12 or its vocational equivalent qualification (Certificate III) was still growing in 2001 but has levelled out in recent years at about 81 per cent. This reflects a longer term pattern (Figure 11) where retention from Year 7/8 to Year 12 reached a peak in the early 1990s, dropped to 71-72 per cent in the mid-to-late 1990s and has been stable at around 74 per cent for the five years to 2006. Tertiary participation has been flat for at least the last half decade, and has not shown much longer term variation.

As shown in section 2.6, domestic student demand is relatively flat. Data show that 64 per cent of school leavers go straight into tertiary education and by age 24, 75 per cent have completed a qualification (ABS 2007a). That data suggests that any attempts to increase participation in the higher education sector could be at the expense of enrolments in vocational education and training.

**Figure 11: School retention and post-school participation in education and training**



Source: ABS Schools, Australia, Cat No. 4221.0, various, NCVET 2007a, Students and Courses 2006 and DEEWR Students Selected Higher Education Statistics, various

## Higher education participation and attainment for disadvantaged groups

Many initial contributors to this review have emphasised that the participation of disadvantaged groups in higher education is a key issue for consideration. They suggest that increased participation of these groups of Australians is an essential goal, both for the benefits it brings to the individual and for the long-term social and economic benefits in terms of workforce participation and a more socially inclusive society.

A widely used definition of equity in Australian higher education comes from the 1990 discussion paper, *A Fair Chance for All* (DEET 1990, p. 2):

The overall objective for equity in higher education is to ensure that Australians from all groups in society have the opportunity to participate successfully in higher education. This will be achieved by changing the balance of the student population to reflect more closely the composition of the society as a whole.

Australia has had a good track record in changing this balance of the student population for some disadvantaged groups – progress has been made in improving the participation of people with disabilities, as well as for people from non-English speaking backgrounds and women. Women are now over-represented in some fields of higher education (but not in all fields or at higher degree level).

However, the growth in university-level qualifications among the general population has not been matched by attainment of these qualifications among two of the most disadvantaged groups in Australia: Indigenous people and people from low socio-economic status (SES) backgrounds.

## Indigenous students

Indigenous people are vastly underrepresented in higher education. A Universities Australia study shows that while the Indigenous population constituted 2.4 per cent of the Australian population in 2006, Indigenous students comprised only 1.25 per cent of the commencing domestic student population (James, Bexley and Maxwell 2008, p. 43).

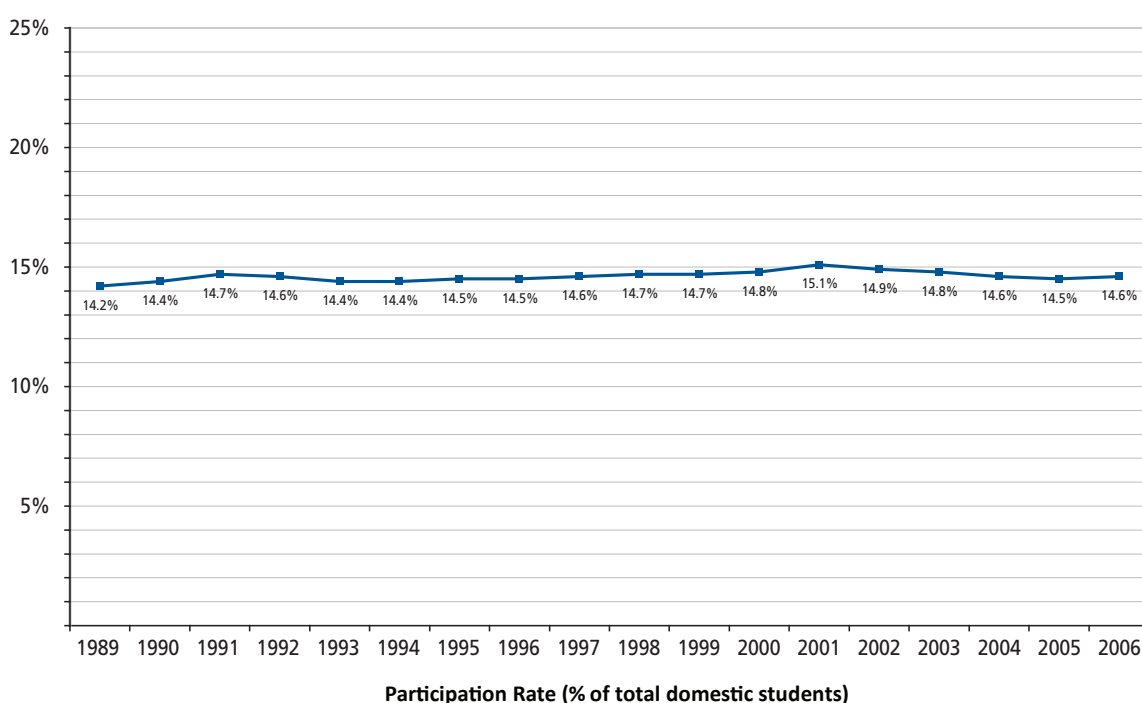
The study highlights two challenges to increasing the participation of Indigenous people in higher education: preparing students academically for university (school completion rates for Indigenous people are about half of those for other Australians); and retaining them once they are enrolled (the university completion rate for Indigenous students is below 50 per cent). The Universities Australia 2007 survey of student finances indicated that financial factors are highly significant in the access and retention of Indigenous students (Universities Australia 2007b). Universities Australia also suggests that there are significant cultural issues that need to be addressed to help Indigenous students achieve better outcomes in higher education.

## Students from low socio-economic status (SES) backgrounds

Universities Australia (James, Bexley and Maxwell 2008, p. 2) reports that:

... people from low SES backgrounds are about one-third as likely as people from high SES backgrounds to participate in higher education. The share of university places for people from low SES backgrounds – approximately 15 per cent of places, compared with a population reference point of 25 per cent – has remained virtually unchanged for 15 years despite the overall expansion of access to higher education during that period.

**Figure 12: Low socio-economic status background participation rate in higher education (per cent), 1989-2006**



Source: DEEWR 2008 (based on Students Selected Higher Education Statistics, various years)

The Australian higher education system does not have a direct measure of SES and uses the postcode of the student's home address as a proxy measure. James, Bexley and Maxwell (2008) note that this is not a particularly valid measure and it is likely to underestimate the number of low SES students that participate in higher education.

Across the world, people from low SES backgrounds generally participate in higher education at rates below their representation in the population. James, Bexley and Maxwell (2008, p. 24) note that the under-representation of low SES students is particularly marked in universities and courses which are most competitive – “medium and low SES students are most highly represented in regional universities, while high SES students are most highly represented in Group of Eight universities”. The share of students from low SES backgrounds in Group of Eight universities, they note, is only about 11 per cent. In the United States, low SES students are particularly under represented in the Ivy League institutions. This is also the case in the Russell Group institutions in the United Kingdom.

The causal relationships affecting participation of students from low socio-economic backgrounds are complex. Factors such as the state of the economy and employment demand, as well as the availability of other education and training options, impact on decisions to undertake higher education. For example, the vocational education and training system attracts more low SES students than the higher education system, particularly at certificate levels.

Critically, we know that most educational disadvantage is experienced long before the point at which participation in higher education could even be considered. Lower levels of educational achievement in schools, lower educational aspirations and lower school completion rates all impact heavily on participation in higher education for people from low SES backgrounds. This suggests that any effective national strategy for increasing the participation of people from Indigenous and low SES backgrounds will need to be implemented in partnership with the schools and vocational education and training sectors.

## Geographic location

A complicating factor is the impact of geography on participation – low SES rural people are more underrepresented than low SES urban dwellers. Research suggests that students from low SES and rural backgrounds are more likely than high SES students to aspire to non-higher education pathways. James (2002) showed that 30 per cent of lower SES background students have a stronger belief that a TAFE course would be more useful than a university course, compared with only 14 per cent of those from a high SES background. Other attitudinal differences between low and higher SES background students related to interest in the subjects they could study at university, less confidence that their parents wanted them to go to university and a stronger interest in earning an income. James noted that rural or isolated students saw higher education as less personally relevant, particularly those from lower or medium SES backgrounds.

As with low SES people, Indigenous people often have further disadvantage if they live in rural and regional Australia. Universities Australia notes that only 31 per cent of Indigenous Australians lived in major cities in 2006 (James, Bexley and Maxwell 2008, p. 52). The study also noted that Indigenous students were more likely than non-Indigenous students to have moved away from home in order to study and consequently they were removed from the financial and emotional support of their families.

## Impact of the costs of education

### *Impact of HECS on low socio-economic status background students*

Most Australian undergraduate students do not pay up-front tuition fees. In the public universities they make a contribution to the cost of their courses but they may take out an income contingent loan<sup>7</sup> (HECS-HELP) and defer payment until their income reaches a certain threshold.

Various studies have shown that the introduction of the Higher Education Contribution Scheme (HECS), and subsequent changes in the level of charges, have not deterred students from participating in higher education. Chapman and Ryan (2003) analysed whether the introduction of student charges through HECS in 1989, and the major changes to the system in 1997, had significant impacts on the net economic benefits to graduates from a university education. They found that before the introduction of HECS there was a clear relationship between enrolment and measures of family wealth. Participation levels did not fall for any wealth group after the introduction of HECS but the increases in participation were greater for the middle and highest wealth groups. They concluded that “HECS did not act to discourage university participation in general or among individuals from the lowest wealth groups” (Chapman and Ryan 2003, p. iii).

Cardak and Ryan (2006) similarly found that HECS did not appear to discourage poorer students from attending university: “In terms of our framework, it seems the Australian income contingent loan for higher education charges (HECS) is an effective funding scheme and largely removes a student’s or household’s ability to pay for university tuition fees from the entry decision” (Cardak and Ryan, 2006, p. 26).

Overseas research confirms Australian findings. The United Kingdom Government commissioned a study (Foskett, Roberts and Maringe 2006) in the lead-up to the introduction of a new fee regime introduced in September 2006. The study found that fees did not deter students from enrolling in university, that participation had continued to rise, and the proportions of students from various social classes had remained broadly static. The study reported that students did not find the fees extreme in the context of the enhanced lifetime salary benefits of a university degree.

Earlier research from the United Kingdom after tuition fees were introduced found no evidence that this had any material effects on participation of 18 and 19 year olds. In 2005, the Higher Education Funding Council for England (HEFCE) found that higher education participation of 18 and 19 year olds in the United Kingdom increased by two percentage points over the 1994-2000 period. This increase can be explained by changes in population size and the rate of improvement in school qualifications. Around the middle of this period, student grants were replaced by loans, and tuition fees were introduced. No evidence was found that this had any material effects on participation. Also, there was no evidence that young people changed their decisions on whether to enter higher education, when to enter higher education, or where to study to avoid the introduction of tuition fees (HEFCE 2005).

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<sup>7</sup> The Higher Education Contribution Scheme (HECS) was introduced in 1989. HECS was replaced by HECS-HELP in 2005 as part of a suite of loan programs known as the Higher Education Loan Program (HELP).



### *Student contribution amounts*

More recent evidence from Australia relates to the impact of changes to funding arrangements introduced in 2005. From that year, universities were able to set student contribution amounts for those in Commonwealth supported places between zero and a maximum 25 per cent above 2004 rates.

Some Australian universities have attempted to increase demand for certain courses by reducing the student contribution amounts. In 2005 and 2006 Deakin University reduced the student contributions for science and mathematics units taken in the Bachelor of Teaching Secondary/Bachelor of Science course to zero – despite this, demand for the course declined in 2006 and the university discontinued the experiment. From 2005, Macquarie University reduced student contributions in selected advanced courses in science and technology to zero, and reduced fees to the lowest level for students studying their honours year in science. Despite these measures, Macquarie University has not experienced an increase in demand to study science.

Other universities found that there was no direct relationship between changes in student contribution amounts and demand. In 2005 the number of applications fell by 12 per cent at Curtin University of Technology despite no increase in student contributions. Curtin University of Technology has since increased student contribution amounts, saying in their Annual Report that “retaining fees at their pre-existing levels did not attract additional students” (Curtin University of Technology 2005, p. 24). In 2006, the University of Western Australia had a nine per cent increase in applications despite having implemented the maximum 25 per cent above 2004 rates. At the University of Ballarat, the number of first preference applications rose by around 16 per cent in 2005 even though student contributions increased by 25 per cent. Murdoch University had a 14 per cent decrease in applications in 2006 having increased its fees by less than the full amount (20 per cent).

### **Income support**

While the option to defer payment of the student contribution amount and to repay it on an income contingent basis effectively removes the upfront cost barrier, this mechanism does not address the major costs of foregone income while studying nor the ancillary costs of education that cannot be deferred.

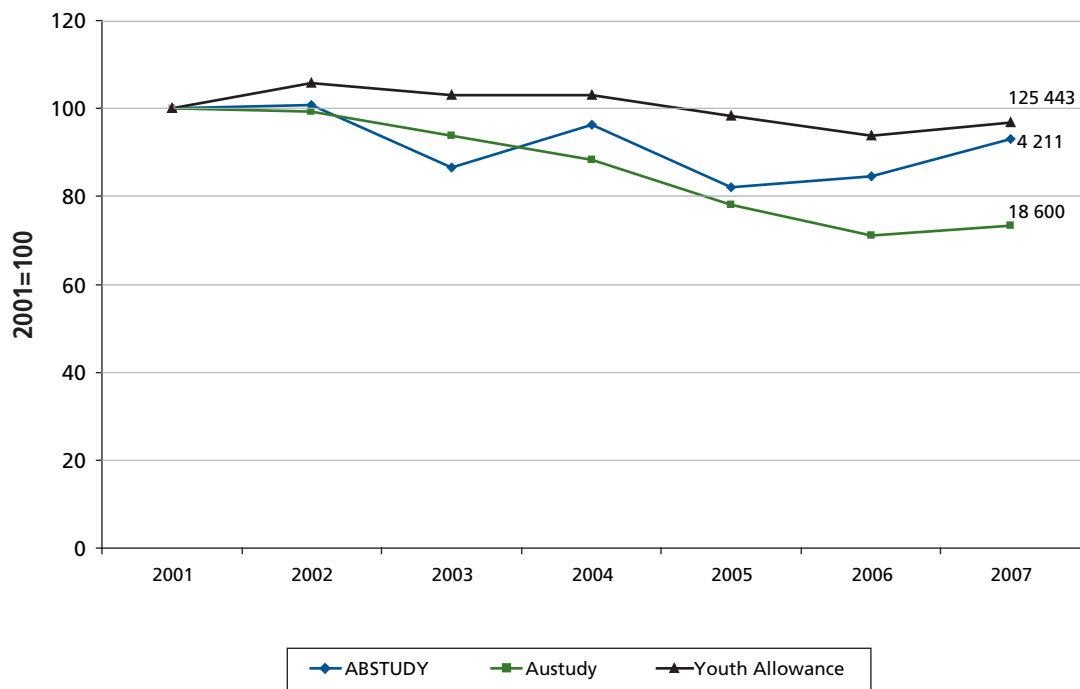
Universities Australia (2007b, p. 1) found that:

During 2006, many Australian university students were in stressful financial situations and many found it difficult to support themselves week-to-week. A large proportion of students lacked adequate financial support and many were highly anxious about ‘making ends meet’ and the debts they were accumulating.

The number of students on income support has declined in recent years (see Figure 13). This is probably due to strong growth in employment and incomes and the tight eligibility requirements which mean that many students do not qualify for income support. Universities Australia noted that there was an increase in the proportion of students whose application for income support was rejected, or who were unable to access the full rate in 2006 compared to 2000. They claim that the main reason for this was the level of parents’ income and assets (Universities Australia 2007b, p. 15).



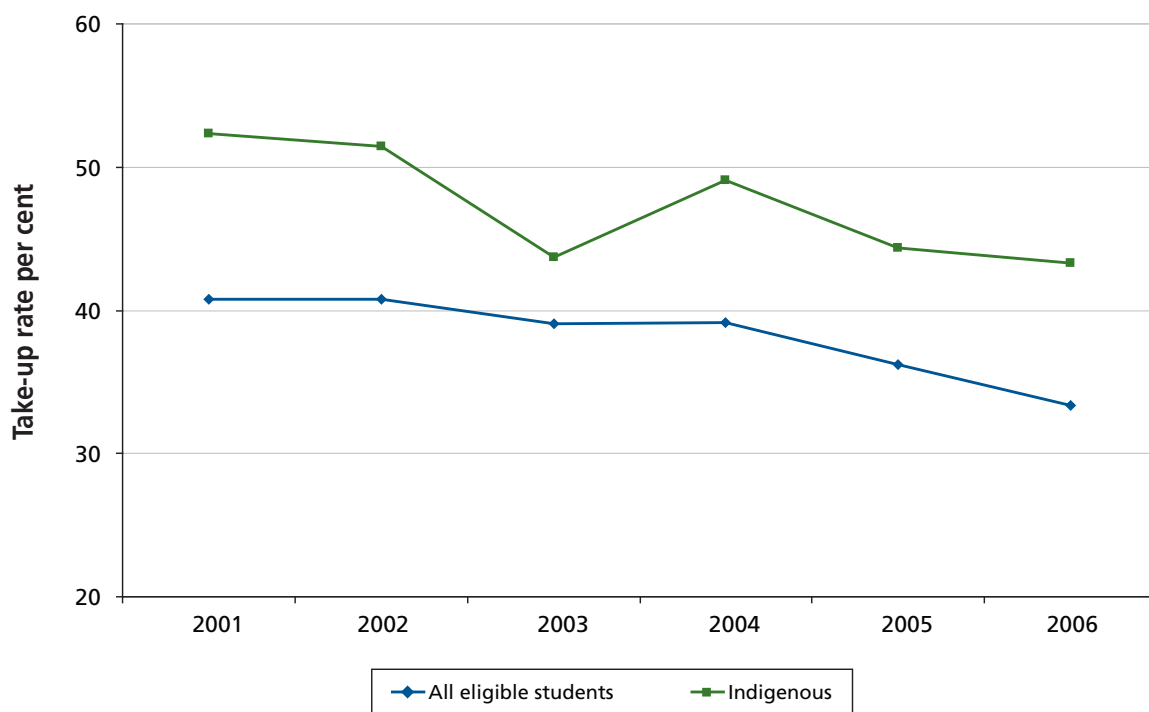
**Figure 13: Number of higher education students receiving income support, 2001 - 2007**



Source: DEEWR 2008

Overall take-up of income support among eligible higher education students has also fallen from around 41 per cent in 2001 to 33 per cent in 2006 (see Figure 14).

**Figure 14: Take-up rate of income support by higher education students (per cent), 2001–2006**



Source: DEEWR, 2008

Comparison of the number of students in receipt of income support and take-up rates over time is made difficult because of substantive changes in income support arrangements and collection methodologies.

Nevertheless, some broad trends appear evident. Chapman (1992) estimated that over the period 1974 to 1990, take-up of income support increased quickly in the initial years, rising from just under 40 per cent and then remaining around 45 per cent to 50 per cent of higher education students over a fifteen year period to 1990<sup>8</sup>. Adding state based teacher scholarships available at the time, Chapman suggests that over 70 per cent of full-time higher education students were in receipt of some form of income support in 1976.

The Universities Australia study also reported that the criteria for eligibility for AUSTUDY and Youth Allowance were criticised by students who were “concerned that the amount of income support was insufficient to meet fundamental living costs” (Universities Australia, 2007b, p. 4).

This view was supported by initial contributors to this review, many of whom raised the issue of income support rather than tuition fees or student contribution amounts, as being the major financial barrier to participation.

The Universities Australia report also showed that 70.6 per cent of full-time undergraduates reported working during the semester and on average these students were working 14.8 hours per week. One in six of the full-time undergraduate students who were working during the semester were working more than 20 hours per week. A large proportion of students surveyed felt that their paid work had a detrimental effect on their studies and limited their capacity to benefit from the university experience (Universities Australia, 2007b, p. 2).

### Questions for discussion

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8. Should there be a national approach to improving Indigenous and low SES participation and success in higher education?
  9. If you support a national approach to improving Indigenous and low SES participation and success how do you see it being structured, resourced, monitored and evaluated?
  10. What institutional initiatives have proved successful in increasing low SES or Indigenous participation and success? (Please provide information about outcomes as well as activities.)
  11. What evidence is available from institutions about the impact on individuals or groups of either failure to gain income support or the inadequacy of income support?
- 

<sup>8</sup> Income support provided by the Commonwealth Government over this period comprised the Tertiary Education Assistance Scheme, AUSTUDY and the Living Allowance component of the Commonwealth Scholarship Scheme which was means tested. Note: Chapman’s measure of take-up refers to all higher education students and is not directly comparable with the measure of take-up for the period 2001-2006 shown above which covers domestic full-time students in higher education.

### 3.3 *The student experience of higher education*

#### **How satisfied are students with their experiences of higher education?**

The student experience of higher education is vastly different from that of a generation ago. Apart from the huge increase in the size of the sector (from just over 300,000 students in 1977 to over 980,000 in 2006), there is now a much wider range of courses and specialisations on offer.

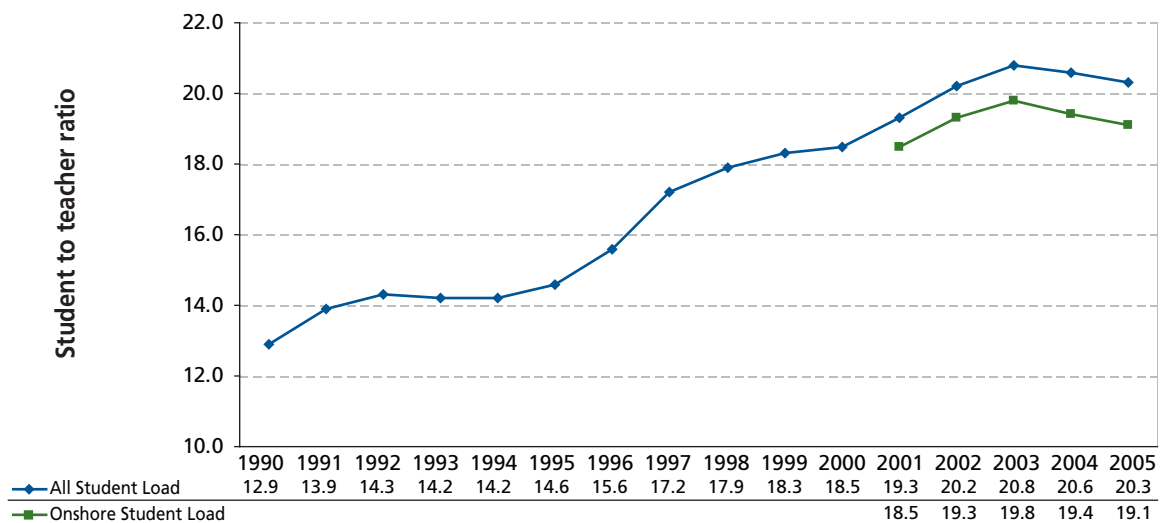
At a general level there is significant evidence that Australian higher education is well regarded and provides good outcomes for graduates:

- There is a high level of graduate overall satisfaction with courses, with 89.8 per cent of bachelor degree graduates in 2007 expressing broad satisfaction with their courses, a level that has been maintained over the last decade (GCA 2007b).
- An Australian higher education qualification confers a significant long-term advantage in terms of employment outcomes and lifetime salary. In 2005 the unemployment rate for males with university level qualifications was 1.3 percentage points lower than for all males and two percentage points lower for females with university level qualifications (OECD 2007b).
- Overseas students choosing to study higher education in Australia grew by some 300 per cent from 1997 to 2006, contributing to education's position as our third largest export industry. A survey of international university students in 2007 found that 83 per cent were satisfied with the quality of education and 81 per cent were satisfied with their overall study experience (AEI 2008).

Student surveys suggest high levels of student satisfaction and a significant decline over the decade in the proportion of first-year students feeling that university has not met their expectations (GCA 2007b, Krause et al. 2005). However, students report less access to staff, with a substantial number of first-year students perceiving staff as not accessible and less than one-third feeling that teaching staff take an interest in their progress and give helpful feedback (Krause et al 2005). The GCA data does not cover most non-university higher education institutions so there is no data on student satisfaction in that part of the sector.

Class sizes are generally significantly larger than they were a decade ago, reflecting the rises in student:staff ratios (Figure 15). While anecdotal evidence suggests that larger tutorial sizes have altered the nature of student and staff interactions, there is little hard evidence of the impact on the quality of learning.

**Figure 15: Universities Australia student to teacher ratio, 1990 to 2005**



Source: Universities Australia 2007a. UA cited sources are DEST Higher Education Student and Staff Statistics 1990–2000; DEST Unit Record Files 2001–2005; Bond University Management Reports 2001–2005.

Note: Data is for Universities Australia member universities only

The nature of learning and teaching in higher education has also changed, with new information and communication technology (ICT) now playing a significant role. While many benefits are claimed for e-learning, its impact on quality of outcomes is largely unknown. Australian researchers have offered qualified support for the expanded use of ICT in teaching and learning, suggesting that it does not in itself improve learning outcomes, but that it can be beneficial when used in combination with an appropriately designed learning activity, appropriate assessment, and adequate preparation and support for students. They note that students respond best to a broad mix of learning tools and resources and that significant use of ICT may disadvantage students from ICT-poor backgrounds (Scott and Alexander 2000).

On the other hand, the new generations of younger students entering university are very ICT literate, and expect a high level of on-demand, on-line access to learning materials, assessment, and administration. The majority of first year students surveyed in 2004 used online course resources, email and software designed for their course. A minority used online discussion opportunities (Krause et al. 2005). All universities are investing substantial amounts in these types of initiatives.

It is also notable that the combination of flexible study options and supported on-line learning offered by Open Universities Australia (OUA) has proved to be extremely attractive to Australian students in recent years. While overall domestic student numbers have risen by seven per cent from 2001 to 2006, OUA enrolments have risen by 137 per cent (although this may be linked to broader access to income contingent loans through FEE-HELP for OUA students from 2005<sup>9</sup>).

A particular issue of concern in relation to the student experience, raised by a number of initial contributors to the review, is the impact of the previous Government’s legislation on voluntary student unionism. It has been argued that the abolition of up-front compulsory student union fees has in many cases resulted in cuts to services offered to students (including sporting, social

9 A loan fee of 20 per cent applies for domestic undergraduate students taking out FEE-HELP and OS-HELP loans. The 20 per cent loan fee does not, however, apply to undergraduate OUA students.

and cultural clubs and union services such as childcare, advocacy and assistance to international students) and increases in prices charged to students for use of services and facilities (Australian University Sport and Australasian Campus Union Managers' Association 2008).

## How good is the teaching and learning in Australia's higher education institutions?

There is little agreement in the scholarly literature about how to measure the quality of teaching in higher education or how to measure and compare learning outcomes.

However, at a national level two initiatives have sought to address these issues. Since 2006 the Commonwealth Government's Learning and Teaching Performance Fund has attempted to reward excellence in learning and teaching in Australian universities using proxies for quality in terms of student satisfaction, graduate outcomes and student success (progress and attrition rates). The nature of the assessment tool has generated considerable controversy within the sector. The Australian Universities Quality Agency (AUQA) was established in 2000 as the principal national quality assurance agency in Australia's higher education system. One of its original objects was to report "on the relative standards of the Australian higher education system and its quality assurance processes, including their international standing...". In its portfolio for an independent review, AUQA acknowledged that it had not made significant progress in this area (Bateman and Giles, 2006, p. 26).

### *Learning outcomes*

There is little evidence available on "the nature and levels of learning outcomes that students are expected to demonstrate in their university studies" (James, McInnis and Devlin 2002a p.2), often termed academic standards. A survey of Australian academics some years ago found that "a majority report that standards have decreased: 36 per cent say 'a little' and 18 per cent a 'great deal'" (Anderson, Johnson and Saha 2002, p. 40).

In this sense standards are often implicitly or tacitly understood norms shared by academics working in a particular field, but may not be universally agreed by experts. There is evidence of moves towards external validation of standards, such as benchmarking arrangements between individual institutions and an increase in formal relationships between some Australian and overseas universities.

In the United States and the United Kingdom, governments have, since the 1990s, expressed the need for assuring academic standards in higher education. In the United Kingdom this led to the development of subject benchmark statements which set out expectations of standards of degrees in a range of subject areas. All statements have been developed by groups of institutional-based practising academics. Statements exist for about 50 disciplines so far with others underway. The way in which benchmarks are applied is a matter for universities themselves, subject to some degree of review through institutional audit. In the United States, regional accrediting bodies develop standards for use in quality assurance in close collaboration with educational institutions. The 2006 Spellings Commission in the United States has called for increased accountability through the development of standards to allow comparisons among institutions of learning outcomes and other performance measures (there is currently variation in standards across regions in the United States). There has been a strong reaction against this recommendation, with some stakeholders arguing that standards should rest in the hands of institutions.

### *Student assessment*

Rigorous processes for assessing student achievement have been described as the most important safeguard of academic standards (James, McInnis and Devlin 2002b). Explicit statements of learning outcomes are generally well-developed in Australian universities, although expected levels of achievement are harder to specify and consequently less well articulated. Assessment practices are therefore often strongly 'norm referenced' (with students graded according to their ranking among peers) rather than 'criterion referenced' (with students graded against defined expectations for each grade). At undergraduate level, assessments are generally moderated internally, with external examiners involved primarily in evaluations of research higher degrees.

Data on student grades is not collected from universities so it is not possible to say whether overall 'grade inflation' is occurring here as has been reported in the United States and the United Kingdom. Surveys of Australian academics suggest it may be happening to some degree. Anderson, Johnson and Saha (2002) found that while most academic staff reported little change in the award of high grades, about 40 per cent reported an increase and only three per cent said that the incidence of high grades had declined. There have been a number of reports of specific instances of concern with the allegedly over-generous assessment of fee-paying international students.

On the other hand Coates et al. (2008) reports that academics believe their grading practices strictly reflect levels of student achievement.

A weakness common to many attempts to compare student achievement is that they may reflect factors such as differences between student populations, rather than the value that institutions 'add' to their students. In Australia, universities have the opportunity to offer the Graduate Skills Assessment (GSA), which is designed to assess a range of generic skills that are developed through the university experience. Its adequacy has been questioned and uptake has been very poor, with only 228 students from two universities participating in the first semester of 2007.

Australia is participating in work by the OECD which aims to develop more adequate assessment of higher education outcomes, following on from its development of the Programme for International Student Assessment (PISA), which measures educational achievement of 15 year olds in the schools sector. The assessment would be done at institutional level at the end of a bachelor program and cover critical thinking and problem solving skills. It is argued that this could provide a valid measure of the learning outcomes from higher education.

### *Standards for student entry*

There is no evidence of a general or systematic drop in tertiary entrance scores in recent years such that would indicate a decline in the quality of students being admitted to higher education courses. However, some commentators claim that the value of a higher education qualification has been eroded in recent years as a result of lower entry requirements and weaker standards for awarding degrees. The evidence shows that tertiary entrance scores (generally referred to as TERs) vary significantly between fields of study and institutions, increasing or decreasing in line with changing demand for particular courses over time. In any case, students admitted to a course on a lower TER are required to meet the same course and assessment requirements.

## Questions for discussion

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12. How can the quality of the student experience within Australia's higher education institutions be monitored nationally? Is there evidence that declining student staff ratios have impacted on the quality of the student experience?
  13. How can the quality of learning outcomes in Australian higher education be measured more effectively?
  14. How do institutions measure the quality of their learning outcomes and how do they know they are nationally and internationally competitive?
- 

### 3.4 *Connecting with other education and training sectors*

The review must address the place of higher education in the broader tertiary education system, which includes vocational education and training and consider how the higher education and vocational education and training sectors can work together to meet the need for a skilled and productive workforce, improve participation and success of Indigenous and low SES groups and provide opportunities for individuals to develop their unique capabilities.

#### Vocational Education and Training

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Formal vocational education and training in Australia is delivered by Registered Training Organisations (RTOs) including TAFE Institutes, dual-sector institutions, enterprises and other private and community providers.

Vocational education and training providers typically offer Certificate I to IV trade and non-trade programs, as well as higher level technical skills at the Diploma, Advanced Diploma, Graduate Certificate and Graduate Diploma levels, and some TAFE institutes also offer degrees.

As at September 2007, there were 1.68 million students enrolled in the publicly funded vocational education and training system, of which nearly 420,000 were Australian Apprentices under a contract of training.

The most recent statistics published by the National Centre for Vocational Education Research (NCVER) showed that 164,000 vocational education and training students were in training at the diploma or higher levels, including 3,100 under Australian Apprenticeship arrangements.

### Distinctive or converging missions?

There are differing views about the roles and missions of the vocational education and training sector and the higher education sector.

It has been argued that convergence is being driven by a range of factors including: government policy and directions; efficiency and cost savings; competition for students; institutional mission in individual institutions; and employer and student needs. Certainly vocational education and training and higher education demonstrate increased overlap in terms of courses, awards, links with employers and overall approach (PhillipsKPA 2006a).



A number of commentators support convergence and suggest a move towards formal recognition of a 'tertiary sector' in Australia consistent with other countries. Marginson suggests that we need a new comprehensive federal tertiary sector (with continuing support from the states and territories) where:

TAFE institutions and all private training institutions offering two-year full-time equivalent (FTE) tertiary programs should be designated as 'higher education'. This would be consistent with the OECD definition of tertiary education and with the United States' definition of 'higher education', which includes the community college sector. (Marginson 2008, p. 8)

Some initial contributors to this review suggested the need for a new Ministerial Council responsible for post-secondary education including vocational education and training, higher education, international education and adult education to facilitate the establishment of a more integrated tertiary education sector.

Other contributors, while recognising the need for improved pathways between the sectors, suggested that each sector should continue to have a distinctive mission and purpose. Generally these contributors point to the need for vocational education and training to maintain a primary focus on close partnerships with industry to meet its needs and with a growing focus also on building the essential learning skills of the ageing workforce. Underlying this argument for distinctiveness is concern that the primary purpose of the vocational education and training sector might come to be a 'feeder' to higher education, which would distort its primary purpose and reduce the standing of vocational education and training qualifications as outcomes in their own right.

However it must be acknowledged that higher education institutions are also significant providers of vocational education for many occupations and professions and many also have a substantial engagement with industry in producing graduates for the professions.

Some commentators have argued that only higher education has a role in the innovation system but others argue that vocational education and training can play a critical role in innovation (if innovation is broadly defined) particularly in the application and adaptation of skills and knowledge to drive productivity in enterprises. Those who argue that vocational education and training has a role point to the fact that vocational education and training skilled occupations make up over 40 per cent of Australia's business research and development workforce (ABS 2007a). They also support the work of researchers in universities, public and other research organisations. Vocational education and training skilled occupations are critical to the 'development' component of research and development (R&D), which comprises over two thirds of all business R&D expenditure (ABS 2007a).

An emerging issue is the extent to which vocational education and training providers, particularly TAFE institutes, should also become providers of higher education qualifications as non-self-accrediting higher education institutions. There are now six TAFE institutions registered with state and territory higher education accreditation agencies and approved by the Commonwealth as higher education providers (which allow their students to access FEE-HELP).

While some commentators argue that increasing provision of higher education by TAFE could lead to the re-creation of a binary system of higher education, others argue that TAFE institutes should not be limited in what they can offer in a competitive market if they meet the relevant accreditation criteria.



## Balance of provision between the sectors

The Centre for the Economics of Education and Training (CEET) estimates that in the 10 year period from 2006 to 2016 a total of four million people will need to acquire higher education or vocational education and training qualifications to meet expected skill needs arising from employment growth, retirements and skill deepening (primarily due to an overall rise in the level of skill and qualifications within occupations, and secondly due to higher skilled occupations growing faster) (Shah and Burke 2006).

Of the four million, 1.559 million will be higher education qualifications (1.032 million new entrants into the workforce, 0.527 million existing workers upgrading their qualifications) and 2.474 million will be vocational education and training qualifications (1.216 million new entrants into the workforce, 1.258 million existing workers upgrading their qualifications). That is, on average, each year there will be a need for 155,000 higher education completions (100,000 new entrants and 55,000 existing workers upgrading) and 247,000 vocational education and training completions (121,000 new entrants and 126,000 existing workers upgrading). These estimates by CEET are based on employment by occupation forecasts produced by the Centre for Policy Studies at Monash University. These forecasts envisage modest growth in employment (1.1 per cent a year) compared to the recent decade (2.1 per cent during 1997 to 2006), so that total employment growth is forecast to increase by only 1.2 million over the decade 2006 to 2016. CEET estimates that the higher education sector is on track to meet these forecasts (Shah and Burke 2006).

**Table 2: Projected total tertiary qualifications gap in decade to 2015 (million)**

	Higher education	Vocational education and training
Required (forecast)	1.56	2.47
Supply (based on 2005 completions)	1.59	2.23
Gap	- 0.03	0.24

Source: Shah and Burke 2006

CEET found that the challenge over the next decade will be to maintain the effort at the Certificate III and Certificate IV levels, grow higher level qualifications and respond to any shortfall in qualified people that arise from the ageing of the workforce (Shah and Burke 2006). Research from the former Queensland Department of Employment and Training indicates that 62 per cent of future jobs will require vocational and technical skills. This is more than a doubling of the current 30 per cent of the workforce with vocational and technical qualifications (research cited by Ai Group 2006).

On the other hand Professor Bob Birrell of the Monash Centre for Population and Urban Research argues that skill shortages now and in the foreseeable future will lie mainly in occupations requiring university training. He analyses census data on employment by industry and occupation over the decade 1996 to 2006 and concludes that demand for university-trained professionals and associate professionals grew much more strongly than demand for trade skills. In addition, he cites evidence in the form of sponsorship by business of skilled migrants under the business long-stay 457 visa category, which he states was concentrated on professional occupations in 2006-07.

Concluding that these trends are unlikely to abate, Birrell argues that there is a far greater need for additional training at the university level than at the vocational level. He notes that there was very little increase in domestic commencements at Australian universities between 2002 and 2006, despite the expansion in employment at the professional, managerial and associate professional level over this period, and urges public policy action to address this situation (Birrell, Healy and Smith 2008).

## **Interface between higher education and vocational education and training**

The interface between vocational education and training and higher education institutions manifests itself in credit transfer and articulation arrangements, dual sector universities, multi-sector campuses, some limited sharing of infrastructure, some research collaboration and increasing overlap in qualifications offered. Initial contributors have suggested, however, that little is known about the effect of these relationships on the quality of provision, satisfaction of students or the efficiency of the system.

Many initial contributors to this review discussed pathways and flexible entry and exit points between and within the two sectors. However, compared to the overall numbers of students in both higher education and vocational education and training, the numbers of students that move between the two sectors is relatively small. The proportion of domestic undergraduate students admitted to higher education on the basis of prior vocational education and training study (articulation) was only 10.1 per cent in 2006. The proportion of students gaining credit (or exemption) for previous vocational education and training study was only 3.4 per cent in 2006. Estimates of the number of students with a higher education background enrolling in vocational education and training are not precise, but in 2001, 83,900 vocational education and training students (4.8 per cent of total) had a degree or postgraduate diploma as their higher prior qualification.

However it is not clear whether or not these relatively small numbers reflect barriers between the sectors or relatively low levels of demand for movement between the sectors – that is the two sectors may serve quite distinct markets.

The Australian Qualifications Framework (AQF) descriptors are sector-based and may contribute to difficulties in building pathways and providing credit between the sectors. Many commentators consider that it may be an appropriate time to consider whether the AQF needs to be a more integrated framework to provide for more flexible and streamlined pathways. A seamless post-secondary education system was one of the key ambitions of the Productivity Stream at the 2020 Summit, with participants calling for a system that allowed people to move in and out of education at all levels throughout various stages of life and work.

## **Different costs to students**

A number of commentators have identified the different cost structures and funding mechanisms as a barrier to a broad tertiary education system with integration between the two sectors. In contrast to the system of student contributions and income contingent loans that applies for most undergraduates in the higher education sector, in the vocational education and training sector there is a complex range of cost structures, and access to income contingent loans for some full-fee vocational education and training students but not to those

in government-funded places<sup>10</sup>. Most higher education undergraduate students in public institutions are in Commonwealth supported places, but vocational education and training students, including those in TAFE institutes, can face quite large up-front fees for Diplomas and Advanced Diplomas. Fees vary considerably from state to state (Table 3).

**Table 3: Interstate comparison of vocational education and training fees, 2008**

	Victoria	New South Wales <sup>1</sup>	South Australia	Western Australia	Queensland	Tasmania
Maximum tuition fee per year	\$877	\$1,420	\$1980	\$1,100	\$1,003	\$990

<sup>1</sup>. NSW sets fees by qualification. This maximum tuition fee is based on the tuition fee for an Advanced Diploma. Fees for other qualifications are lower. Source: Various jurisdictions' websites.

Source: Department of Innovation, Industry and Regional Development, 2008, p. 15

These different cost structures and differential access to income contingent loans may distort student choice. One of the 'top ideas' from the recent 2020 Summit was the suggestion that income contingent loans be made available to all post-secondary students regardless of sector. The current Victorian Government discussion paper on skills reform notes that there is no alignment between the allocation of government subsidies and individual needs for training or re-training.

## Institutional funding and regulation

Funding mechanisms are very different between the sectors.

In 2006, states and territories provided 53.4 per cent of total revenue for government training departments in the vocational education and training sector whereas the Commonwealth Government contributed 23.1 per cent through the Skilling Australia's Workforce Agreement (NCVER 2007b). Expenditure through the agreement in 2006-07 totalled \$1,270 million but the Commonwealth provided a further \$1,179 million on vocational education and training outside the agreement including through employer incentives and student income support. The proportion provided outside the agreement has risen substantially in recent years.

The Commonwealth has primary responsibility for the financing of higher education, providing an average of 56 per cent of its total revenue in 2006 (this includes grants, HECS-HELP and FEE-HELP). State and local governments provided only four per cent of total revenue for higher education institutions in 2006 (includes vocational education and training funding for dual providers).

The two sectors operate within different regulatory frameworks consistent with what have been different financing arrangements and understandings about their different purposes. Higher education receives its direct government funding overwhelmingly from the Commonwealth, yet universities are established under state or territory legislation. The vocational education and training sector is largely controlled and funded by the states, yet operates to a national curriculum framework and with significant, though largely indirect,

10 From 2008, FEE-HELP will be extended to eligible full fee-paying students undertaking certain vocational education and training accredited courses (Diploma and Advanced Diploma with a credit towards a higher education award; and Graduate Certificate and Graduate Diploma). These students will be required to pay the 20 per cent loan fee (as do domestic undergraduate fee-paying students in higher education).

Commonwealth funding. This poses particular problems for those providers (public and private) in each sector operating as dual-sector institutions which need to navigate a maze of conflicting governmental reporting requirements, different industrial relations agendas and competing governmental aspirations. While these are mostly management challenges, they create significant governance dilemmas.

While some commentators have highlighted the complexities for institutions of working within two separate regulatory and funding frameworks, others have noted that these differences are more of a concern to the institutions and governments and may not be an issue for students.

## Regional tertiary education

There are particular issues about provision in regional Australia. In many towns there are campuses of both higher education and vocational education and training institutions. These often compete for resources and for students, although there are also good examples of cooperation and resource sharing. Reforms to the higher education sector in 2004 resulted in some additional funding, the regional loading, for universities with regional campuses. This funding recognised that these universities often have less capacity to diversify their revenue sources, or attract fee-paying students and commercial partnerships. Some commentators have suggested that these pressures could also be alleviated by more effective sharing of resources with vocational education and training providers, including co-location of campuses where feasible.

## Questions for discussion

15. To what extent should vocational education and training and higher education continue to have distinctive missions and how should these missions be defined?
16. Does the movement between the sectors of students with credit need to be improved? If so, in what ways?
17. To what extent should relative provision between the sectors be planned or demand driven. What are the effects of current differences on funding, governance and regulation in limiting planning or influencing choice between the sectors?
18. Can institutions provide examples of good practices which have led to movement between the sectors with high levels of credit and good learning outcomes?

### 3.5 Higher education's role in the national innovation system

Universities are an integral component of the national innovation system. They are fundamental in the production, application and diffusion of knowledge. Universities are the nation's leading providers of training for our future research workforce. They generate much of the new knowledge which is essential to Australia's future and they help to link Australia into global research networks.

#### Links between the Review of Australian Higher Education and the National Innovation System Review

Responsibility for research and research training in higher education now lies with the Minister for Innovation, Industry, Science and Research, the Hon. Senator Kim Carr. Senator Carr recently announced a Review of the National Innovation System with terms of reference that go far beyond the higher education sector. The Review of the National Innovation System will examine the array of government innovation and industry assistance programs, across all levels of government in Australia, aimed at supporting innovation. One aspect of that review will be consideration of the current status of collaboration between firms and universities and research agencies (public and private) and ways to strengthen such collaboration.

The Review of the National Innovation System has identified two key areas of linkage with the Review of Australian Higher Education: increasing research collaboration between the public and private sectors; and the development of skills as a supply-side infrastructure issue for the knowledge economy.

This review will collaborate with the Review of the National Innovation System and take account of its work to ensure a coherent policy review of the higher education system as a whole.

However, this review is also looking for special insights into the relationship between Australia's higher education and Australia's innovation systems.

### Teaching – Research nexus

All Australian universities must engage in some research if they are to meet the criteria for university status set out in the *National Protocols for Higher Education Approval Processes*. These National Protocols were revised in 2007 and specify that, among other things, all Australian universities must have a culture of sustained scholarship which informs teaching and learning in all fields in which courses are offered, and undertake research leading to the creation of new knowledge and original creative endeavour in fields where research masters and doctorates are offered. In addition, universities other than those with a specialised university title, must offer higher education qualifications across at least three broad fields of study (MCEETYA 2007a). This definition effectively precludes any form of a 'teaching only' university in Australia. These revisions introduced two important new changes which allow for 'specialist universities' to offer courses, including research masters and doctorates, and undertake research activity, in one or two fields of study only, and 'university colleges' which at the point of establishment need only undertake research and research training in one field.

The basis for this approach is the argument that there is an essential nexus between university teaching and research. The idea that this nexus is a core value of a university originates from Wilhelm von Humboldt's concept of a university developed in the nineteenth century. Humboldt believed that teachers in universities should also be engaged in research because it improves the quality of both research and teaching. Since that time the teaching-research nexus has become embedded in modern understandings of a university in many countries. More recently, however, there has been sustained questioning of this argument both here and in the United Kingdom. This has been driven by two factors. First is the observation that at any point in time in any university a significant proportion of academic staff are not actively engaged in research. Second is the rising costs of sustaining research infrastructure across all fields in all universities and the consequent pressures to concentrate resources to allow national research activity to become or remain internationally competitive. As this debate has intensified it has been suggested by some that Australia should consider 'teaching only' universities. While there is little support for 'teaching only' universities in Australia, there has been no evidence of a rejection of teaching only higher education providers and, indeed, the numbers of students in such institutions have grown. Undoubtedly there is a range of views on this issue in this country but there appear to be some areas of broad consensus within the sector. These are:

- The term 'university' should only be applied to institutions that can demonstrate a research capability.
- Research funding and research infrastructure support should be directed primarily to those areas within universities that can demonstrate both high performance in research and a research operation at a scale which is competitive in an international context.
- Cooperation and collaboration among universities and between universities and publicly funded research agencies are vital if Australia is to remain competitive in knowledge generation and dissemination.
- Universities are a vital link in the innovation system in local and regional communities through the research undertaken that is relevant to the particular community.

## Financing of university research

Governments around the world recognise the public benefit of research undertaken in universities and other higher education institutions and provide substantial funding for this purpose.

Higher education sector expenditure on research and development (that is, higher education R&D or HERD) in Australia in 2004 was \$4,283 million. This represented an increase of 24.9 per cent in current price terms over 2002. HERD as a proportion of gross domestic product (GDP) increased from 0.44 per cent in 2002 to 0.48 per cent in 2004 (ABS 2006b).

Over the ten years to 2004, HERD increased at an average annual rate of 13.4 per cent in current price terms and 7.3 per cent in chain volume terms.

The majority of HERD in 2004 was sourced from general university funds (\$2,964.6 million or 69.2 per cent of HERD) and Australian competitive research grants (\$739.6 million or 17.3 per cent). State and territory governments contributed \$148 million (3.5 per cent) and business contributed \$243 million of HERD (or 5.7 per cent). Universities Australia, in its submission to the Review of the National Innovation System, noted that business support for R&D is low compared with



many other countries (Universities Australia 2008c). Business expenditure on R&D (BERD) as a proportion of GDP in Australia in 2005-06 was 1.04 per cent.

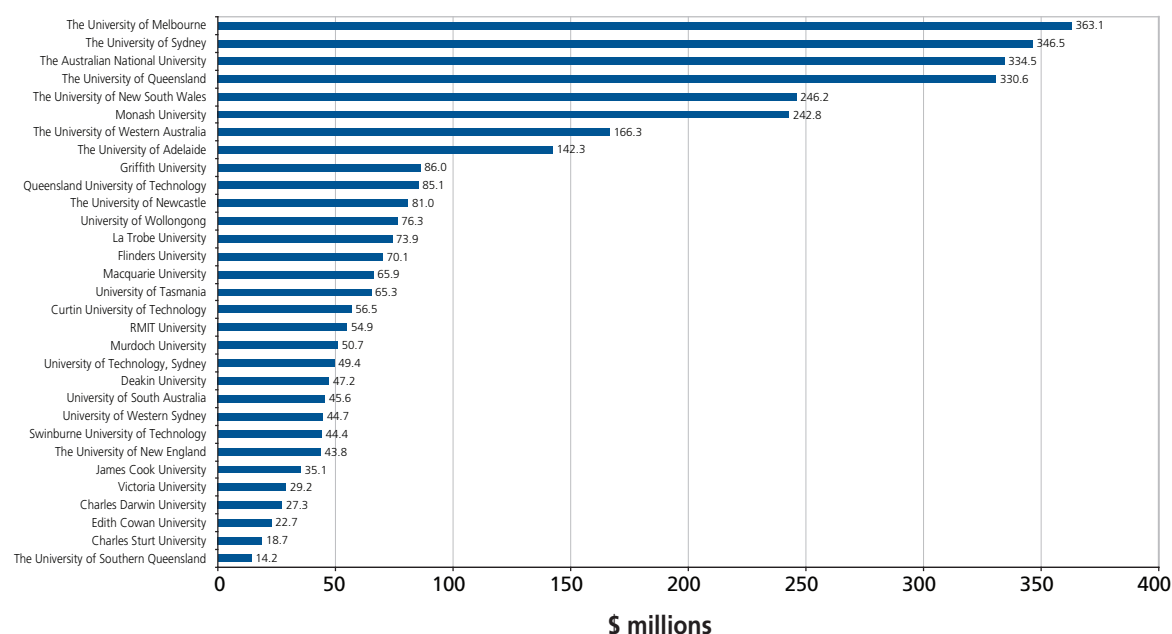
The Australian Bureau of Statistics noted that this was the first time that the ratio of BERD to GDP exceeded 1.0 per cent. It remains, however, below the OECD average of 1.53 per cent and contrasts with 1.10 per cent from business in the United Kingdom and 1.82 per cent in the United States (ABS 2007b). It leaves Australian universities more dependent upon government funding.

In 2004, 40.8 per cent of HERD (\$1745.6 million) was directed towards applied research, 28.7 per cent (\$1229.8 million) to pure basic research, and 22.9 per cent (\$978.8 million) to strategic basic research. The remaining 7.7 per cent of HERD (\$328.6 million) was classified as experimental development. The distribution of HERD across types of activity was largely unchanged from 2002. The percentage of basic research (including both 'pure basic research' and 'strategic basic research') as a proportion of all expenditure on higher education research and development activities declined from 63 per cent in 1990 to 52 per cent in 2004 (ABS 1995 and 2006b).

Almost half (46.9 per cent) of HERD in 2004 was devoted to research in the fields of medical and health sciences (\$1,082.4 million), engineering and technology (\$473.9 million) and biological sciences (\$451.0 million) (ABS 2006b).

Research expenditure varies significantly within and across universities. The Group of 8 universities were responsible for over \$2.2 billion in R&D expenditure in 2002 – almost double the combined spending of all other universities.

**Figure 16: R&D expenditure in the top 30 universities, 2002<sup>a</sup>**



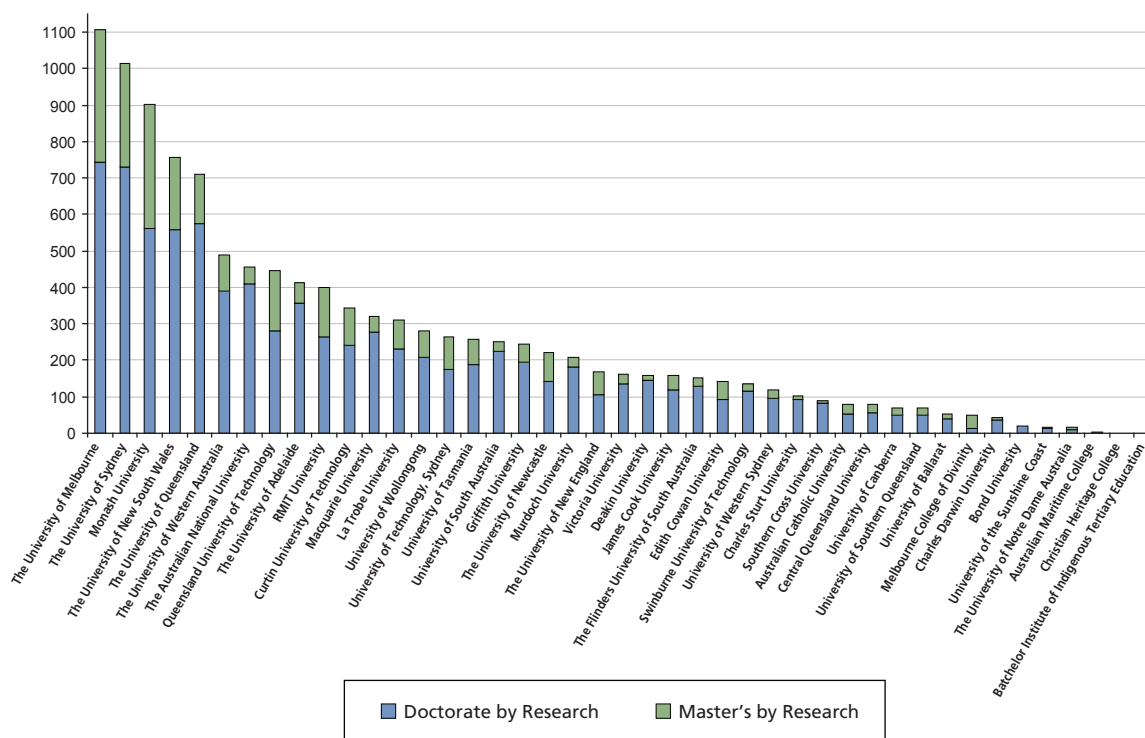
Source: DEST 2005a, Australian Science and Innovation System, A Statistical Snapshot,

<sup>a</sup> 2002 is the latest available data on R&D expenditure by universities from the ABS.

Higher degree by research students (doctorate by research and masters by research) make up 5.5 per cent of the domestic student population and 3.6 per cent of the international student population. Commencing domestic higher degree research students have increased, with a one per cent growth between 2005 to 2006 (to 8,769). This reverses declines in the previous two years.

Between 2005 and 2006 there was a 2.5 per cent increase in commencing higher degree research students. Commencing doctorate by research students increased by 4.2 per cent but there was a decline in commencing masters by research students. The number of higher degree research students also varies significantly across institutions as shown in Figure 17.

**Figure 17: Commencing higher degree students by higher education institution, 2006**



Source: DEST 2007b, Students 2006 Full Year Selected Higher Education Statistics

While there has been an increase in the total level of expenditure on research in the higher education sector, universities express strong concerns about some aspects of the financing system for research. A key issue highlighted in the preliminary input to this review is the partial funding of research grants by the Commonwealth in the major competitive grants schemes such as those operated by the Australian Research Council (ARC) and the National Health and Medical Research Council (NH&MRC).

This is not a new issue. The original logic of the 'dual funding' arrangements was that the research granting agencies would pay the direct costs of the projects they support, while the universities met, from their operating grants, the costs of the salaries of the chief investigators and the general infrastructure needed to sustain research. Additional funding for project-related infrastructure costs was to be provided through the Research Infrastructure Block Grants program (which provides a loading on top of the income from the project grants). The universities assert that the elements of this financing system are out of kilter.

They argue first, that the project grants do not cover the full direct costs of the projects, partly reflecting an attempt by the granting agencies to fund more projects and second, that the infrastructure loading through the block grants program is only around 20 cents in the dollar, when a more realistic figure would be at least twice that amount. The impact of these together, they argue, is that particular universities or areas of universities which are research intensive and successful in competing for research grants carry a disproportionate share of



the financial burden of underpinning the national research effort. Inevitably this affects their performance in other aspects of their mission. This is not a view held only within the sector. While the Productivity Commission supports the use of dual streams of funding for higher education research, it is concerned about further erosion of block grants.

The conceptual arguments for dual streams of funding of higher education research are sound. They encourage researchers to compete on quality and impact (competitive grants), while providing institutions with a base research funding level intended to allow them to make their own strategic choices (block grants) with reduced transaction cost burdens compared with external grant applications. But changes to funding for higher education research have increasingly eroded the share of block grants. The Commission assesses that further shifts away from block grants would risk undermining their important role." (Productivity Commission 2007, p. XXIX)

## International comparisons of research performance in higher education

Expenditure on R&D affects research performance. Australia's higher education expenditure on R&D (HERD) as a percentage of GDP (0.48 per cent in 2004) is above Germany, France (both at 0.41 per cent) and the United States (0.36 per cent), having risen from 0.32 per cent in 1986 (ABS 2006b). In 2004, Australia ranked 9th among OECD countries for HERD as a percentage of GDP (ABS 2006b). Total HERD increased from \$1.53 billion in 1986-87 to \$3.43 billion in 2002-03 (in constant 2002 prices) (DEST 2007c).

But the higher education sector in Australia performs a large share of the nation's research and development, especially its basic research. In proportional terms, higher education's contribution to national R&D effort in Australia (27 per cent) is higher than the OECD average (18 per cent). Australia ranked 12th among OECD nations in the percentage of Gross Expenditure on R&D (GERD) accounted for by the higher education sector (OECD 2008).

Appropriate public funding to support good research performance in Australia's universities is an important issue for public policy. Commentators have noted that Australia's research performance is strong in terms of the spread of research capacity across the system and performance is consistent with its population size and funding levels (Marginson 2007; Young 2008). However, they point to signs that our competitive position internationally is under pressure because of the development of a global knowledge economy; the huge investment in R&D occurring in other developed countries because they see this as underpinning future prosperity; and the rapid improvement in performance in China in particular. Some have expressed concerns that there are few universities in the top tiers of the international rankings – in 2007 only the Australian National University and the University of Melbourne were among the top 100 (57 and 79 respectively) in the Shanghai Jiao Tong University annual index.

Marginson (2007, p. 3) compared Australia's performance against Canada which is similar in size and background to Australia:

Canada has four research universities in the top 100 and two in the top 50. The University of Toronto ... is at equal 23rd in the Jiao Tong; British Columbia is at 36. Toronto is third in the world on volume of citations after Harvard and Tokyo, UBC is 25th.

In order to improve national performance and deal with the challenges arising from changes in the international context, he argues for greater concentration of investment in research

and research training through much more focussed funding of research infrastructure in high performing institutions.

The range of views on this issue is very wide with some arguing for sustained support to develop one or two 'world class' universities in Australia, others arguing for support for an unspecified number of high performing research intensive universities and yet another group arguing for support for excellent performance, wherever its institutional setting.

But all agree that there is need for much greater investment in R&D in Australian universities. They point to the fact that other countries have embarked on strategies to boost their investment in R&D across all sectors (not just higher education). The European Union has set a target of three per cent of each member country's GDP (compared with 1.77 per cent in Australia in 2004) as part of its ambition to become the leading knowledge economy region in the world. In our region China is dramatically increasing its investment in R&D while Singapore, South Korea and Taiwan have all increased their research inputs and outputs at much faster rates than Australia (OECD 2008).

### Questions for discussion

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19. By what mechanisms should research activities in Australian universities be supported?
  20. On what principles and for what purposes should research activity be concentrated in particular universities or types of universities?
  21. Do you believe there is a place in Australia's higher education system for universities that are predominantly 'teaching only' universities? If so, why ?
- 

## 3.6 *Australia's higher education sector in the international arena*

### Australia's success in the international education market

There is no doubt that Australia has had enormous success in attracting international students and that the higher education sector has been a major contributor to that success. There are now over 250,000 international students in Australian universities (with close to 70,000 of these offshore), a significant increase on the 21,000 international students in 1989.

Australia has the highest proportion of overseas students in its higher education system of all OECD countries – 19.3 per cent in 2005 as reported by the OECD. The OECD average by comparison is just 7.2 per cent. Australia is the world's fifth-largest provider of higher education to international students, behind the United States, United Kingdom, Germany and France (OECD 2008).

In 2006, 13 Australian universities had over 8,000 international students (including both onshore and offshore enrolments) and three had more than 16,000 (Monash University, RMIT University, Curtin University). The average number of onshore international students in Australia's public universities is just under 5,000. By contrast, the University of Southern California in Los Angeles, the United States higher degree university with the largest international enrolment, has just over 7,000 international students (Marginson 2008).

There are differing views, though, about the drivers for this success, the extent to which it can and should continue, and the impact it has had on campus life.

## **What have been the drivers for the expansion in the international student market?**

The significant growth in international enrolments over the past 20 years has largely been driven by individual institutions, following legislative changes in 1986 which prohibited the subsidisation of foreign students from government funding. This was a significant shift from the previous practice of offering government funded scholarships to selected participants from key partner countries under the Colombo Plan. Institutions now have sophisticated recruitment and international student service operations, as well as long established relationships with their counterparts in the Asia-Pacific region, Europe and the Americas (Adams 2007).

Many in the sector claim that reductions in public funding have forced universities to seek alternative revenue, to the point where there is now an over reliance on international student fees. Others suggest a more complicated set of dynamics and incentives. It is apparent, though, that the policies of successive governments have encouraged universities to pursue the international market.

Revenue from international student fees now accounts for an average of 14.9 per cent of total university revenues. For some institutions international student fee revenues are over 50 per cent of total revenues. At the other end of the scale, the University of Western Australia and the Australian National University, both of which have significant alternative revenue sources, have relatively low proportions of revenue from international student fees (7.8 and 4.8 per cent, respectively).

A number of Australian universities have questioned the benefits of continued growth and have now placed caps on the number of international students they will accept. These universities have publicly stated their objectives in relation to international student numbers, based on assumptions about maintaining balance between provision of an international perspective to the learning environment while ensuring an Australian educational experience for foreign students. The Australian Technology Network believes that 25 per cent of Australia's higher education students should be international with proportionate representation at the research level (Gardner 2008). The University of New South Wales has set a target of 25 per cent of international students onshore from a broad range of countries, spread across each faculty and course.

The high concentration of international students from particular destinations and in particular courses demonstrates the market driven nature of the growth in international enrolments. For example, in 2006, 65 per cent of international students were from Asia, and 49 per cent of international students were studying management and commerce. There were 57 per cent at undergraduate level and 56 per cent were based in Sydney and Melbourne. Many commentators have suggested a more diverse spread of international students would lead to a better experience for both domestic and international students and reap broader public good benefits.

## Internationalising Australian higher education to improve student experiences and outcomes

There is an emerging view that to benefit both domestic and international students, higher education institutions need to focus on internationalising the delivery and content of courses. Initial contributors to the review have put forward the following strategies as potentially important ways to extend the international nature of Australian higher education:

- better quality and broader provision of languages;
- more opportunities for students and staff to undertake offshore activities, including study aboard and internships; and
- deeper relationships with quality institutions abroad which encompass the full scope of activities from teaching and learning to research collaborations.

Internationalisation, as noted by an initial contributor to the review, is a two-way process. Some respondents have raised concerns about the extent to which Australian students study in another country. The evidence on this is not clear. The OECD reported that, in 2002, one per cent of Australian students completed part of their studies abroad compared to the OECD average of four per cent (OECD 2004). However, research on student mobility at the undergraduate level conducted by the International Education Association of Australia (IEAA) found that 4.8 per cent of completing undergraduates in Australian universities undertook international study experiences in 2003, including 3.2 per cent who undertook international exchanges or other semester or year-long programs (DEST 2007c).

Several initial contributors argued that Australia needs to attract more advanced research degree students in order to enhance our research links and to extend global regard for the quality of the Australian higher education system. According to OECD figures, 17.8 per cent of all advanced research students in Australia are international students. While this is higher than the OECD average of 16.5 per cent, it is significantly lower than Switzerland (43.3 per cent), the United Kingdom (40 per cent) and the United States (24.1 per cent) (OECD 2007b).

## International recognition of qualifications and learning outcomes

As students become more internationally mobile, there will be increasing pressure for greater transparency and international recognition of qualifications and learning outcomes. As other systems develop strategies to meet these requirements, there will be pressures for the Australian system to come into alignment. Notably, the development of the European Higher Education Area through the 'Bologna' process will continue to provide a significant impetus for these types of developments.

The Bologna process has already led to major reforms of higher education systems in Europe including the alignment of degree structures and descriptors of learning outcomes. The focus of reform in Europe is shifting to issues such as quality assurance and student centred learning, and the expectations of students are likely to change as a result.

## European Higher Education Area ('Bologna')

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The Bologna process involves 46 European countries undertaking a series of reforms intended to create an integrated European higher education area (EHEA) by 2010. The 1999 Bologna Declaration committed signatories to six objectives:

- Easily readable and comparable degrees
- Uniform degree structures
- Establishment of a system of credits
- Increased mobility
- Promotion of European co-operation in quality assurance with a view to developing comparable criteria and methodologies
- Promotion of the European dimension in higher education

The uniform degree structure is based on a three-cycle model: the first cycle ends in a bachelor-level degree, the second in a masters degree and the third in a doctorate (3 + 2 + 3).

The EHEA is not intended as a unitary European system of higher education but an area in which national systems possess common key features, in which qualifications offered by institutions in the EHEA are easily recognised and assessed by institutions and employers for purposes of further study or employment, and in which there is a high level of mobility by students and staff.

The United States is monitoring the European developments to ensure it remains internationally competitive and continues to attract students from Europe. In our region a number of Asia-Pacific countries have or are developing their own qualification frameworks (notably China, Hong Kong, India, Korea, Malaysia, Philippines, Thailand and Indonesia).

In April 2006 the inaugural meeting of Asia-Pacific education ministers issued the Brisbane Communiqué in which they agreed to collaborate on the development of quality assurance frameworks for the region. These would be linked to international standards and include courses delivered online and the recognition of educational and professional qualifications. Further work in this area has found lack of transparency was a major issue and it was difficult to obtain information on educational structures and systems, and the content, duration and nature of qualifications in order to compare systems (DEEWR 2008b).

There is also a growing influence from international professional bodies on the accreditation of programs and the structure of qualifications. Students are attracted to programs which carry international accreditation and thereby give graduates the opportunity for their qualifications to be recognised in multiple countries. There has been a focus by both governments and institutions on developing international professional accreditation in areas such as architecture and engineering, through multi-lateral fora, to aid the mobility of graduates and skilled migrants.

## Questions for discussion

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22. Are there any unintended consequences of the current approach to internationalisation of higher education in Australia?
  23. What is an appropriate role for government in assisting the Australian higher education system to internationalise? On what principles should this role rest and what purposes should it serve?
  24. Can you provide any examples of good practice in encouraging local students to undertake study in other countries?
- 

### 3.7 *Higher education's contribution to Australia's economic, social and cultural capital*

A former Governor of the Reserve Bank of Australia has identified one of the factors influencing a country's long-term economic success is a strong institutional framework grounded in laws, constitutions and culture. He singled out access to education, an open society, democratic political system and a free press as particularly important (Macfarlane 2004). Higher education clearly has a major role in these areas in the broadest sense.

Higher education contributes to Australia's economic, social and cultural capital most directly through its two core functions of teaching and research. Over the last decade national and international commentators have also noted a significant trend among many universities towards a third function, which has been described using a range of terms such as knowledge transfer, community service, community engagement and the third stream.

This function encompasses a disparate range of functions and activities which make it difficult to define precisely. In its report on third stream activities to the Russell Group of Universities, the Science and Technology Policy Research Unit at Sussex University defined it as follows:

Third Stream activities are therefore concerned with the generation, use, application and exploitation of knowledge and other university capabilities outside academic environments. In other words, the Third Stream is about the interactions between universities and the rest of society. (Molas-Gallart J et al. 2002, p. iii)

The Science and Technology Policy Research Unit argues that this goes beyond the commercialisation of research:

Universities make contributions to government and civil society as well as the private sector, assisting not only with economic performance but also helping to improve quality of life and the effectiveness of public services. Any approach to university Third Stream activities that focuses purely on university commercial activities is likely to miss large and important parts of the picture. (Molas-Gallart J et al. 2002, p. iv)

## Trends

Commentators suggest that the trend towards greater involvement in the community has developed as a result of the recent expansion of higher education in many countries, particularly in the non-university sector; new innovation agendas which encourage crossovers from higher education into industry and which have subsequently encouraged engagement



on social and cultural aspects; technology which enables development of networks which span different organisations, sectors and individuals; and the need to address national and international challenges which cross national and discipline boundaries (OECD 2007c; Holland 2005). Greater engagement between higher education and communities has arguably also evolved to meet the expectations of citizens for a greater voice in society and in response to community-identified needs, opportunities and questions that align with academic strengths (Harman 2005; Holland 2005).

This trend, and the opportunities which it offers for development of greater synergies across higher education, industry, governments, regional agencies and community groups, has been formally recognised in a number of countries. The United Kingdom Government has introduced third stream funding to support initiatives of this nature, and the United States has amended its Carnegie classification of higher education institutions to include an 'elective' classification on 'community engagement'. Australia has recognised engagement as an important component of university activity in its *National Protocols for Higher Education Approval Processes*.

## Ways in which higher education can contribute to economic, social and cultural capital

The economic and employment impact of the higher education industry is particularly significant at a regional level. The OECD found in a study on higher education and regions that:

In regions with a well represented higher education sector the contribution to the regional GDP can be significant. For example, in peripheral regions, the expenditure of higher education institutions may range from 2 to 4% of regional GDP. (OECD 2007c, p. 20)

Third stream activities by universities perform an important regional development function, which can take a wide variety of forms. A recent report documents a number of case studies including projects which provide free internet access to Australasian legal materials, services to protect the health and wellbeing of regional and rural Victorians, an international projects agency providing research and policy advice on Asia and the Pacific, capacity building programs for developing Asian economies and public affairs programs, and research into diversionary arts programs for young people experiencing difficulties in their lives (PhillipsKPA 2006b).

A university can provide a focus for links with local health care services and social welfare groups, for example to analyse and address needs in disadvantaged areas; and with cultural and community development industries at local level. In a recent speech, one vice-chancellor talked about his university's contribution to cultural activities, such as an international arts festival, in which the resources and facilities of the university linked to those of the state government and the city to produce an activity of value to the community. In another example, one university's wide-ranging community engagement program includes a community service elective for students, publication of a community newsletter and the annual Community Partnership and Women of the West Awards. Its activities are informed by a regional council which advises the university on community issues including health, housing, educational opportunity, equity, employment, small business and environmental management.

Universities can also assist with the 'joining up' of a range of national policies at the regional level (for example, in areas such as science and technology, industry, education and skills, health, culture, sport, environmental sustainability and social inclusion). The OECD suggests

a number of ways in which governments can use their higher education systems to support regional development, such as including regional engagement in higher education legislation, providing funding to support regional engagement and developing indicators to monitor the impact of institutions on regional performance (OECD 2007c).

The importance of higher education to local regions was recently underlined by the British Secretary of State for Innovation, Universities and Skills who has flagged that communities which submit bids for new higher education institutions will be required in future to articulate the potential broader benefits to the region. The Secretary of State noted that universities can provide:

... incubation support, business workspace, education and training programs, mentoring and access to other support networks, professional advice on subjects such as financial and legal issues, access to specialist facilities and expertise. (DIUS 2008b, p. 7)

## Stakeholder views

Preliminary input to the review has also confirmed the significant and increasing role universities are playing in their local regions. Not surprisingly, a number of regional universities have made these points quite forcefully, although the issues are by no means confined to country areas. For example, a recent City of Melbourne report demonstrated that Melbourne's universities make a major contribution not only to industry and the local economy, but also to maintaining cultural infrastructure. They are also leading service providers for government, industry and the community (City of Melbourne 2007).

In 2006 the Australian Vice-Chancellors' Committee expressed strong support for engagement between universities and the community:

The Australian Vice-Chancellors' Committee firmly believes that Australian universities, the industry and community partners in a knowledge transfer relationship and the Australian economy as a whole would benefit from continued and strengthened efforts to strengthen university-industry linkages, networks and relationships. (AVCC 2006, p. 1)

A number of Australian universities have formed the Australian Universities Community Engagement Alliance "to promote the social, environmental and economic and cultural development of communities" (AUCEA 2006, p. 4). Similar networks exist in Europe and the United States.

## Constraints on engagement with communities

The OECD (2007c) found that more active engagement, particularly around longer term community development and cultural issues, is constrained in many countries by the policy, funding and regulatory environments in which the higher education institutions operate. There are often limited resources, and hence limited incentives, for institutions and staff to engage in third stream activities.

A number of Australian universities surveyed in 2006 about the adequacy of public support for knowledge transfer expressed the view that current funding arrangements and programs in this country did not support the full range of actual and potential knowledge transfer activities; in particular they considered there was a deficit of support for projects involving knowledge transfer for human, social and environmental benefit (PhillipsKPA 2006b).



The immediate, practical significance of this issue relates to implementation of more mission-specific funding of universities in order to recognise and promote greater diversity. Many commentators suggest that this objective will not be realised if the overwhelming drivers of funding remain focussed on student numbers and research performance. Unless funding streams are developed to support other aspects of university missions, there will continue to be convergence around the functions that drive the funding of institutions and the recognition of staff performance.

A key issue for both policy makers and higher education institutions seeking to promote knowledge transfer and engagement activities is the difficulty of measuring impacts and performance. Without adequate robust performance measures it is difficult for government to establish reliable and equitable funding arrangements for institutions, and it is difficult for institutions to provide appropriate recognition and reward to staff. Identifying and developing performance measures in this area will be a challenging task.

### Questions for discussion

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25. How would you define knowledge transfer and community engagement in an Australian context?
  26. Do you believe that knowledge transfer and community engagement are legitimate and appropriate roles for contemporary higher education institutions? If so, how do you see this additional role for the higher education sector blending with its traditional roles and are there limits to these additional roles?
  27. If you think that knowledge transfer and community engagement are appropriate roles for higher education institutions, how do you believe these functions should be funded?
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## 3.8 Resourcing the system

The scale, source and distribution of resources for higher education will always be vitally important but contested issues. These issues are also dynamic: the review needs to consider the resourcing of the system not just in the light of current circumstances, but in relation to likely changes in the strategic context.

### The overall scale of resources from all sources

In international terms, Australia's total expenditure on higher education from all sources is relatively high. The total expenditure (public and private) on tertiary education in Australia was around 1.6 per cent of Gross Domestic Product in 2004. This was lower than in the United States, Sweden and Korea, but higher than the United Kingdom and some other European countries, and also higher than the OECD average.

However, most other OECD countries increased their expenditure on higher education more quickly than Australia did over the decade to 2004 (OECD 2007b). Australia ranked 15th out of 24 reporting countries in terms of growth in expenditure per student on educational institutions for tertiary courses from 1995 to 2004. In real terms, between 1995 and 2004, total national expenditure on education and training institutions in Australia grew faster (32 per cent) than GDP (24 per cent), but significantly less than the OECD average (55 per cent).

As noted previously, the growth in Australia was a result of increased private expenditure; public expenditure actually declined by four per cent between 1995 and 2004.

The resourcing levels of individual universities vary widely between and within different countries. For example, in 2002 the Productivity Commission examined the resources of 11 Australian universities and 26 universities from nine other countries. The analysis found that:

- Three of the overseas universities had revenues per student that far exceeded that of the other universities. These were the University of Pennsylvania (A\$229,632), Stanford University (A\$296,599) and Yale University (A\$310,833).
- Excluding these three outlier universities, revenue per FTE [full-time equivalent student] of the other universities ranged between A\$10,136 (Charles Sturt University) and A\$73,029 (the University of Hong Kong).
- The highest figure for an Australian university in the sample was Australian National University (A\$60,941 including funding for the Institute of Advanced Studies). The next highest was the University of New South Wales (A\$30,567) (Productivity Commission 2002).

The figures for each of the universities in the study are shown in Table 4.

**Table 4: Resourcing levels for select universities, 2001**

University	Total revenue from all sources per FTE student* (A\$) 2001
Yale University (USA)	310,833
Stanford University (USA)	296,599
University of Pennsylvania (USA)	229,632
University of Hong Kong (Hong Kong)	73,029
Georgetown University (USA)	62,665
Australian National University	60,941
Oklahoma State University (USA)	38,310
Utrecht University (Netherlands)	37,830
University of Amsterdam (Netherlands)*	32,862
Queens University (Canada)	31,605
Bond University	30,782
University of New South Wales	30,567
University of Manchester (UK)	30,015
University of Oklahoma, Norman Campus (USA)	29,144
National University of Singapore (Singapore)	27,882
University of Melbourne	27,876
University of Warwick (UK)	26,315
University of British Columbia (Canada)*	25,787
University of Bath (UK)	23,214
Nanyang Technological University (Singapore)*	20,140
Flinders University	18,722
University of Nottingham (UK)	18,645
RMIT University	18,572
University of Waterloo (Canada)*	18,366
Simon Fraser University (Canada)	18,204
University of Tasmania	17,996
University of Otago (New Zealand)	17,815
Murdoch University	16,690
University of Dublin, Trinity College (Ireland)*	15,720
University of Auckland (New Zealand)	15,619
University of Limerick (Ireland)*	14,865
University of Western Sydney	12,304
Massey University (New Zealand)	12,123
University of Southern Queensland	11,636
De Montfort University (UK)	11,005
Charles Sturt University	10,136

Source: Productivity Commission 2002, *University Resourcing: Australia in an International Context*, Appendix D

Note: For universities marked with an asterisk\*, actual student numbers (headcount) rather than FTE were used. The level of revenue per FTE is therefore likely to be higher than the figure shown in the table.

The Productivity Commission concluded from its analysis the following.

- There were significant differences in financial resources among the universities studied. Universities generally fell into two broad categories when ranked by their total revenues in 2001, namely:
  - Australian universities and most of the overseas universities, with revenue ranging between A\$57.4 million and A\$968.6 million; and
  - three resource-rich US universities, each with revenue of over A\$2.6 billion (Yale, Stanford and Pennsylvania).
- Some universities in the first category had up to three times the revenue per student of others. This largely reflects differences in:
  - course offerings, such as medicine compared with the arts;
  - the emphasis on teaching and research — resulting in differences in government operating grants and the level of competitive (government and private) research funding; and
  - their ability to derive revenue from sources other than governments and students.
- Universities in the second category, which are private and unregulated, have massive resources by comparison, even after revenues from hospitals and health care services are netted out:
  - over 50 per cent of their revenue is from private gifts and donations, or generated from commercial and investment activities. (Productivity Commission 2002, p. xiii)

As noted in sections 2.5 and 2.6 (see Figures 3, 4 and 5) state and territory governments provide only around two per cent of total revenue on average for higher education activities.

Some commentators have argued that it is important for Australia to concentrate its higher education resources so that a small number of Australian universities can move toward the resourcing levels of leading institutions overseas. Others argue that a better approach is to distribute funding in a way which encourages excellent teaching in all universities and which supports centres of excellence in research in fields of demonstrated international competitiveness, regardless of institution.

## Philanthropy

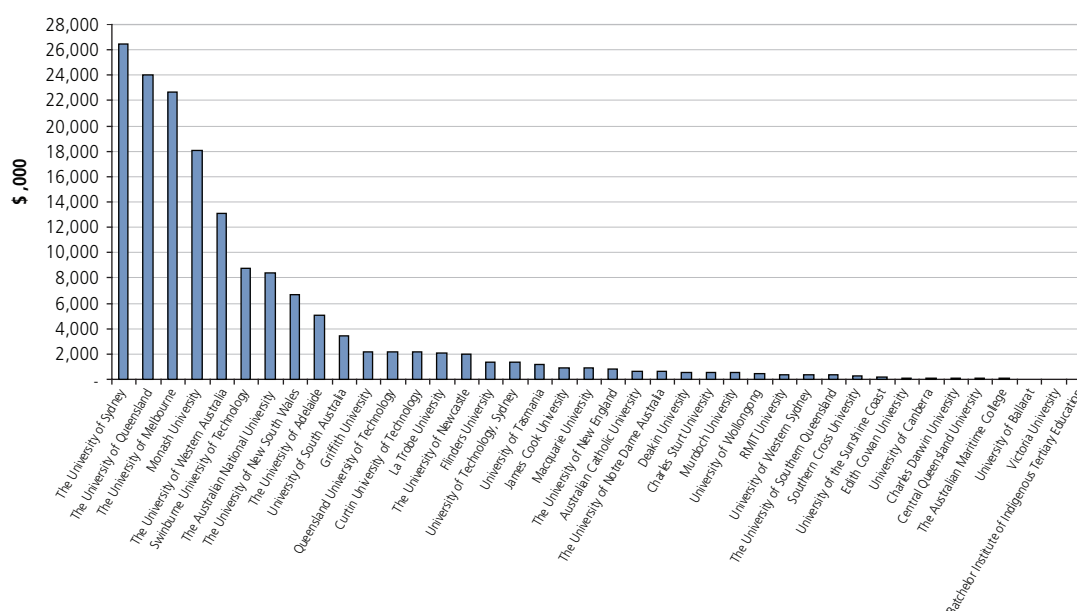
While there is a growing focus among Australian universities on the possibilities for generating income from philanthropic sources, there is no suggestion that this might be sought in place of adequate public funding or provide any immediate solution to the resource constraints experienced in Australian universities. Australian higher education has not traditionally had a well developed culture of philanthropy. The *Giving Australia* report (ACOSS 2005) shows that individuals and businesses were more likely to give to community service and welfare, health, and sports and recreation before giving to education. This is in contrast with the United States, for example, where individuals give to education as their second largest cause.

Alumni are a primary source of donations for many universities. In Australia, however, this raises particular challenges as graduates here do not have a culture of donating to their universities. A recent report to Universities Australia on behalf of the Business, Industry and

Higher Education Collaboration Council (The Allen Consulting Group, 2007) suggests that the reticence to donate to education in Australia is because the funding of education is seen as primarily a responsibility of government and because of a lack of connection Australians have to their universities.

There are huge variations across Australian universities in the revenue they receive from donations and bequests as shown in Figure 18.

**Figure 18: Donations and bequest received by higher education institutions, 2006**



Source: DEST 2007a, Finance 2006, Financial Reports of Higher Education Providers

The Business, Industry and Higher Education Collaboration Council (Murray 2008) has recommended that the Commonwealth Government provide funding to enable universities to increase and develop their capacity for philanthropy. It has suggested funding for both capacity building and a matching funding scheme for philanthropic donations.

## Financing arrangements and incentives for institutions

For any given total level of funding it is important to understand the dynamics of revenues and costs for higher education providers and how they affect institutional performance and behaviour.

### The public universities

As noted in section 2.6, the level of Commonwealth funding per student in 2006 was below the 1989 level in real terms. However, the total amount of income available to institutions for each student place was 7.2 per cent higher in 2006 than in 1989 when student contributions are factored in.

There is likely to be continuing pressure on institutional budgets over the next few years as the legislated yearly additional 2.5 per cent increases in Commonwealth Grant Scheme funding conditional on workplace relations and governance requirements ceased in 2007. In the medium to long term, the use of an indexation formula which is unlikely to cover the full effect of expected forecast wage inflation will put further cost pressures on universities.

The Commonwealth Grant Scheme amount for each university is determined each year in the funding agreement with the Commonwealth. The maximum student contribution amounts that a university can charge to domestic undergraduate students (the largest group of students) are capped. The cap on the student contribution amounts and the level of the Commonwealth contribution through the Commonwealth Grant Scheme is the same for a student in the same field of study at every university. A small number of postgraduate coursework places are also supported by the Commonwealth and the amount a university can charge these students is also capped.

On the cost side, the largest single area of university expenditure is for staff remuneration and associated costs – an area where cost pressures are expected to rise significantly as a result of the ageing of the workforce and increased international competition for academic staff. This will be exacerbated by the low indexation rate. With one exception, staff costs represent between 52 per cent and 67 per cent of total expenses for all Australian public universities.

Thus in relation to its largest single activity, the teaching of Australian undergraduate students, the public university sector has been dealing with a rising cost base that is not matched by increased income from government sources, within a financing system which constrains both volume and price. In the absence of policy change these conditions will continue.

In relation to research, total funding for universities has risen in real terms supporting an increased volume of research activity and outputs. However the institutions argue that Commonwealth funding for research projects, such as those supported through the Australian Research Council and the National Health and Medical Research Council, does not cover the full direct costs of the projects and that there is insufficient funding for the indirect costs from the block research grants (see also section 3.5). As a result they argue that this type of research activity must be cross-subsidised from other sources of income.

In relation to infrastructure, the universities argue that the limited funding available has left parts of the system unable to renew the core fabric of buildings, equipment and facilities to acceptable standards. As noted in section 2.6 the Government is rolling the Higher Education Endowment Fund into the Education Investment Fund and providing universities with a one-off \$500 million this year for capital expenditure on facilities to support teaching, research and student amenities. The Government has noted that there will be no disbursements from the fund in 2008-09 to ensure allocations align with the recommendations of this review and the priorities of universities, vocational education and training institutions and major research institutes.

These factors combine to produce a strong incentive for universities to increase student:staff ratios, increase the rate of casualisation of the academic workforce, and pursue revenue from the same, limited number of other sources that are flexible and scalable.

The most significant such source is international student fees. International student numbers and fee levels are not capped. Fees charged to international students in any field of study are significantly higher than the funding provided for an Australian student in the same field. The majority of Australian postgraduate coursework student numbers and fees are similarly deregulated with universities being able to set their own fees. The postgraduate coursework market is much smaller than the market for international students.

We need to assess carefully whether the dynamics in our current financing system are the right ones to support the purposes and functions of higher education in modern Australia.

For example, the growth of international student numbers and revenue has wide ranging benefits for higher education and for the nation. On the other hand there are obvious risks in placing too great a reliance on international student fee income for any individual institution and for the system as a whole.

Not all academic disciplines have equal capacity to generate revenue from fee-paying students. The current cost-revenue dynamics produce imperatives for each individual university to move out of areas of low enrolment, especially if there is little demand from overseas fee-paying students in the area, regardless of the national significance of the field. Mathematics, languages and some areas of the physical sciences are cases in point. Conversely, the dynamics produce imperatives for each university to move into areas where there is demand from international students, such as business. The effects of these dynamics can be seen in enrolment patterns.

In addition, the governance, business models and dynamics associated with providing educational services to full fee-paying overseas students in parallel with the public university system for Australian students could have the potential to create a two-tiered higher education system with very different regulatory, governance, funding and quality imperatives.

The incentives to increase class sizes, constrain staff numbers and increase the use of casual staff may lead to short term efficiency but may also work counter to the objectives of achieving excellent academic outcomes and a high quality student experience. A clear issue for the sector at present is how to get the right balance in academic staffing between casual staff who can meet short term needs or provide industry relevant education and those staff who are building a career as academics on long term contracts or on tenure track. Nurturing and developing the careers of the latter group is key to meeting the challenge of the ageing academic workforce and international competition for academic staff.

From the perspective of higher education as an industry in its own right, the dynamics of differential access to resources and increasing competition for staff and students may drive increasing divergence in resourcing levels between institutions. The extent to which this will be acceptable to the community and to government is an open question. Restructuring within the higher education sector may occur as a result as has been the case in many other industries exposed to similar pressures. Higher education providers may seek to merge or reconfigure in different ways in order to achieve competitive advantages, increased critical mass to sustain key areas, or benefit from economies of scale. At least arguably it could be appropriate for government to play a facilitation role in supporting restructuring of the industry where the changes are in the public interest.

### *The private providers*

The cost-revenue dynamics are somewhat different for private providers. In general, their main source of income is student fees, the level of which is not capped by the government. Their student numbers, the fees they charge, and therefore their total revenue, are determined principally by the market. The extension of FEE-HELP to students in recognised higher education providers has allowed students in private institutions to defer paying their fees and repay them on an income contingent basis, lowering the up-front cost of entry and encouraging a larger number of students to take up a fee-paying place in these institutions.

However, with the exception of 'national priority' student places (generally places in nursing and teaching), private providers are not eligible to receive Commonwealth supported places. Institutions recognised as higher education providers by the Commonwealth which offer courses



accredited by the relevant state and territory authorities in national priority areas may be eligible to receive places. Similarly, most (but not all) private providers are not eligible for capital funding from the Commonwealth. Therefore most private providers operate in areas where:

- they are not in direct competition for students with the publicly funded institutions; or
- the demand from fee-paying domestic or international students is high and the corresponding courses in public institutions are also offered on a fee-paying basis; and
- the costs of infrastructure and teaching are relatively low.

Australia's private higher education sector is therefore comprised mainly of small institutions providing a limited range of courses in specific areas, ranging from divinity and other forms of religious study to finance and business studies, natural therapies and hotel management. The main exceptions are Bond University and the University of Notre Dame, Australia both of which are self-accrediting and receive public funding, placing them in a third category between the fully private providers and the public universities.

### Alternative approaches to institutional funding

Some initial contributors to the review have argued that the current system of resource allocation works against certain forms of diversity among the public universities because the primary funding streams for teaching and research are allocated on the same basis to all eligible universities and there are no or insufficient funding streams to support other functions of universities such as knowledge exchange, community engagement and expansion of access.

Some have argued that the reliance on enrolments and discipline mix as the primary drivers of public funding for teaching could be balanced by introducing a greater emphasis for funding eligibility on graduate outputs or outcomes.

Other commentators have argued that a more responsive and diverse system could best be promoted through a more competitive and deregulated approach, using student choice as the primary driver for the allocation of public funding for teaching. Various models for a 'student-centred' approach to funding, using vouchers, 'rationed scholarships' and learning entitlements, were explored in both the 1997 West Review (West 1998) and the 2002 Crossroads Review (Nelson 2002). A 'student-centred' approach could also potentially allow more widespread provision of public funding to recognised private providers, if that were considered desirable, as occurs in the vocational education and training and schools sectors.

The concept of mission-driven 'compacts' negotiated with universities by Commonwealth representatives has recently arisen. The intent of this approach is to strengthen institutional autonomy, encourage universities to be responsive to the economic and social needs of their communities and to boost the international competitiveness of Australia's higher education system. Concerns about a possible lack of transparency in such an approach have been raised. The Government has committed to introduce compacts but the precise nature of these new arrangements will be the subject of consultations with the sector and decisions on how they will operate in practice are still to be taken.

At a more detailed level, there have been persistent concerns with the way in which public funding for teaching is allocated between fields of study and to particular types of teaching such as clinical practice. The combined total of student and Commonwealth contributions varies between different fields in a way which still largely reflects the 'Relative Funding

Model', initially developed in 1988. Even at that time the model was acknowledged to be an imperfect approximation of the average range of costs of teaching different disciplines. There have been persistent calls for a significant re-working of that approach. In 2007, the Commonwealth Government commissioned Access Economics to examine some aspects of the Commonwealth Grant Scheme including the impact of existing discipline groupings and relativities within the funding mechanism for allocating funding (Access Economics 2007). The review resulted in a departure from the relative funding model for some disciplines.

The merits and implications of any alternatives to current institutional funding arrangements must be assessed against the features of the existing system, including its stability, transparency, consistency between public providers, and capacity to concentrate scarce public resources.

## Contributions from students

Australian universities typically receive a greater share of their revenue from students than do universities in some other countries (counting student contribution amounts, previously HECS).

The shift to private funding for education, particularly at the tertiary level, has been more pronounced in Australia than in many other countries; funding for tertiary education from all private sources increased by 98 per cent between 1995 and 2004. The extent to which households contribute to the cost of tertiary education varies greatly across countries. In 2004, the proportion of private household expenditure on tertiary education was more than 30 per cent in Australia, Chile, Korea, Mexico, New Zealand and the United States (OECD 2007b).

Within the current system of financing, higher education students pay widely differing amounts toward the costs of their courses, contribute widely differing proportions of the costs, and have different degrees of access to income support and to income-contingent loans. Some of the differences reflect deliberate policy decisions, others have developed historically. As a result the overall picture is at best complex and at worst anomalous, inconsistent and irrational. For example:

- Full time Australian students in any accredited course offered by both public and private providers are eligible for income support, subject to parental and personal means tests.
- Australian undergraduate students who are in a Commonwealth supported place at one of a specified subset of higher education institutions (mainly but not exclusively the 'public' universities) pay a student contribution amount set by the institution and may defer payment by taking out a HECS-HELP loan. There is no means test relating to either the student contribution amount or the loan. No loan fee or maximum loan amount applies. The maximum student contribution amount levels are indexed annually. The maximum student contribution amounts in 2008 per equivalent full time student load (EFTSL) range between \$4,077 (education and nursing) and \$8,499 (law, medicine, dentistry). The proportion of funding contributed by the student ranges between 28 per cent (agriculture) and 84 per cent (law).
- Australian undergraduate students in other types of places in public universities and at other types of institutions pay fees set by the institution. The Commonwealth does not regulate the fee levels. The student may defer the fee through the FEE-HELP loan program, but only if the institution is approved as a higher education provider by the Commonwealth (this is different from accreditation of the course). There is a loan fee of 20 per cent for undergraduate fee-paying courses (except for courses undertaken

through Open Universities Australia) but not for postgraduate fee-paying courses. There is a loan limit of \$81,600 except for dentistry, medicine and veterinary science, where the limit is \$102,000. Undergraduate fee-paying places in public institutions are being phased out from 2009.

- Australian postgraduate coursework students in all higher education institutions generally pay fees set by their institution, although some postgraduate students are charged in the same way as undergraduates. Fee-paying postgraduate students may defer the fee through the FEE-HELP loan program if their institution is approved as a higher education provider by the Commonwealth.
- Australian postgraduate research students are generally exempt from fees in the 'public' universities.
- Australian students in TAFE institutes generally pay fees upfront without access to income-contingent loans. The fees are generally lower than in universities. From 2008, FEE-HELP will be extended to eligible full fee-paying students undertaking certain vocational education and training accredited courses (Diploma and Advanced Diploma with a credit towards a higher education award; and Graduate Certificate and Graduate Diploma).

The combined effect of these various approaches is that students undertaking similar courses may pay widely varying amounts and may have differing access to loans. The extent of the subsidy to students through direct Commonwealth grants and the cost of providing HELP loans (interest free and income-contingent) vary accordingly, without any clear link to the extent of public and private benefit or to the capacity of the student to pay, or repay.

Some of the initial contributors to the review have argued that it is time to take stock of the overall system of student contributions and the Higher Education Loan Program, and to do so alongside a serious review of student income support arrangements.

### Questions for discussion

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28. What incentives or unintended consequences are there in the current arrangements for higher education funding?
  29. To what extent are the current funding models adequate to secure the future of Australia's higher education sector? If there are better models, what are they?
  30. Are the current institutional arrangements for determining relative funding between higher education institutions appropriate? If not, what changes should be considered?
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## 3.9 Governance and regulation

### Regulatory arrangements

Australian higher education operates within a complex framework of regulatory and reporting requirements from Commonwealth, state and territory and local governments.

A recent major report defined regulation:

... to include any laws or other government 'rules' which influence or control the way people and businesses behave. Under this definition, regulation is not limited to legislation and formal regulations; it also includes 'quasi-regulation' (such as codes of conduct, advisory instruments or notes etc). (Regulation Taskforce 2005, p. 2)

All but one of Australia's universities are established or recognised under state or territory government legislation (the Australian National University is established under Commonwealth legislation). While all are self-governing institutions, most are accountable to the state or territory parliament and the minister for education, as well as to state or territory auditors-general, ombudsmen and other specialist bodies.

All of Australia's universities, public and private, receive Commonwealth funding, through the *Higher Education Support Act 2003* and other supporting legislation. The Commonwealth uses funding as a lever to exercise influence over the number of students in each field of study, including establishing tuition prices for different undergraduate courses, targeting additional places for some high demand fields and requiring institutions to seek approval before closing programs judged to be critical to national requirements.

The entry of private and non-self-accrediting institutions to the higher education system is tightly regulated under broad protocols agreed by Commonwealth and state and territory ministers, underpinned by legislation. Institutions must seek a 'licence to operate' and must undergo re-registration processes, generally every five years. Failure to meet requirements can result in withdrawal of registration or accreditation. Non-self-accrediting institutions must seek accreditation for each course offered in each jurisdiction. If private institutions wish to access Commonwealth funding to offer FEE-HELP loans to their students, they must satisfy additional financial viability and other quality and accountability requirements under the *Higher Education Support Act 2003* on an ongoing basis. Any institution wishing to offer places to international students must comply with the substantial additional requirements of the *Education Services for Overseas Students Act*.

### Are these regulatory arrangements fit for purpose?

The appropriateness of these arrangements needs to be assessed in the context of the increasing scale, sophistication and competitiveness of the Australian higher education industry.

Universities have expressed concern for some time about the level of regulation and 'red tape' imposed on them by government, particularly the Commonwealth. They consider it anomalous that, while the Commonwealth contributes around 40 per cent of total university revenue, its regulations effectively apply to the entirety of university operations. An independent report on university reporting requirements in 2006 (PhillipsKPA 2006c) suggested that, given the long-term decline in Commonwealth funding as a proportion of university revenue, there was a growing case to revisit the relationship between the Commonwealth and universities.

There is a perception in the sector that the implementation of the previous Government's *Our Universities: Backing Australia's Future* package of initiatives in 2003 led to closer control of key decisions about the best balance of students and courses and that these requirements "increase administrative costs for universities, divert more staff to external reporting tasks, and discourage diversity in university operations" (AVCC 2005, p. 2).

The regulatory, legal and accountability frameworks applying to higher education institutions also vary between states and territories. Variations in jurisdiction-based legislation and in universities' own establishment legislation can mean that they are subject to different arrangements in areas such as governance and management, capacity to undertake commercial activities, workplace relations, payroll tax and consumer protection. Dual sector universities, with both vocational education and training and higher education components, have dual accountability requirements to the states and territories and the Commonwealth and must deal with very different regulatory and financing systems.

The small but increasing number of private and non-self-accrediting institutions seeking to operate across jurisdictions and sectors (higher education, vocational education and training, and in both the domestic and international markets) have highlighted the complexities and inconsistencies in the current regulatory environment, in which legislative responsibility is shared between Commonwealth and state and territory governments, and between agencies within the same level of government. Many non-self-accrediting providers are dissatisfied with the administrative burden associated with perceived differences in approach to accreditation processes across states and territories, despite the attempts to harmonise processes through the development of the *National Protocols for Higher Education Approval Processes* and guidelines.

## Alternatives to current arrangements

There have been some calls for quite significant changes to the current arrangements.

### *Transfer of 'ownership' to the Commonwealth*

The former government explored, but did not proceed with, the proposal for a transfer of 'ownership' of universities from the states and territories to the Commonwealth. The issues paper *Rationalising Responsibility for Higher Education in Australia* (DEST 2004) canvassed the potential benefits of such a transfer, "including improved international competitiveness and improved operations of higher education providers through re-design of their governance and management framework" (DEST 2005b, p. 4). The discussion paper also identified risks which would need to be managed in the event of a transfer of responsibility. For example, the sustainability of universities would need to be safe-guarded in the event of a withdrawal of state and territory government financial and in-kind support. The important economic and social role played by universities in regional economies would need to be taken into account, and the status and viability of dual sector institutions considered. The paper also indicated that there might be implications for Commonwealth grants to states and territories if the Commonwealth assumed additional functions in respect of higher education such as provision of ombudsman services.

### *National regulatory agency*

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) has recently requested the Joint Committee on Higher Education (JCHE) to undertake, on its behalf, an inquiry into the desirability of a national higher education accreditation body.

This inquiry is close to completion. The inquiry's objective is to contribute to an informed discussion by ministers and officials on ways to promote greater national consistency in recognition and accreditation, by describing and assessing current arrangements in each jurisdiction and canvassing options for improvement, including models for a national accreditation agency. If MCEETYA decides to proceed with a national agency, it is likely that its main focus would be on non-self-accrediting institutions.

Craven, Phillips and Wade (2005b) floated the concept of a single higher education industry regulatory agency in 2005. They suggested that the states and territories and the Commonwealth could collaborate in the formation of a single higher education industry regulator. They argued that "such a move could also provide the opportunity to review the higher education regulatory framework and update it to reflect and facilitate the development of an increasingly diverse and competitive industry" (DEST 2005b, p. 16). The model they proposed was for a body with both regulatory and quality assurance functions, which would not be a funding body like the former Commonwealth Tertiary Education Commission (CTEC) or similar bodies in other countries.

### *Independent 'buffer' body*

The OECD notes in its Final Synthesis Report for the Thematic Review of Tertiary Education (2008) that various forms of intermediate agencies positioned between higher education institutions and government are becoming increasingly important in the steering of tertiary education. Some OECD countries such as Ireland, New Zealand and the United Kingdom (except Northern Ireland) have established agencies such as funding councils or quality assurance agencies to carry out governance functions. They aim to avoid:

... the hazards of excessive interference by governments in the institutions, especially in funding and internal management, while facilitating the steering of higher education within a policy framework set by governments focused on high level policy issues, rather than the details of administration. (Boland 2006 cited in OECD 2008, vol. 1, p. 62)

Some commentators have argued in favour of a 'buffer' body to remove decision-making from the political sphere, to develop an organisation with specialised skills and experience, and to provide organisational continuity (Karmel 2000; OECD 2008). Others argue that an independent body adds another layer of bureaucracy to the regulatory system and reduces public accountability to taxpayers.

Some initial contributors to the review have also argued for an intermediary agency in the context of a move to more mission-specific compact funding for universities. They argue that if such arrangements are to be effective, there will need to be an expert and independent body involved in the development and monitoring of compacts, and express doubts about the capacity of a department of state to deal with the fine detail of compact negotiation. Other contributors offered more general support for a buffer body which they considered would ensure greater transparency and accountability in decision-making affecting universities.

The Commonwealth Tertiary Education Commission was created in 1977, merging the former Universities, Advanced Education and Technical and Further Education Commissions. The commission was created to promote balanced and coordinated development of the provision of tertiary education. Its main functions were to advise the minister on Commonwealth financial assistance to universities, colleges and technical and further education institutions, and to administer programs of financial assistance. It operated within policy and financial guidelines set annually by government. It was required to develop policy directions in



consultation with state tertiary coordinating authorities, individual institutions and the Commonwealth, advised by the Department of Education.

One researcher considered that initially the commission was the dominant voice in tertiary education policy and the initiatives which it undertook were "...well-coordinated in content and predictable in outcome" (Marshall 1988, p. 5). However, he suggested that its effectiveness diminished from the mid-1980s as a result of growing involvement in tertiary education policy by a range of federal departments. This fragmentation of the policy process meant that the commission was required to meet a variety of disparate and potentially incompatible objectives with inadequate time and variable funding from year to year.

The commission was abolished in 1988, with its policy and administrative functions transferred to the newly created Department of Employment, Education and Training and its advisory role transferred to the Higher Education Council of the National Board of Employment, Education and Training. The then minister responsible for higher education, the Hon John Dawkins, discussed his reasons for abolishing the commission in a media interview in 1992. He is reported as saying that "the trouble was that CTEC was organised in such a way that it actually was a barrier to significant change. CTEC had a considerable amount of power and whoever was the chairman of CTEC was essentially the Minister for higher education. ... I thought that if the Government had views about what it wanted to do and wanted to commit huge additional resources to the system, then .... it needed to have its hands more closely on the action"(cited in DEET 1993, p. 109).

In 2007 the Group of Eight called for establishment of an 'Australian Tertiary Education Commission' under Commonwealth legislation, with joint Commonwealth-state and territory appointments, as an intermediary agency between government and tertiary education institutions (including vocational education and training). In this model the commission would be responsible for functions including allocation of block grants to universities and negotiation of agreements with universities in relation to use of funds and performance accountabilities. The Group of Eight argues that this shared responsibility model provided a safeguard of university autonomy and an opportunity to develop a coordinated steering mechanism to drive reform (Go8 2007).

### *Creation of higher education networks or systems*

An initial contributor to the review put forward an idea for structural reform based on the joining together of some tertiary institutions into systems, along the lines of state-based systems in the United States and some European systems. Systems could include a range of institutions with a good mix of disciplines, sufficient infrastructure, research capacity and potentially dual sector approaches. Each institution could retain its own council or senate, with an overall governing body for the 'system'. The contributor suggested that this arrangement would allow greater diversity to develop, in that individual institutions could specialise in particular areas, while maximising choice and movement for students across the network.

## **Australia's quality assurance framework**

Australia's higher education quality assurance framework forms a major part of the regulatory environment applying to higher education, particularly for private and non-self-accrediting institutions. It consists of a number of spheres of activity.



### *Recognition of qualifications*

In 1995 Commonwealth, state and territory ministers for higher education agreed to adopt the Australian Qualifications Framework (AQF), which links nationally recognised qualifications in post-compulsory education and training across the schools, vocational education and training and higher education sectors.

### *Accreditation and registration of higher education institutions and courses*

The Commonwealth and states and territories have agreed on *National Protocols for Higher Education Approval Processes* against which states and territories assess applications for registration of institutions to offer higher education and accreditation of their courses. The protocols are underpinned by higher education legislation in each state and territory and the Commonwealth.

The national protocols also protect the use of the word 'university' in business and company names, with the states and territories responsible for business names and the Commonwealth for company names.

Professional accreditation of higher education courses (whether delivered by a self-accrediting or a non-self-accrediting institution) occurs in a range of professional areas (e.g. medicine, nursing, law, accountancy) as a prerequisite for professional registration on a legislative or voluntary basis.

### *Institutional self-monitoring and review*

Universities and other self-accrediting institutions are responsible for their own academic standards and quality assurance processes and have adopted a variety of ways to monitor and review the quality of their courses, involving formal internal processes and external review.

Peak bodies such as Universities Australia have adopted voluntary codes in areas such as academic quality and standards in teaching and learning, higher degrees and the provision of education to international students.

The national protocols require non-self-accrediting institutions to have academic governance and quality assurance arrangements that focus on continuous improvement to teaching and learning and quality outcomes for students, and academic standards comparable with Australian universities.

### *External monitoring and review*

Most universities are required to provide state and territory governments with audited annual financial reports and operational reports and are also subject to audit by state and territory auditors-general as part of their regular audits of public sector bodies. Universities also provide annual financial reports to the Department of Education, Employment and Workplace Relations (DEEWR) to discharge their obligation to report on overall financial viability and expenditure of funds received under the *Higher Education Support Act 2003*. Substantially the same financial report is used for reporting to all levels of government.

Universities are also required to participate in departmental statistical collections and annual Graduate Destination and Course Experience Questionnaire surveys of students and graduates.

The Commonwealth uses performance indicators derived from these surveys and the departmental statistical collection for its Institution Assessment Framework, which produces

an across-the-board assessment of institutional achievements based on quantitative and qualitative data from universities and external sources and forms the basis of strategic bilateral discussions between the Department of Education, Employment and Workplace Relations and individual institutions, generally every two years.

Non-self-accrediting institutions are required to provide annual reports in most jurisdictions to the relevant state and territory accrediting authority. Some states and territories use these as a basis for formal risk assessments of institutions and targeted monitoring of compliance with approval conditions. Higher education providers eligible to offer FEE-HELP to students are required to comply with a range of additional quality and accountability requirements as part of their accountability for public funding.

Under the *Education Services for Overseas Students Act* arrangements, monitoring and review processes exist for all institutions offering courses to overseas students in Australia. In particular, institutions must monitor student progress and attendance and report students in breach of visa conditions. Institutions are also obliged to report prospective changes in ownership and management.

### *Independent institutional audit*

A key component of Australia's quality assurance system is an audit of institutions and accreditation agencies by the Australian Universities Quality Agency (AUQA) to check that procedures are in place to assure the quality of Australia's higher education.

Established in 2000 by the Ministerial Council on Education, Employment, Training and Youth Affairs, AUQA is an independent body responsible for auditing Australian universities and other self-accrediting higher education institutions on a five-yearly cycle. AUQA also audits the state, territory and Commonwealth higher education accreditation authorities responsible for approving new and overseas universities and higher education courses offered by other providers.

From 2006, non-self-accrediting higher education institutions which have been approved as higher education providers by the Commonwealth (to allow their students to access FEE-HELP) have also been required to undergo periodic quality audit. AUQA is the only approved quality audit body for these institutions at present, pending passage of legislation which will allow the Commonwealth to designate additional bodies to perform this role such as state and territory government accreditation authorities.

All AUQA audit reports are publicly available and published on the AUQA website ([www.auqa.edu.au](http://www.auqa.edu.au)). The audit may make recommendations and it is the responsibility of the governing body of the institution concerned or, in the case of state and territory accreditation authorities, of the relevant department and minister to take action in response to audit reports. Failure to respond appropriately to reports could lead to funding sanctions by the Commonwealth or regulatory action by the relevant state or territory government. The Commonwealth minister can require a higher education provider to comply with a recommendation by AUQA as part of the quality requirements of the *Higher Education Support Act 2003*.

The first cycle of audits of self-accrediting institutions and accreditation agencies was conducted throughout 2001 to 2007. For this cycle, AUQA scrutinised the claims of institutions against their own missions and objectives to investigate the extent to which they were achieving these objectives. The audits assessed the adequacy of the institution's quality assurance arrangements in the key areas of teaching and learning, research and management

and its success in maintaining standards consistent with university education in Australia. Audits covered both the onshore and offshore operations of institutions. The audits made use of panels of experts with substantial experience in higher education. The process included a critical self-assessment and a site visit.

The second cycle audits will be conducted from 2008–2013. This cycle will more explicitly address performance, standards and outcomes of the activities of Australian higher education institutions.

## Challenges in assuring the quality of Australian higher education

Commentators have consistently pointed to the lack of a mechanism in Australia's quality assurance framework to convincingly demonstrate the quality of our degrees. Nevertheless, AUQA's first cycle of audits identified a number of areas where individual universities needed to do more to manage the standards of their courses. But criticisms that the AUQA approach to quality assurance is too focussed on process to the detriment of standards have continued (Slattery, Moodie, Massaro, Chubb, all 2008).

In 2006, AUQA commissioned an independent review of its activities. While the review panel found that its fitness-for-purpose model and peer review approach had been successful, the ministerial council agreed to revise AUQA's objectives to include an explicit reference to quality improvement, and required that audits address the standards being achieved by institutions. In response, AUQA developed a new framework for the 2008–2013 cycle of audits to allow consideration of standards through investigation of benchmarking activities. This will require institutions to demonstrate during the audit that there is a process in place to compare standards with like institutions—national and international. AUQA's *Framework on Standards, Evidence and Outcomes* (AUQA 2007) will assist institutions and auditors in framing and interpreting the evidence relative to the various findings and claims in the institution's performance portfolio.

Fitness-for-purpose will remain a central structuring principle for the second cycle audits. However, AUQA will also consider how institutions are adhering to other 'external reference points', including the *National Protocols for Higher Education Approval Processes*, the Australian Qualifications Framework, various codes and relevant legislation. In addition, AUQA will measure the standards an institution is actually achieving.

While AUQA's second cycle of audits will have a greater focus on outcomes and standards, questions persist about which standards will be used for second cycle audits and how they will be measured, the way in which institutions will be audited for these standards and whether the reports from the second round of audits will provide any greater public assurance that our higher education institutions are meeting a minimum set of internationally comparable standards.

Addressing academic standards is difficult territory. The United Kingdom's Quality Assurance Agency (QAA) appears to have progressed further than Australia in this area at this time, and its processes have a greater focus on academic standards than occurred in the AUQA first cycle audits. Through use of codes of practice and subject benchmarks it looks for evidence that institutions have considered such external reference points and used them where relevant.

Under the Bologna process 46 European countries have committed to reform their higher education systems to increase consistency and portability of qualifications between countries. The aims of the 1999 Bologna Declaration are to create an integrated European higher

education area to facilitate the speedy entrance of educated professionals into the job market through shortened degrees; enhance cross-border mobility of students, teachers, researchers and job seekers; and increase the competitiveness of European higher education internationally. This development has created concerns within Australia about our higher education qualifications in terms of:

- their comparability with European and United States degrees, especially the continued existence of so many three-year qualifications with a fourth honours year in contrast to the prevailing degree patterns in the United Kingdom and United States; and
- the varying lengths and levels of masters degrees.

In addition, it would appear trends in length and internal balance within qualifications offered by Australian higher education providers suggest that insufficient regard is being paid to the Australian Qualifications Framework in some cases, and raise issues about the importance assigned to it by the sector. In recent years a number of institutions have introduced courses leading to the qualification of professional doctorate which have varied significantly in terms of the levels of research required and a number of new masters degree courses have varied significantly in terms of level and nature of coursework and the duration of study.

### Internal governance of public universities

In recent years, there has been a significant focus on the governance of universities with many commentators suggesting that governance arrangements need to be more contemporary. This includes the need for governing bodies to keep pace with rapid changes in the environment in which the modern university operates, such as the growth in controlled commercial entities and changing sources of revenue.

In a recent article in *Company Director*, governance experts outlined the challenges posed by the 'representational board' model where constituencies control specified board seats, and identified university councils as a prime example. The paper articulated common problems inherent in this model, including the potential for a lack of critical skills and experience amongst elected members, tensions between obligations to the company and to their constituencies, confusion between the respective accountabilities of board and management and poor group dynamics as a result of these boards being quite large (Ralph and Cameron 2006).

The previous Commonwealth Government introduced National Governance Protocols in 2004 to address these and other governance issues in universities. The issues paper released by the Joint Committee on Higher Education for the review of the governance protocols under the auspices of the Ministerial Council for Education, Employment, Training and Youth Affairs noted that the protocols "... would appear to have had a significant impact on the operations of universities" (MCEETYA 2007b, p.7). All universities have made changes to the size and composition of their boards, the length of tenure and conditions for appointment of members, and the oversight of controlled entities, as required by the governance protocols.

The paper canvassed whether more could be done to improve the effectiveness of university governance. It canvassed a number of issues in areas such as accountability arrangements, including the fiduciary responsibilities of members of the governing body, the potential for requiring audit committees and sub-committees to be a responsibility of the governing body and encouraging further continuous improvement in governance arrangements (MCEETYA 2007b).

The current Commonwealth Government has since introduced legislation to Parliament to remove the requirement for higher education providers to comply with the National Governance Protocols as a condition of funding. However, it is consulting with Universities Australia and state and territory governments on the potential for a voluntary code of practice to be developed to replace these protocols.

### Questions for discussion

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31. Is it time to reshape tertiary education in Australia and streamline financing and regulatory arrangements? If so, what structural changes would you make and why?
  32. Is the level of regulation in the sector appropriate? If not, why not, and what should be done to reduce the level of regulation?
  33. Does Australia's Quality Assurance Framework need revision? If so, why? What changes would you make?
  34. Are changes required to the Australian Qualifications Framework?
  35. Is there more that could be done to improve university governance? How should this be done?
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# Appendix A: Terms of reference

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The Review of Australian Higher Education will examine and report to the Hon Julia Gillard MP, Deputy Prime Minister and Minister for Education, Employment, Workplace Relations and Social Inclusion, on the future direction of the higher education sector, its fitness for purpose in meeting the needs of the Australian community and economy and the options for ongoing reform.

It will build on the Rudd Government's key higher education initiatives in progress and the Government's overall economic and social policy settings.

It will be led by an expert panel drawing from the tertiary education sector and wider industry. The Review Panel is to be chaired by Emeritus Professor Denise Bradley AC. It will provide its report on priority action by the end of October 2008, and final report by the end of the year.

In particular, the Review Panel will examine the current state of the Australian higher education system against international best practice and assess whether the education system is capable of:

- contributing to the innovation and productivity gains required for long term economic development and growth; and
- ensuring that there is a broad-based tertiary education system producing professionals for both national and local labour market needs.

The Review Panel will advise Government on possible key objectives for higher education in Australia, starting with the themes below, and how these could be achieved through reform of the sector and changes to regulation and funding arrangements.

## **Diverse, high performing institutions with a global focus**

Developing a diverse, globally focused and competitive higher education sector with quality, responsive institutions following clear, distinctive missions to provide higher education opportunities to students throughout Australia.

## **Productivity and participation**

Enhancing the role of the higher education sector in contributing to national productivity, increased participation in the labour market and responding to the needs of industry. This includes the responsiveness of the sector in altering the course mix in response to student and employer demand and an understanding of trends in the economy, demography and the labour markets served by higher education.

## **Effective and efficient investment**

Improving funding arrangements for higher education institutions as they relate to teaching responsibilities, taking into account public and private benefits and contributions to inform the development of funding compacts between the Australian Government and institutions.

## **Underpinning social inclusion through access and opportunity**

Supporting and widening access to higher education, including participation by students from a wide range of backgrounds.

## **Enhanced quality and high standards**

Implementing arrangements to ensure that quality higher education is provided by public and private providers and that this is widely understood and recognised by clients of the higher education sector.

## **A broad tertiary education and training sector**

Establishing the place of higher education in the broader tertiary education sector, especially in building an integrated relationship with vocational education and training.

## **Policy linkages**

The review will collaborate with and take account of the work of the Review of the National Innovation System and Skills Australia. It will also consult with state and territory tertiary education authorities.



# Appendix B: Making a submission

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## *How to make a submission*

Submissions should be addressed to:

Secretariat  
Review of Australian Higher Education  
GPO Box 9880  
Canberra ACT 2601

Or emailed to: [HEReview@deewr.gov.au](mailto:HEReview@deewr.gov.au)

## **The deadline for submissions is 31 July 2008.**

Please note that all submissions will be published on the review website.

The Review Panel will not accept submissions from individuals submitted on a wholly confidential basis, however, submissions may include appended material that is marked as 'confidential' and severable from the covering submission.

The Review Panel will accept confidential submissions from individuals where those individuals can argue credibly that publication might compromise their ability to express a particular view.

Please note that any request made under the *Freedom of Information Act 1982* for access to any material marked confidential will be determined in accordance with that Act.

The review website is at <http://www.dest.gov.au/herereview>

## *Questions for discussion*

### **Chapter 1 Higher education in modern Australia**

1. How adequate is the statement of functions and characteristics of higher education in modern Australia?

### **Section 3.1 Meeting labour market and industry needs**

2. Are there impediments to the higher education sector being able to innovate in the development of courses and programs? What are these impediments and how could they be removed?
3. What are the appropriate mechanisms at the national and local level for ensuring higher education meets national and local needs for high level skills? What is the role of state and territory governments in this area?
4. How adequate are the mechanisms for aligning supply and demand of graduates? How do pricing and labour market signals impact on student choices?
5. Are there particular examples of good practice where you can demonstrate either rapid response to skill shortages or successful initiatives to improve generic skills?

6. How effectively are Australian higher education institutions responding to demographic change, especially in providing lifelong learning to meet the challenge of the ageing population and the need for upgrading of skills and re-training?
7. What is the relevance and applicability of the findings and approaches proposed in the United Kingdom paper, Higher Education at Work, for increasing skills levels in the workforce to Australia?

### **Section 3.2 Opportunities to participate in higher education**

8. Should there be a national approach to improving Indigenous and low SES participation and success in higher education?
9. If you support a national approach to improving Indigenous and low SES participation and success how do you see it being structured, resourced, monitored and evaluated?
10. What institutional initiatives have proved successful in increasing low SES or Indigenous participation and success? (Please provide information about outcomes as well as activities.)
11. What evidence is available from institutions about the impact on individuals or groups of either failure to gain income support or the inadequacy of income support?

### **Section 3.3 The student experience of higher education**

12. How can the quality of the student experience within Australia's higher education institutions be monitored nationally? Is there evidence that declining student:staff ratios have impacted on the quality of the student experience?
13. How can the quality of learning outcomes in Australian higher education be measured more effectively?
14. How do institutions measure the quality of their learning outcomes and how do they know they are nationally and internationally competitive?

### **Section 3.4 Connecting with other education and training sectors**

15. To what extent should vocational education and training and higher education continue to have distinctive missions and how should these missions be defined?
16. Does the movement between the sectors of students with credit need to be improved? If so, in what ways?
17. To what extent should relative provision between the sectors be planned or demand driven. What are the effects of current differences on funding, governance and regulation in limiting planning or influencing choice between the sectors?
18. Can institutions provide examples of good practices which have led to movement between the sectors with high levels of credit and good learning outcomes?

### **Section 3.5 Higher education's role in the national innovation system**

19. By what mechanisms should research activities in Australian universities be supported?
20. On what principles and for what purposes should research activity be concentrated in particular universities or types of universities?
21. Do you believe there is a place in Australia's higher education system for universities that are predominantly 'teaching only' universities? If so, why?

### **Section 3.6 Australia's higher education sector in the international arena**

22. Are there any unintended consequences of the current approach to internationalisation of higher education in Australia?
23. What is an appropriate role for government in assisting the Australian higher education system to internationalise? On what principles should this role rest and what purposes should it serve?
24. Can you provide any examples of good practice in encouraging local students to undertake study in other countries?

### **Section 3.7 Higher education's contribution to Australia's economic, social and cultural capital**

25. How would you define knowledge transfer and community engagement in an Australian context?
26. Do you believe that knowledge transfer and community engagement are legitimate and appropriate roles for contemporary higher education institutions? If so, how do you see this additional role for the higher education sector blending with its traditional roles and are there limits to these additional roles?
27. If you think that knowledge transfer and community engagement are appropriate roles for higher education institutions, how do you believe these functions should be funded?

### **Section 3.8 Resourcing the system**

28. What incentives or unintended consequences are there in the current arrangements for higher education funding?
29. To what extent are the current funding models adequate to secure the future of Australia's higher education sector? If there are better models, what are they?
30. Are the current institutional arrangements for determining relative funding between higher education institutions appropriate? If not, what changes should be considered?

### Section 3.9 Governance and regulation

31. Is it time to reshape tertiary education in Australia and streamline financing and regulatory arrangements? If so, what structural changes would you make and why?
32. Is the level of regulation in the sector appropriate? If not, why not, and what should be done to reduce the level of regulation?
33. Does Australia's Quality Assurance Framework need revision? If so, why? What changes would you make?
34. Are changes required to the Australian Qualifications Framework?
35. Is there more that could be done to improve university governance? How should this be done?

## Appendix C: Glossary and definitions

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**Actual prices**—Actual prices are prices in nominal value. Nominal value is the value of grants expressed in money of the day.

**Attainment**—The OECD definition for educational attainment is: “Educational attainment is expressed by the highest completed level of education, defined according to the International Standard Classification of Education (ISCED)” (OCED 2007b). Attainment in this document, therefore, refers to the completion of a qualification.

**Community engagement**—See ‘Third stream activities’.

**Commonwealth supported place**—A higher education place which is funded by the Commonwealth Government through the Commonwealth Grant Scheme. Previously called a ‘HECS’ place.

**Equivalent full-time student load (EFTSL)**—One EFTSL is a measure of the study load, for a year, of a student undertaking a course of study on a full-time basis.

**Full time equivalent (FTE)**—A member of staff who at a reference date has a full-time work contract in respect of their current duties, has an FTE of 1.00. The FTE for a member of staff who at a particular reference date has a fractional full-time work contract in respect of their current duties (i.e. is working a fraction of a normal full-time working week, will be less than 1.0).

**Globalisation**—The OECD definition for globalisation is: “The process of globalisation can be defined as ‘the widening, deepening and speeding up of worldwide interconnectedness’ (Held et al., 1999) and the emergence over the last three decades of ‘complex electronically networked relations between institutions and between people, creating an open information environment and synchronous communications in real time’ (Marginson, 2004)” (OECD 2008, vol. 3, p. 53).

**Higher Education Contribution Scheme (HECS)**—The system introduced in 1989 which required higher education students in places subsidised by the Commonwealth Government to make a contribution to the cost of their course, underpinned by income-contingent loans. ‘HECS’ places are now called Commonwealth supported places for which there is a ‘student contribution amount’ with loans and discounts for up front payment under HECS-HELP.

**Higher education institutions**—Refers to all institutions offering accredited higher education qualifications. This includes both public and private and self-accrediting and non-self-accrediting institutions.

**Higher Education Loan Program (HELP)**—A program to help eligible students pay their student contributions (HECS-HELP), tuition fees (FEE-HELP) and overseas study expenses (OS-HELP) through loans that are repaid through the taxation system (through either compulsory or voluntary repayments). HECS-HELP also covers the discount that Commonwealth supported students receive if they pay student contributions up front. There are bonuses for voluntary repayments.

**Income-contingent loan**—A loan for which repayments are not required unless a person's income reaches a certain threshold and with repayments that vary according to income above that threshold. HELP loans (and previously HECS and loans under other schemes that have been subsumed by HELP) have income contingent repayment arrangements.

**Internationalisation**—The OECD definition for internationalisation is: "... the process of internationalisation relates to 'the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of tertiary education' (Knight, 2003)." (OECD 2008, vol. 3, p. 53).

**Knowledge transfer**—See 'Third stream activities'.

**Low socio-economic status (SES) students**—The Index of Education and Occupation from the latest available Australian Bureau of Statistics (ABS) Socio-Economic Indexes for Areas (SEIFA) is used. The Index value for each postcode is used to identify a postcode nationally as low (bottom 25 per cent of the population), medium (middle 50 per cent) or high (top 25 per cent). The number of students from a low SES background is then calculated by summing the number of students whose home postcodes as reported by university enrolment data are low SES postcodes.

**Productivity**—Productivity is defined as the ratio of output to input for a specific production situation. Productivity changes can be caused by either movements in the 'best practice' production technology, or a change in the level of efficiency.

**Real terms (Constant prices)**—Nominal value is the value of the grants expressed in the money of the day, that is, the actual amount of cash received by the universities each year. Real value is the nominal value adjusted for the effects of inflation so as to show the change in the purchasing power of the funding received. Unless otherwise stated in this paper the index used to calculate constant prices is the Consumer Price Index (CPI) Weighted Average of Eight Capital Cities [Australian Bureau of Statistics Cat No. 6401.0] and the base year is 2006.

**Sector**—Categories of educational activity which are defined in terms of course type and award. Sectors within tertiary education are the higher education and the vocational education and training sector.

**TAFE institution**—A Technical and Further Education (TAFE) institution is a registered training organisation owned and operated by the state government. TAFE institutes are responsible for delivering the majority of publicly funded training.

**Tertiary education**—In Australia tertiary education is generally understood to be post-secondary education. The OECD defines tertiary education as programmes at International Standard Classification of Education (ISCED) levels 5B, 5A and 6. Programmes below ISCED level 5B are not considered tertiary level (OECD 2008).

**Third stream activities**—Activities concerned with the generation, use, application and exploitation of knowledge and other university capabilities outside academic environments. In other words, the third stream is about the interactions between universities and the rest of society. Third stream activities are also discussed under the terms 'community engagement' and 'knowledge transfer'.

**University**—An Australian university is an institution which meets nationally agreed criteria and is established or recognised as a university under state, territory or Commonwealth legislation (*National Protocols for Higher Education Approval Processes*, Section 1.13).

**Vocational education and training (VET)**—Vocational education and training provides skills and knowledge for work through a national system of public and private training providers. A wide range of qualifications are available, including certificates, diplomas and some graduate courses.



# Appendix D: Methodology

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## Calculation of constant dollars

Unless otherwise stated, all amounts in 'constant dollars' have been calculated in 2006 dollars using the Consumer Price Index, Weighted Average of Eight Capital Cities (CPI). The use of the CPI does not constitute a view on the appropriate index for measuring the real value of grants for educational purposes.

## Calculation of Commonwealth funding per student place

Changes to Commonwealth funding programs and collection of higher education data make it difficult to calculate comparable figures for the amount of Commonwealth funding per student place over an extended period of time.

The amounts provided in this paper are based on an estimate of Commonwealth Government funding to higher education institutions each year for costs associated with supporting subsidised undergraduate and post graduate students (including research students) and an estimate of the number of student places occupied by these students. The majority of subsidised students are in Commonwealth supported places (or previously HECS places) or, for higher degree research students from 2001, in Research Training Scheme places.

In general, research funding has been excluded except if granted for the purpose of research training. Prior to 2001, the Commonwealth included funding for research and research training in operating grants to universities. Estimates of the funding for research in the operating grant, as stated in Commonwealth Budget papers, have been used to remove research funding, except when the funding was for research training. The amount excluded from the calculation in this category in 2006 is around \$700 million.

Some Commonwealth programs for research cannot easily be disaggregated into research training and research components and have been excluded. Similarly, Commonwealth programs for higher education that fund organisations other than higher education institutions have also been excluded, even if higher education institutions receive some funding under the program. The effect is that the total funding is probably lower than would otherwise be the case but not significantly given the scale of the excluded programs. The amount excluded from the calculation in this category in 2006 is around \$35 million.

Commonwealth funding for Australian Postgraduate Awards and other grant scholarships has also been excluded.

Student places have been included in the calculation when the Commonwealth provides funding. All places offered under a particular program are included even if Commonwealth funding was limited to a set number of places. Places are included even if the Commonwealth does not provide the majority of the funding for the place. Student places occupied by overseas students are included if the Commonwealth provided funding (for example, overseas students subject to the overseas student charge which was funded through operating grants until 2000. This excludes all full fee-paying overseas students).

# References

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Access Economics 2005, *The Economic Benefit of Increased Participation in Education and Training*, Dusseldorp Skills Forum, Glebe.

Access Economics 2007, *Higher Education: Cost Relativities and Pipeline: Final*, Report by Access Economics for the Department of Education, Science and Training, 6 March, [http://www.dest.gov.au/NR/rdonlyres/5F4324AF-2E68-4960-B8D9-AE2103DD7C63/16862/AttachmentA\\_AccessEconomicsReport.pdf](http://www.dest.gov.au/NR/rdonlyres/5F4324AF-2E68-4960-B8D9-AE2103DD7C63/16862/AttachmentA_AccessEconomicsReport.pdf).

Adams, T 2007, The Development of International Education in Australia: A Framework for the Future, *Journal of Studies in International Education*, Sep 2007; vol. 11: pp. 410 - 420.

Ai Group 2006, *Ai Group New National Skills Fund Initiative*, Press Release from the Australian Industry Group, 18 September 2006, viewed 30 April 2008, <http://www.aigroup.asn.au/scripts/cgiip.exe/ccms.r?pageid=3125>.

Anderson, D, Johnson, R & Saha L 2002, *Changes in Academic Work – Implications for Universities of the Changing Age Distribution and Work Roles of Academic Staff*, Department of Education, Science and Training, Canberra, [http://www.dest.gov.au/archive/highered/otherpub/academic\\_work.pdf](http://www.dest.gov.au/archive/highered/otherpub/academic_work.pdf).

Australian Bureau of Statistics (ABS) 1995, *Research and Experimental Development, Higher Education Organisations, Australia*, 1992 Cat No. 8111.0, 5 April, Commonwealth of Australia, Canberra.

Australian Bureau of Statistics (ABS) 2006a, *Population Projections Australia*, Cat No. 3222.0, Commonwealth of Australia, Canberra.

Australian Bureau of Statistics (ABS) 2006b, *Research and Experimental Development, Higher Education Organisations, Australia, 2004 (Reissue)*, Cat No. 8111.0, 27 July, Commonwealth of Australia, Canberra.

Australian Bureau of Statistics (ABS) 2007a, *Survey of Education and Work*, Cat No. 6227.0, Commonwealth of Australia, Canberra.

Australian Bureau of Statistics (ABS) 2007b, *Research and Experimental Development, Business, Australia*, 2005-06, Cat No. 8104.0, Commonwealth of Australia, Canberra.

Australian Bureau of Statistics (ABS) 2007c, *Schools, Australia, 2007*, Cat No. 4221.0, Commonwealth of Australia, Canberra.

Australian Council of Social Services (ACOSS) 2005, *Giving Australia: Research on Philanthropy in Australia*, Summary of Findings, October, Commonwealth of Australia, Department of Family and Community Services, Canberra.

Australian Education International (AEI), *International Student Data*, <http://aei.dest.gov.au/AEI/MIP/Statistics/StudentEnrolmentAndVisaStatistics/Default.htm>

Australian Education International (AEI) 2008, *2007 Follow-up International Student Survey Higher Education*, Commonwealth of Australia, Department of Education, Employment and Workplace Relations, Canberra.

Australian Government, 2007, *Intergenerational Report 2007*, Commonwealth of Australia, Canberra.

Australian Universities Community Engagement Alliance (AUCEA) 2006, *Position Paper: Universities and Community Engagement*, July 2006, viewed 31 May 2008, [http://www.universityworldnews.com/filemgmt\\_data/files/AUCEA%20Position%20Paper.pdf](http://www.universityworldnews.com/filemgmt_data/files/AUCEA%20Position%20Paper.pdf).

Australian Universities Quality Agency (AUQA) 2007, *AUQA Audit Manual Version 4.1*, AUQA, Melbourne.

Australian University Sport and Australasian Campus Unions Managers' Association 2008, *VSU Impact Study: A study on the impact of voluntary student unionism legislation at universities across Australia*, Australian University Sport, Milton, <http://www.acuma.org.au/DisplayPage.asp?pageid=4992>.

Australian Vice-Chancellors' Committee 2005, Submission 9 to the Regulatory Taskforce: *Reporting and Regulatory Burden on Universities*, 13 November 2005, [http://www.regulationtaskforce.gov.au/\\_data/assets/pdf\\_file/0011/69806/sub009.pdf](http://www.regulationtaskforce.gov.au/_data/assets/pdf_file/0011/69806/sub009.pdf).

Australian Vice-Chancellors Committee 2006, *AVCC Statement on Knowledge Transfer*, October, Australian Vice-Chancellors Committee, Canberra, <http://www.universitiesaustralia.edu.au/documents/publications/policy/statements/Knowledge-Transfer-Oct2006.pdf>.

Banks, M, Olsen, A & Pearce, D 2007, *Global Student Mobility: An Australian Perspective Five Years On*, IDP Education Pty Ltd., Melbourne.

Bateman & Giles Pty Ltd 2006, *Review of the Australian Universities Quality Agency*, Final Report, prepared for AUQA on behalf of the AUQA Review Panel, May 2006, AUQA, Melbourne, [http://www.auqa.edu.au/aboutauqa/externalreview/review\\_report.pdf](http://www.auqa.edu.au/aboutauqa/externalreview/review_report.pdf).

Birrell, B, Healy, E & Smith, TF 2008, 'Labor's education and training strategy: Building on False Assumptions?', *People and Place*, vol.16, no. 1, 2008, pp. 40 – 54, Monash University, Melbourne.

Cardak, BA & Ryan, C 2006, *Why are individuals from poor backgrounds under-represented at university?* Discussion Paper No. A06.04, Centre for Economic Policy Research Discussion Papers, Australian National University, Canberra, <http://econrsss.anu.edu.au/Staff/ryan/pdf/La%20Trobe%20DP%20A06-04.pdf>.

Chapman, B 1992, *AUSTUDY, Towards a More Flexible Approach : An Options Paper*, report commissioned by the Department of Employment, Education and Training, Commonwealth of Australia, Canberra.

Chapman, B & Ryan, C 2003, *The access implications of income contingent charges for higher education: lessons from Australia*. Discussion Paper No. 463, April, Centre for Economic Policy Research Discussion Papers, Australian National University, Canberra. <http://econrsss.anu.edu.au/pdf/DP463.pdf>.

Chubb, I 2008, *Higher education: it's time.... [to change the policy framework]*, address to the Australian and New Zealand School of Government, 20 February 2008, viewed 31 May 2008, [http://info.anu.edu.au/ovc/Media/Media\\_Releases/2008/Chubb%20ANZSOG%20speech.pdf](http://info.anu.edu.au/ovc/Media/Media_Releases/2008/Chubb%20ANZSOG%20speech.pdf).

City of Melbourne 2007, *Melbourne Vice-Chancellors' Forum Melbourne Australia's knowledge capital: The contributions of Melbourne's universities to the City's economic, cultural and community development*, May 2007, Howard Partners Pty Ltd, Deakin, [http://www.melbourne.vic.gov.au/rsrc/Publications/KnowledgeCapital/3030-Uni\\_study\\_screen.pdf](http://www.melbourne.vic.gov.au/rsrc/Publications/KnowledgeCapital/3030-Uni_study_screen.pdf).

Coates, H, Goedegebuure, L, van der Lee, J & Meek, L 2008, *The Academic Profession in 2007: A First Analysis of Survey Results*, University of New England, Armidale, <http://www.une.edu.au/chemp/resources/project/cap/cap080311analysis.pdf>.

Curtin University of Technology 2005, *Annual Report 2005*, Perth, <http://annualreport.curtin.edu.au/2005/curtinannualreport05.pdf>.

Department of Education, Employment and Workplace Relations (DEEWR), *Higher Education Statistics Collections*, [http://www.dest.gov.au/sectors/higher\\_education/publications\\_resources/statistics/publications\\_higher\\_education\\_statistics\\_collections.htm](http://www.dest.gov.au/sectors/higher_education/publications_resources/statistics/publications_higher_education_statistics_collections.htm).

Department of Education, Employment and Workplace Relations (DEEWR) 2008, *Recognition of Higher Education Qualifications across the Brisbane Communiqué Region - Scoping study and report*, Commonwealth of Australia, Canberra, <http://www.brisbanecommunique.dest.gov.au/NR/rdonlyres/780F8386-30C8-4878-8EF2-2903120174A2/21157/BrisbaneCommunique%c3%a9RecognitionReportFinal.pdf>.

Department of Employment, Education and Training (DEET) 1990, *A Fair Chance for All. National and Institutional Planning for Equity in Higher Education*, A Discussion Paper, February 1990, National Board of Employment, Education and Training, Canberra.

Department of Employment, Education and Training (DEET) 1993, *National Report on Australia's Higher Education Sector*, May 1993, Commonwealth of Australia, Canberra.

Department of Education, Science and Training (DEST) 2004, *Issues Paper: Rationalising Responsibility for Higher Education in Australia*, December, Commonwealth of Australia, Canberra, [http://www.dest.gov.au/NR/rdonlyres/C593AB29-F984-4FD4-8CDA-7D6F0965C01C/4046/rationalising\\_responsibilities.pdf](http://www.dest.gov.au/NR/rdonlyres/C593AB29-F984-4FD4-8CDA-7D6F0965C01C/4046/rationalising_responsibilities.pdf).

Department of Education, Science and Training (DEST) 2005a, *Australian Science and Innovation System, A Statistical Snapshot 2005*, December, Commonwealth of Australia, Canberra.

Department of Education, Science and Training (DEST) 2005b, *Building Better Foundations for Higher Education in Australia: A discussion about re-aligning Commonwealth-State responsibilities*, March, Commonwealth of Australia, Canberra, [http://www.dest.gov.au/NR/rdonlyres/B365C269-534E-4790-BA64-67D7FC728603/4047/ResponsibilitiesPaper\\_compiled\\_onlineversion.pdf](http://www.dest.gov.au/NR/rdonlyres/B365C269-534E-4790-BA64-67D7FC728603/4047/ResponsibilitiesPaper_compiled_onlineversion.pdf).

Department of Education, Science and Training (DEST) 2007a, *Finance 2006: Financial Reports of Higher Education Providers*, September, Commonwealth of Australia, Canberra, [http://www.dest.gov.au/sectors/higher\\_education/publications\\_resources/profiles/finance\\_2006\\_stats.htm](http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/finance_2006_stats.htm).

Department of Education, Science and Training (DEST) 2007b, *Students 2006 Full Year Selected Higher Education Statistics*, September, Commonwealth of Australia, Canberra, [http://www.dest.gov.au/sectors/higher\\_education/publications\\_resources/profiles/students\\_2006\\_selected\\_higher\\_education\\_statistics.htm#publication](http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/students_2006_selected_higher_education_statistics.htm#publication).

Department of Education, Science and Training (DEST) 2007c, *OECD Thematic Review – Education Country Report Australia*, April, Commonwealth of Australia, Canberra.

Department of Innovation, Industry and Regional Development 2008, *Securing our future economic prosperity: Discussion Paper on Skills Reform*, April, Victorian Government, Melbourne.

Department for Innovation, Universities and Skills (DIUS) 2008a, *Higher Education at Work, High Skills: High Value*, United Kingdom Department for Innovation, Universities and Skills, Sheffield, [http://www.dius.gov.uk/consultations/documents/Higher\\_Education\\_at\\_Work.pdf](http://www.dius.gov.uk/consultations/documents/Higher_Education_at_Work.pdf).

Department of Innovation, Universities and Skills (DIUS) 2008b, *A new ‘University Challenge’: Unlocking the Talent*, March, <http://www.dius.gov.uk/policy/documents/university-challenge.pdf>.

Foskett, N, Roberts, D & Maringe, F 2006, *Changing Fee Regimes and their Impact on Student Attitudes to Higher Education*, Report of a Higher Education Academy Funded Research Project 2005-2006, University of Southampton, The Knowledge Partnership, [http://www.heacademy.ac.uk/assets/York/documents/ourwork/research/changing\\_fees\\_regimes\\_full\\_report.pdf](http://www.heacademy.ac.uk/assets/York/documents/ourwork/research/changing_fees_regimes_full_report.pdf).

Gardner, M 2008, *A Top 10 University System for Australia*, Australian Technology Network Chair’s speech to 2008 AFR Higher Education Conference, 13 March, viewed on 30 April 2008, <http://www.atn.edu.au/newsroom/Docs/A%20Top%2010%20University%20System%20for%20Australia%20-%20Speech.pdf>.

Graduate Careers Australia (GCA) 2007a, *Graduate Destinations 2006 – the Report of the Graduate Destination Survey*, Graduate Careers Australia, Melbourne.

Graduate Careers Australia (GCA) 2007b, *Uni Graduates: Work, Salaries, Study and Course Satisfaction*, GradFiles, Schools Edition, December, Graduate Careers Australia, Melbourne.

Group of Eight 2007, *Seizing the opportunities: Designing new policy architecture for higher education and university research*, A Group of Eight Policy Discussion Paper, 6 June, Canberra.

Harman, E 2005, *What possible new types of institutions could be recognised?*, Paper presented to Session 2, National Protocols Workshop, 17 August.

Healy, G 2008, “Age outruns recruitment”, *The Australian*, 7 May.

Higher Education Funding Council for England (HEFCE) 2005, *Young Participation in higher education*, January 2005/03, HEFCE, London, [http://www.hefce.ac.uk/pubs/hefce/2005/05\\_03/05\\_03.pdf](http://www.hefce.ac.uk/pubs/hefce/2005/05_03/05_03.pdf).

HM Treasury, Department for Education and Skills and Department of Trade and Industry 2004, *Science & innovation investment framework 2004 – 2014*, July, HM Treasury, London, [http://www.hm-treasury.gov.uk/spending\\_review/spend\\_sr04/associated\\_documents/spending\\_sr04\\_science.cfm](http://www.hm-treasury.gov.uk/spending_review/spend_sr04/associated_documents/spending_sr04_science.cfm).



- Holland, BA 2005, *Scholarship and Mission in the 21st Century University: The Role of Engagement*, Indiana University-Purdue University Indianapolis, <http://www.auqa.edu.au/auqf/2005/program/papers/holland.pdf>.
- Hugo, G 2008, *Demographics: the need for renewal*, conference paper presented to the Council for the Humanities Arts and Social Sciences (CHASS), PhD in the Humanities, Arts and Social Sciences, 7 March, [http://www.chass.org.au/events/2008/phd/PhD\\_WorkshopFullProgram.pdf](http://www.chass.org.au/events/2008/phd/PhD_WorkshopFullProgram.pdf).
- James, R 2002, *Socioeconomic Background and Higher Education Participation: An analysis of school students' aspirations and expectation*, Evaluations and Investigations Programme, Higher Education Group, Commonwealth of Australia, Canberra.
- James, R, Baldwin, G & McInnis, C 1999, *Which University? The factors influencing the choices of prospective undergraduates*, August, Centre for the Study of Higher Education, the University of Melbourne, report for the Department of Education Training and Youth Affairs, Canberra. <http://www.dest.gov.au/archive/highered/eippubs/99-3/whichuni.pdf>.
- James, R, Bexley, E & Maxwell, L 2008, *Participation and equity. A review of the participation in higher education of people from low socioeconomic backgrounds and Indigenous people*, March, Universities Australia, Canberra.
- James, R, McInnis, C & Devlin, M 2002a, *Submission to the Higher Education Review 2002 - Options for a national process to articulate and monitor academic standards across Australian universities*, Centre for the Study of Higher Education, University of Melbourne, Melbourne, [http://www.cshe.unimelb.edu.au/assessinglearning/docs/Crossroads\\_submission.pdf](http://www.cshe.unimelb.edu.au/assessinglearning/docs/Crossroads_submission.pdf).
- James, R, McInnis, C & Devlin, M 2002b, *Assessing Learning in Australian Universities: ideas, strategies and resources for quality in student assessment*, Centre for the Study of Higher Education, University of Melbourne, Melbourne, <http://www.cshe.unimelb.edu.au/assessinglearning/06/index.html>.
- Karmel, P 2000, *Reforming Higher Education*, Occasional Paper Series 2/2000, Academy of the Social Sciences in Australia, Canberra, <http://www.assa.edu.au/Publications/op/op22000.pdf>.
- Krause, KL, Hartley, R, James, R & McInnis, C 2005, *The First Year Experience in Australian Universities: Findings from a Decade of National Studies*, Centre for the Study of Higher Education, University of Melbourne, Melbourne, <http://www.cshe.unimelb.edu.au/pdfs/FYEReport05KLK.pdf>.
- Macfarlane, IJ 2004, *Geography, Resources or Institutions?*, Talk to 'The Bottom Line' Luncheon, 25 August, Melbourne, [http://www.rba.gov.au/PublicationsAndResearch/Bulletin/bu\\_sep04/bu\\_0904\\_1.pdf](http://www.rba.gov.au/PublicationsAndResearch/Bulletin/bu_sep04/bu_0904_1.pdf).
- Marginson, S 2007, *The global positioning of Australian higher education: where to from here?* The University of Melbourne Faculty of Education Dean's Lecture Series, 16 October.
- Marginson, S 2008, Preliminary submission to the Australian Government Review of Australian Higher Education, 21 April, [http://www.cshe.unimelb.edu.au/people/staff\\_pages/Marginson/Submission%20to%20HEd%20Review%20210408.pdf](http://www.cshe.unimelb.edu.au/people/staff_pages/Marginson/Submission%20to%20HEd%20Review%20210408.pdf).

Marshall, N 1988, *Bureaucratic politics and the Demise of the Commonwealth Tertiary Education Commission*, The Australian National University Graduate Program in Public Policy, Discussion Paper No. 8, March, The Australian National University, Canberra.

Massaro, V 2008, "Review provides a difficult test for Government", *Australian Financial Review*, 31 March.

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) 2007a, *National Protocols for Higher Education Approval Processes*, October, MCEETYA, Carlton South,  
[http://www.mceetya.edu.au/verve/resources/NationalProtocolsOct2007\\_Complete.pdf](http://www.mceetya.edu.au/verve/resources/NationalProtocolsOct2007_Complete.pdf).

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) 2007b, *Review of the National Governance Protocols Issues Paper*, May, MCEETYA, Carlton South,  
[http://www.mceetya.edu.au/verve/resources/Review\\_of\\_NGPs\\_-\\_issues\\_paper\\_-\\_final\\_paper.pdf](http://www.mceetya.edu.au/verve/resources/Review_of_NGPs_-_issues_paper_-_final_paper.pdf).

Molas-Gallart, J, Salter, A, Patel, P, Scott, A & Duran, X 2002, *Measuring Third Stream Activities: Final Report to the Russell Group of Universities*, Science and Technology Policy Research Unit, University of Sussex, April,  
[http://www.sussex.ac.uk/spru/documents/final\\_russell\\_report.pdf](http://www.sussex.ac.uk/spru/documents/final_russell_report.pdf).

Moodie, G 2008, AUQA's role, Gavin Moodie Blog March 20, viewed 28 May 2008,  
<http://blogs.theaustralian.news.com.au/gavinmoodie/index.php/theaustralian/comment>.

Murray, D 2008, *BIHECC Advice on Philanthropy in the Higher Education Sector*, letter to the Minister for Education, the Hon. Julia Gillard, MP, 19 March, Business Industry and Higher Education Collaboration Council, Canberra,  
<http://www.dest.gov.au/NR/rdonlyres/202234B6-69DD-4D3A-81ED-9B311028C68F/21549/BIHECCAdviceonPhilanthropy.pdf>.

National Centre for Vocational Education Research (NCVER) 2007a, *Students and courses 2006*, July 11, Adelaide, viewed 30 May 2008,  
<http://www.ncver.edu.au/publications/1792.html>.

National Centre for Vocational Education Research (NCVER) 2007b, *Australian vocational education and training statistics, Financial information 2006*, Australian Government, Adelaide.

Nelson, B 2002, *Higher Education at the Crossroads: An overview paper*, April, Commonwealth of Australia, Canberra.

Organisation for Economic Co-operation and Development (OECD) 2004, *Education at a Glance 2004*, OECD, Paris.

Organisation for Economic Co-operation and Development (OECD) 2007a, *Understanding the Social Outcomes of Learning*, OECD, Paris.

Organisation for Economic Co-operation and Development (OECD) 2007b, *Education at a Glance 2007*, OECD, Paris.

Organisation for Economic Co-operation and Development (OECD) 2007c, *Higher Education and Regions: Globally competitive, locally engaged*, OECD, Paris.



Organisation for Economic Co-operation and Development (OECD) 2008, *Tertiary Education for the Knowledge Society, OECD Thematic Review of Tertiary Education: Synthesis Report* (April 2008), viewed 25 May, <http://oecd-conference-teks.iscte.pt/documents.html>.

PhillipsKPA Pty Ltd 2006a, *Giving credit where credit is due*, A report to the Department of Education, Science and Training, June, Commonwealth of Australia, Canberra.

PhillipsKPA Pty Ltd 2006b, *Knowledge Transfer and Australian Universities and Publicly Funded Research Agencies*, A report to the Department of Education, Science and Training, March, Commonwealth of Australia, Canberra.

PhillipsKPA 2006c, *University Reporting Requirements*, Report to the Australian Vice-Chancellors Committee, Final Report (revised), May, <http://www.universitiesaustralia.edu.au/documents/publications/policy/submissions/ReportingRequirements14Feb06.pdf>.

Precision Consultancy 2007, *Graduate Employability Skills*, Report prepared for the Business, Industry and Higher Education Collaboration Council, Precision Consultancy, Melbourne, <http://www.dest.gov.au/NR/rdonlyres/E58EFDBE-BA83-430E-A541-2E91BCB59DF1/20214/GraduateEmployabilitySkillsFINALREPORT1.pdf>.

Productivity Commission 2002, *University Resourcing: Australia in an International Context*, Commonwealth of Australia, Canberra.

Productivity Commission 2007, *Public Support for Science and Innovation*, Commonwealth of Australia, Canberra.

Ralph, L & Cameron, A 2006, 'The challenge of the 'representational board'', in *Company Director*, June 2006 edition, <http://cameronralph.com.au/Downloaded%20documents/The%20Challenge%20of%20the%20Representative%20Board.pdf>.

Regulation Taskforce 2005, *Taskforce Issues Paper*, 25 October, Commonwealth of Australia, Canberra, [http://www.regulationtaskforce.gov.au/data/assets/pdf\\_file/0004/69727/issuespaper.pdf](http://www.regulationtaskforce.gov.au/data/assets/pdf_file/0004/69727/issuespaper.pdf).

Scott, G & Alexander, S 2000, *Online Learning: Rhetoric or reality?*, viewed 30 April 2008, [www.onlineopinion.com.au/print.asp?article=1004](http://www.onlineopinion.com.au/print.asp?article=1004).

Shah, C & Burke, G 2006, *Qualifications and the future labour market in Australia*, Report prepared for the National Training Reform Taskforce. Monash University – ACER, Centre for the Economics of Education and Training, Melbourne, <http://www.eduweb.vic.gov.au/edulibrary/public/voced/research-CEET-quals-labour-market.pdf>.

Slattery, L 2008, Mediocre seems not to matter, *The Australian*, 6 February.

Stuart, J 2000, *Achieving Institutional and Staff Renewal: Retrenchment, Retirement, Recruitment, Reward and Retention*, University of Western Australia, Perth.

The Allen Consulting Group 2007, *Philanthropy in Australia's higher education system*, Final Report, May, Report to Universities Australia on behalf of the Business, Industry and Higher Education Collaboration Council, Universities Australia, Canberra.

Universities Australia 2007a, *Student to Teacher Ratio 1990-2005* (updated August 2007), viewed 25 May 2008, <http://www.universitiesaustralia.edu.au/documents/publications/stats/Student-teacher-ratio-1990-2007.pdf>.

Universities Australia 2007b, *Australian University Student Finances 2006: Final report of a national survey of students in public universities*, Universities Australia, Canberra, August, <http://www.universitiesaustralia.edu.au/documents/publications/policy/survey/AUSF-Final-Report-2006.pdf>.

Universities Australia 2008a, *Report on Applications, Offers and Acceptances of Undergraduate University Places*, Universities Australia, Canberra, <http://www.universitiesaustralia.edu.au/documents/publications/stats/unmet/Report-on-undergraduate-demand-2008.pdf>.

Universities Australia 2008b, *A National Internship Scheme: enhancing skills and work-readiness of Australian university graduates*, Position Paper No. 3/08, Universities Australia, Canberra, <http://www.universitiesaustralia.edu.au/documents/publications/discussion/National-Internship-scheme-May08.pdf>.

Universities Australia 2008c, *Submission to the Review of the National Innovation System*, viewed 30 May 2008, [http://www.innovation.gov.au/innovationreview/Documents/206-Universities\\_Australia.pdf](http://www.innovation.gov.au/innovationreview/Documents/206-Universities_Australia.pdf).

West, R 1998, *Learning for Life: Final Report. Review of higher education financing and policy*, April, Department of Education, Training and Youth Affairs, Canberra.

Young, I 2008, Building Australian research, *Campus Review*, 8 April.

