OECD THEMATIC REVIEW OF TERTIARY EDUCATION

COUNTRY BACKGROUND REPORT

AUSTRALIA

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This report was prepared for the Department of Education, Science and Training (DEST) as an input to the OECD Thematic Review of Tertiary Education. It was prepared in response to guidelines provided by the OECD to all participating countries. The guidelines encouraged the canvassing of a breadth of views and priorities on tertiary education issues. The opinions expressed are not necessarily those of DEST, the OECD or its Member countries.

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LIST OF ACRONYMS AND ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACER	Australian Council for Educational Research
ACT	Australian Capital Territory
AEI	Australian Education International
AIMS	Australian Institute of Marine Science
ANSTO	Australian Nuclear Science and Technology Organisation
ANTA	Australian National Training Authority
AQF	Australian Qualifications Framework
ARC	Australian Research Council
ATN	Australian Technology Network
AUQA	Australian Universities Quality Agency
AVCC	Australian Vice-Chancellors' Committee
BAA	*Backing Australia's Ability*
BAF	*Our Universities: Backing Australia's Future*
BCA	Business Council of Australia
BERD	Business Expenditure on Research and Development
B-HERT	Business and Higher Education Round Table
BIHECC	Business, Industry and Higher Education Collaboration Council
BOTPLS	Bridging for the Overseas Trained Professionals Loan Scheme
CDP	Capital Development Programme
CASR	Collaboration and Structural Reform Fund
CEQ	Course Experience Questionnaire
CGS	Commonwealth Grant Scheme
CLS	Commonwealth Learning Scholarship
COMET	Commercialising Emerging Technologies
CRC	Co-operative Research Centre
CRICOS	Commonwealth Register of Institutions and Courses for Overseas Students
CSHE	Centre for Studies in Higher Education
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCO	Disability Coordination Officer

DEET	Department of Employment, Education and Training
DEST	Department of Education, Science and Training
DETYA	Department of Education, Training and Youth Affairs
DEWR	Department of Employment and Workplace Relations
DFAT	Department of Foreign Affairs and Trade
DIAC	Department of Immigration and Citizenship
DSP	Disability Support Program
DSTO	Defence Science and Technology Organisation
EAG	Expert Advisory Group
EFTSL	Equivalent Full-Time Student Load
EFTSU	Equivalent Full-Time Student Unit
ESOS	Education Services for Overseas Students
ESP	Equity Support Program
GCA	Graduate Careers Australia (formerly Graduate Careers Council of Australia)
GCCA	Graduate Careers Council of Australia (now Graduate Careers Australia)
GDP	Gross Domestic Product
GDS	Graduate Destination Survey
HDR	Higher Degree by Research
HECS	Higher Education Contribution Scheme
HEEP	Higher Education Equity Program
HEIMS	Higher Education Information Management System
HELP	Higher Education Loan Programme
HERD	Higher Education Expenditure on Research and Development
HESA	Higher Education Support Act 2003
HEWRR	Higher Education Workplace Relations Requirements
IAF	Institution Assessment Framework
ICT	Information and Communications Technology
IGS	Institutional Grants Scheme
IHEAC	Indigenous Higher Education Advisory Council
IP	Intellectual Property
IRU	Innovative Research Universities
ISP	Indigenous Support Programme
IT	Information Technology
ITI	Interstate Transfer Index
JCHE	Joint Committee on Higher Education

LTPF	Learning & Teaching Performance Fund
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
MNRF	Major National Research Facilities
NATSEM	National Centre for Social and Economic Modelling
NBEET	National Board of Employment, Education and Training
NCGP	National Competitive Grants Programme
NCRIS	National Collaborative Research Infrastructure Strategy
NESB	Non-English Speaking Background
NGU	New Generation Universities
NHMRC	National Health and Medical Research Council
NISI	National Industry Skills Initiative
NRP	National Research Priorities
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
OLDPS	Open Learning Deferred Payment Scheme
PELS	Postgraduate Education Loan Scheme
PFRA	Publicly Funded Research Agency
PREQ	Postgraduate Research Experience Questionnaire
Qld	Queensland
R&D	Research and Development
RDLO	Regional Disability Liaison Officer
RIBG	Research Infrastructure Block Grants
RMIT	Royal Melbourne Institute of Technology
RPS	Regional Protection Scheme
RQF	Research Quality Framework
RRTMR	Research and Research Training Management Report
RTO	Registered Training Organisation
RTS	Research Training Scheme
SA	South Australia
SES	Socio-Economic Status
SII	Systemic Infrastructure Initiative
SLE	Student Learning Entitlement
TAFE	Technical and Further Education
Tas	Tasmania

UK	United Kingdom
UMAP	University Mobility in Asia and the Pacific
UNSW	University of New South Wales
USA	United States of America
VET	Vocational Education and Training (previously vocational and technical education [VTE])
Vic	Victoria
WA	Western Australia
WPP	Workplace Productivity Programme

EXECUTIVE SUMMARY

1. This report provides an overview of the Australian higher education system for the purposes of the *OECD Thematic Review of Tertiary Education*. It is a summary of the current higher education system in Australia as well as past, present and future trends. The focus of the report is confined to higher education as it is defined within Australia. Although some qualifications considered to fall within the definition of higher education are offered by the vocational education and training sector, this sector will not be the focus of the study. Higher education forms a relatively discrete system or sector in Australia, although pathways between sectors are encouraged and there are some dual sector institutions. However, higher education is considered to be distinct from the vocational education and training sector and so forms a logical focus for this report. More discussion of the scope of this report is at Section 2.2, however, it is important to note that it does not cover institutions within the vocational education and training sector which may offer higher level qualifications and international comparisons of 'tertiary' education may therefore be misleading. For information on the vocational education and training sector, see the *Annual National Report of the Australian Vocational and Technical Education System 2005* (DEST, 2005f).[1]

2. With regard to discussions on funding of higher education in Australia it is also important to note that the Australian Government payment of student contributions is treated differently in different contexts. The OECD classifies such Higher Education Loan Programme (HELP) advances on behalf of students as subsidies to households, and the corresponding payments to institutions as private. In identifying its total expenditure on higher education in each year, the Australian Government includes these contributions, and identifies repayments separately. However, this does not reflect the total amount of Australian Government financial support for higher education as it does not take account of costs inherent in the loans schemes, including the provision for debt not expected to be repaid due to the income-contingent repayment arrangements, debt write-off, the bonus for voluntary repayment of a loan and the implicit subsidy involved in debts being indexed to inflation but otherwise interest free. There needs to be caution, therefore, in comparing funding of higher education in the Australian context with that of other OECD countries.

3. An Australian higher education institution is classified as either a:
   - university
   - self-accrediting higher education provider, or
   - non self-accrediting higher education provider.

A self-accrediting higher education institution is an institution authorised by government to accredit its own awards – it is either a university (a body established as a university, or recognised as a university, by or under a law of the Australian Government, a State, the Australian Capital Territory or the Northern Territory, and meets nationally agreed criteria for a university) or a self-accrediting higher education provider (a body, other than a university, whose name is included in the Australian Qualifications

[1] Available at http://www.dest.gov.au/sectors/training_skills/publications_resources/profiles/Annual_National_Report_Australian_VTESystem2005.htm

Framework Register as the name of a higher education institution empowered to issue its own qualifications).

A non self-accrediting higher education provider:

- is recognised under relevant State or Territory legislation,
- is included in the list of Non Self-Accrediting Higher Education Institutions contained in the Australian Qualifications Framework Register, and
- offers at least one course of study that is accredited as a higher education award.

4. Australia is a diverse country with a robust economy. Despite its large geographical size, Australia has a relatively small population that is highly urbanised and concentrated in certain regions of the country, mainly the eastern seaboard. The low population density across much of Australia's land mass leads to particular issues in maintaining provision of the full range of services, including higher education, to regional, rural and isolated communities.

5. Since 1996, participation rates in higher education of the population aged 17-24 has grown steadily to the year 2000 and has remained stable at around 19 students per 100 of the population from 2001 onwards to 2005. There are significant variations in the participation rates among and within States and Territories, largely arising from historical and demographic differences.

6. The Australian higher education system comprises:

- 39 universities of which 37 are public institutions and 2 are private;
- 1 Australian branch of an overseas university;
- 4 other self-accrediting higher education institutions; and
- non-self-accrediting higher education providers accredited by State and Territory authorities, numbering more than 150 as listed on State and Territory registers. These include several that are registered in more than one State and Territory.

7. The Australian Qualifications Framework (AQF) provides descriptors for qualifications accredited through the higher education sector, as well as those accredited by the vocational education and training sector and the schools sector. All accredited higher education providers are listed on the AQF register.

8. Decision-making, regulation and governance for higher education are shared among the Australian Government, the State and Territory Governments and the institutions themselves. Universities are self-accrediting, generally established through State and Territory legislation, and receive the vast majority of their public funding from the Australian Government through the *Higher Education Support Act 2003*.

9. In terms of student enrolments, the system is dominated by the public universities. Growth in the private sector has been relatively recent and inclusion of the full range of providers into a coordinated policy framework and data collection system is still in progress.

10. Higher education enrolments have grown significantly in the past two decades, although in the last decade much of this growth has been the result of enrolments from overseas students. Undergraduate taxpayer-supported places (now called Commonwealth supported places) increased by 10% between 1996 and 2005. There were 957,176 students enrolled in 2005, an increase of 1.3% from 2004. The students represented the equivalent of 674,092 full-time students and comprised 75% domestic and 25% overseas students. Postgraduate students comprised 28%. Management and Commerce was the most popular field of

education in 2005 with 29% of all students and Society and Culture was the next most popular with 22% of all students. Health had 11% of student enrolments. The latest full year data on actual enrolments is 2005. In terms of the number of undergraduate Commonwealth supported places for which funding is provided, there has been an increase of around 18% between 1995 and 2007.

11. In March 2002, the Australian Government commenced a major review of higher education entitled *Higher Education at the Crossroads* which comprised an extensive consultative process of discussion papers, submissions, forums and an advisory group. Among the drivers for the review were concerns about funding pressures and the need for growth of the higher education sector. The review culminated in a new policy entitled *Our Universities: Backing Australia's Future* released in May 2003 in which the Australian Government announced a number of significant new initiatives and directions, significant funding and additional Commonwealth supported student places. The new policy was associated with a range of reforms targeted at improving aspects of higher education identified in the review. The *Higher Education Support Act 2003 (HESA),* introduced at the end of 2003, provides the legislative framework for the reforms.

12. Additional funding announced with *Our Universities: Backing Australia's Future* amounted to A$11 billion over ten years. Initiatives associated with the package include: new Government supported student places; increases in the Commonwealth Grant Scheme contingent on institutions meeting criteria associated with the National Governance Protocols and the Higher Education Workplace Reform Requirements; a regional loading for campuses teaching students remote from metropolitan areas; expansion of the student loans scheme to undergraduate fee-paying students and eligible students at private providers; new student support scholarships; additional funds for equity programmes; introduction of Student Learning Entitlements to cover the duration of a Government supported place for up to seven years with some provision for extension in certain circumstances; a new Collaboration and Structural Reform Fund; national priority areas in nursing and education; a new Learning and Teaching Performance Fund; and a new institute to support teaching and learning. As a result of legislative changes associated with the package, institutions may increase the number of undergraduate fee-paying domestic students to 35% of any course except for medicine which is 25% and set student fees within a range of up to 25% above the rate set by the Higher Education Contribution Scheme (HECS).

13. Australia's university graduates have high employment rates. In 2006, 82% of graduates available for employment were in full-time employment within four months of completing their degrees. New graduates earned a median starting salary of A$40,800 in 2005, up from A$37,000 in 2003. There are skills shortages in some areas and these are addressed by a combination of targeted immigration and the introduction of new Government supported student places in targeted areas of skills shortage such as nursing and education.

14. Australia's universities contribute 27% of total expenditure on R&D. Australia's R&D expenditure in the higher education sector grew by 5% per annum in real terms over the period 1992 to 2002, which was relatively high by OECD standards. Targeted policy and programmes of research funding and support have been a contributing factor. Performance-based funding in support of research and research training has been in place for over a decade. This has been accompanied by programmes that support research infrastructure and collaboration with industry. A current focus of the Australian Government is the development of a Research Quality Framework which will provide a greater focus on supporting research of high quality and impact in Australian universities.

15. The Australian Government's *Backing Australia's Ability* programme was introduced in 2001 taking a whole-of-Government approach to promote science, technology and innovation. The package was associated with funding of A$3 billion over the five years 2001-02 to 2005-06, and a further package was released in 2004 with funding of A$5.3 billion over seven years. A large proportion of these funds flowed

to the higher education system to support such initiatives as expanded competitive research grants schemes, infrastructure, centres of excellences, new student places in science and technology, and programmes to increase the commercialisation of R&D.

16. There has been a strong and sustained focus on equity and access in higher education within Australia that involves monitoring and supporting the access, participation, success and retention of identified equity groups. The equity groups so identified are: people from socio-economically disadvantaged backgrounds; Aboriginal and Torres Strait Islander people; people suffering disadvantage because of gender; people with disabilities; people from non-English speaking backgrounds; and people from rural and isolated areas. Generally, participation in higher education by equity groups has remained relatively stable. While access for those with a disability rose in 2005, access for other target groups declined marginally. Preliminary student data for the first half of 2006 shows that the number of Indigenous students grew by 7% from 7,000 in the first half of 2005 to 7,500 in the first half of 2006.

17. The new Commonwealth Learning Scholarships programme is aimed at supporting the education costs of students from the identified equity groups. For students who must move away from home to attend higher education, some of these scholarships also provide support for accommodation costs. In addition to scholarship support for students, the Australian Government directs funds to institutions so that they can provide a range of support services and initiatives for students from equity groups. In recent years, there have been moves to focus this funding more specifically on the target groups and to make it more contingent on performance outcomes.

18. Higher education staff numbers have grown over the last decade, albeit at a slower rate than student numbers have grown, resulting in increased student/staff ratios although these now appear to have stabilised. In 2005, staff employed in the higher education sector under a full-time or fractional full-time contract totalled 90,407, a 15% increase since 1996. There are concerns about the age profile of academics, with a large turn-over of academic staff predicted within the next five years.

19. In 2005, the Australian Government provided, in the form of grants and other payments, A$7.8 billion or 56.4% of higher education providers total income (includes HECS-HELP funding - 11.8% and FEE-HELP funding - 2.1%) with state and local Governments contributing a further 1.7% of higher education providers' total income. These proportions vary significantly across different institutions.. The overall reliance by institutions on Australian Government funding has decreased over the past decade. An important contribution to this trend has been overseas student fees which comprise an average of 15% of the income of publicly funded higher education providers, although again this varies widely among different institutions. Australian Government grants are supplemented by income from students in the form of student contributions (in the case of Commonwealth supported students – previously known as HECS-liable students) or tuition fees (in the case of full fee-paying students). Students may pay for their tuition costs up front, by paying their institution directly, or eligible students may defer their contribution by taking out a Higher Education Loans Programme (HELP) loan. Where a student takes out a HELP loan, the Australian Government pays the student's contribution amount on behalf of the student and the student becomes liable to repay the loan to the Government. Repayments are made through the tax system when the student's income reaches a certain level (A$38,149 in 2006-2007).

20. The largest single programme of Government funding is the Commonwealth Grant Scheme (CGS) which provided A$3.1 billion to higher education providers in 2005. Under the CGS, the Australian Government provides a contribution towards the cost of teaching units of study in Government supported student places in a broad range of discipline areas which are grouped into 10 funding clusters and two national priority areas (education and nursing). Each higher education provider receiving CGS funding enters into a funding agreement with the Australian Government. Funding agreements allow the Government, in negotiation with the providers, to set targets for Commonwealth supported places by

overall numbers as well as within discipline funding clusters. The national priorities areas can also be reviewed to target additional places and student support towards areas of national significance. From 2004, in recognition of the additional costs incurred by providers in regional areas, a regional loading has been paid to support student places at campuses more distant from the metropolitan areas.

21. Institutions have a high level of autonomy in terms of institutional directions and priorities including curriculum, course profile, staffing, internal allocation of resources and capital programmes. However, the Australian Government has a strong influence as the largest single source of funding and through its policy and accountability framework. Several initiatives introduced through *Our Universities: Backing Australia's Future* are performance-based programmes which aim to improve outcomes through influencing the way in which institutions set priorities and operate. Some of these initiatives make additional funding contingent on meeting certain criteria, thus providing a strong incentive to institutions to make the required changes. The introduction of the Institution Assessment Framework (IAF) in 2004 has been an important platform for the changed accountability environment associated with the *Our Universities: Backing Australia's Future* reforms, and is aimed at developing a strategic bilateral engagement between the Government and each individual provider. These annual discussions and analysis of performance across the full range of institutional activity focus on accountability, planning, outcomes, quality and compliance with legal obligations.

22. As with other aspects of higher education, there are shared responsibilities for quality assurance. The Australian Qualifications Framework, the Australian Universities Quality Agency and the *National Protocols for Higher Education Approval Processes* play a key role at the national level. The Australian Qualifications Framework provides a standard set of qualifications accredited in each sector and also maintains a register of approved providers. The Australian Universities Quality Agency (AUQA) audits institutions on a five-year cycle against each institution's own goals and provides a public report on its findings. *The National Protocols for Higher Education Approval Processes* set out processes and criteria for approval to operate as a university or as a non-self-accredited higher education provider in Australia. The term 'university' is legally protected and certain criteria must be met before gaining approval to operate as a university or use the term 'university' in a business name. Non-self-accrediting institutions must seek permission from State and Territory Governments to offer higher education awards. AUQA audits these State and Territory agencies responsible for approving non-self-accrediting higher education providers.

23. The Australian Government, in addition to its funding and policy role, provides a range of resources and data sets to higher education providers to assist them in their quality assurance and benchmarking and to monitor quality at the sector level. All indicators of quality are trending positively in spite of the continuing growth of the sector. To increase the focus on learning and teaching and student outcomes, the *Our Universities: Backing Australia's Future* reforms included the introduction of the Learning and Teaching Performance Fund, which will allocate an additional $250 million over three years to institutions judged as demonstrating excellence in undergraduate teaching across a range of performance indicators. The package also announced the establishment of the Carrick Institute for Learning and Teaching which will conduct a number of programmes and projects to support the enhancement of learning and teaching in Australian higher education.

24. There has been a significant increase in enrolments of overseas students in the Australian higher education system over the past decade from around 39,000 equivalent full-time student load (EFTSL) in 1995 to over 172,000 EFTSL in 2005. Overseas students comprise 26% of student load across all higher education institutions, varying from a high of 60% to a low of 4% in individual institutions. Although the majority (80%) of overseas students come from the Asian region, a wide range of countries is represented among the overseas student enrolments. In 2005, nearly 64,000 overseas students enrolled in Australian universities were studying offshore, representing 27% of the total overseas students and more than double

the number enrolled offshore in 2000. A small number of Australian universities have established branch campuses in overseas countries. There have been concerns about the reliance of some providers on overseas student enrolments as there has been some recent flattening of demand. The expansion of offshore involvement has led to the need for the quality assurance strategy to extend to offshore provision. When conducting its audits, AUQA has increased its focus on these operations. Research collaboration, international benchmarking, institutional linkages and partnerships, programmes of visitors and fellowships, student exchange programmes and internationalisation of the curriculum are other significant aspects of the internationalisation strategies of Australian higher education.

25. Over the next few years, implementation of *Our Universities: Backing Australia's Future* will continue and there will be a need to evaluate its effectiveness as well as respond to new issues that arise. A review of the *Higher Education Support Act 2003* was announced in 2006.

1 THE AUSTRALIAN CONTEXT OF TERTIARY EDUCATION

1.1 Introduction

1. This Chapter provides an outline of the broad political, demographic, economic, social and cultural characteristics of Australia, particularly those that provide a context for tertiary education in Australia.

1.2 Australian population (size, language, religion and culture)

2. Australia has a population of 20.7 million people spanning across a vast landmass covering 7,686,850 km², comparable to the contiguous United States of America. A population density of around 2.5 people per square kilometre places Australia alongside Canada and Iceland as the least densely populated OECD nations.

3. The core ethnic groups represented in Australia comprise European (92%), Asian (6%) and Indigenous (2%). In terms of foreign-born persons, Australia is ranked second highest of all OECD countries with 23% (OECD, 2005). In 2001, the highest proportions of Australians born overseas were from the United Kingdom, New Zealand, Italy, Vietnam and China with the remainder coming from around 200 different countries of birth, highlighting the diverse nature of the Australian population (ABS, 2001a; DFAT, 2003). A further 19% of Australians had one or both parents born overseas.

4. Most of Australia's population is concentrated in urban areas, particularly on the South East and East Coast, and to a lesser extent, in the South West of the continent, with the majority of Australians living in the capital cities of the States and Territories. Vast distances separate many pockets of population in rural areas. In contrast, the most densely populated 1% of the continent contains around 84% of the population (see Figure 1.1).

5. The national population growth rate during the 12 months to June 2005 was slightly more than 1%. This was the same as the world's estimated population growth rate during the 12 months ended June 2005. For the year ended 30 June 2005, net overseas migration (110,000 persons) contributed 46% to Australia's population growth (ABS, 2005a).

6. English, the official language, was the only language spoken at home by 79% of the population in 2001, a decrease from 81% in 1996. Of those people who spoke a language other than English at home, the highest proportions were Chinese at 2.1%, Italian at 1.9% and Greek at 1.4% (ABS, 2001b).

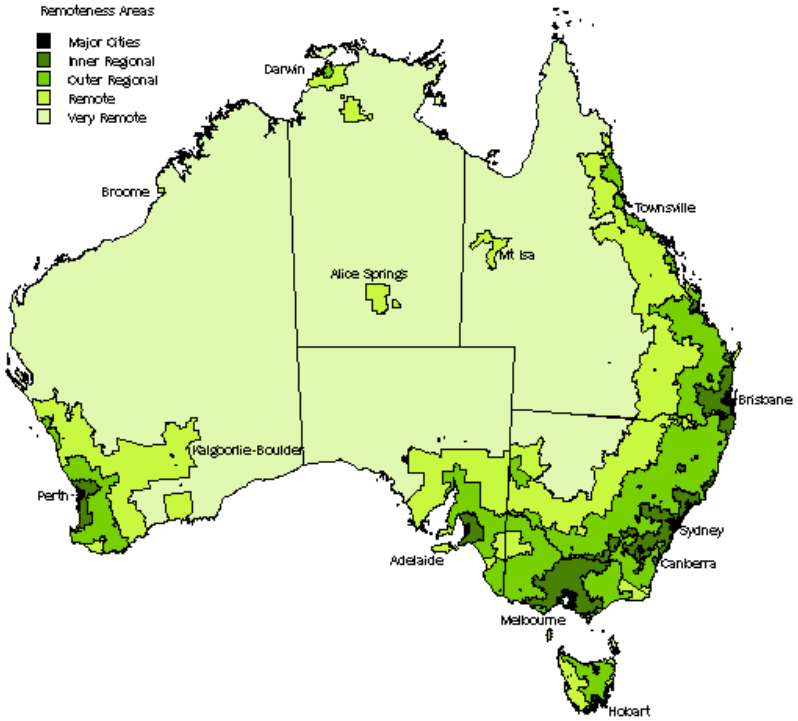
7. The composition of religious faiths in Australia is: Catholic (26%), Anglican (21%), other Christian (21%), Buddhist (2%), Muslim (1.5%), Other (1%), Unspecified (13%) and None (15%) (ABS, 2001a).

8. In terms of longevity, Australians are among the most long-lived of OECD member populations. Australia was ranked sixth in the OECD for female life expectancy at birth (83 years) and fourth in the OECD for male life expectancy (78 years) (ABS, 2006).

9. In common with many other developed countries, Australia is experiencing a demographic shift towards an older population, with more retirees and fewer people of working age. However, following

successive annual declines in the mid-1990s, most recent data shows fertility rates are at a 10 year high (ABS, 2005a).

Figure 1.1: Remoteness of areas of Australia



Source: ABS Australian Demographic Statistics 2005 3101.0

1.3 Government in Australia

10. Australia has a federal system of government with power and responsibilities shared between the Australian (Commonwealth) and State and Territory Governments. The establishment of a federation in 1901 came over a century after initial European settlement. There are six State Governments (New South Wales, Queensland, South Australia, Tasmania, Victoria and Western Australia) and two Territory Governments (the Australian Capital Territory and the Northern Territory). The powers of the Australian and State and Territory Governments are determined by the Australian Constitution and each level of government has different areas of responsibility. Under the Constitution, the Commonwealth is granted specified powers. State Governments have those powers not specified by the Constitution (residual powers). Australia's two self-governing Territories have political systems similar to those of the States.

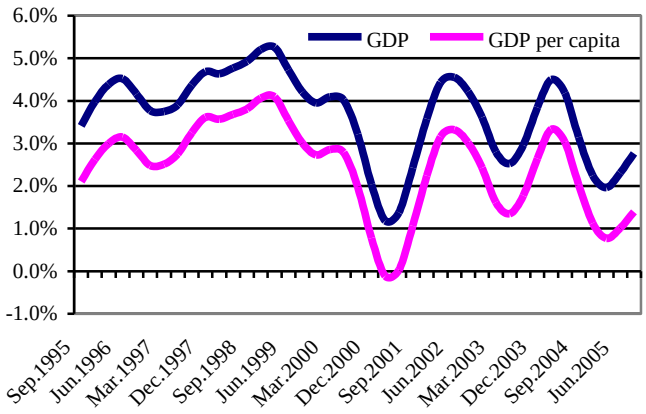
11. There is also an additional tier of government, local government, which is established and regulated by State and Territory parliaments. Australia has about 750 local government councils. The functions of these councils vary but in general include responsibility for town planning, roads, streets and bridges, waste and sanitation services and community and recreation facilities.

1.4 Australian economy and labour market

12. With a comparative advantage in primary products, the majority of Australia's export market is reliant on mining and agriculture. As shown in Figure 1.2, the Australian economy (measured by

GDP) is growing at an average of 4%. This is one of the highest growth rates among OECD countries in the last decade (OECD, 2005), ensuring a relatively stable inflation rate of 3.3% in 2006. New South Wales generates around 35% of Australia's Gross Domestic Product (GDP), while Victoria generates 26% and Queensland 17% (Economist, 2004).

Figure 1.2: GDP and GDP per capita growth, 1995 to 2005



Source: ABS

13. The size of the Australian labour force is around 10.5 million and almost half of Australia's workforce has university, trade or diploma qualifications (DFAT, 2005a).

14. Over the last 10 years, the unemployment rate has declined from 9% to 4.5%, reaching a 30-year low in February 2007. Almost 12% of persons under the age of 25 were unemployed in 2004, which is relatively consistent with the OECD average of 13.5% (OECD, 2005).

15. With a workforce participation rate of 64%, the Australian economy is dominated by its services sector (75% of civilian employment); recording one of the highest proportions of service-oriented economies in all OECD countries. The largest service industry is finance, property and business services (which contribute around 18% of GDP). Since 1994 the proportion of civilian employment in agricultural, fishing, mining and industry sectors has declined, which is consistent with trends across the total of all OECD countries (OECD, 2005).

16. Female participation in the workforce has increased from 63% in 1994 to 68% in 2004, a 16% increase over the last decade.

17. School attendance is compulsory throughout Australia between the ages of 6-15 years (16 years in South Australia and Tasmania). In 2003, 62% of Australians in the 25-64 age range had an upper secondary or higher qualification. Eighteen OECD nations had a higher level of educational attainment and, across the OECD as a whole, some 66% of 25-64 year olds had an upper secondary or higher level qualification (ABS, 2006). There are quite significant variations in educational attainment across and within the States and Territories, reflecting differences in socio-economic status and demography. Educational attainment is lower in regional and more remote areas.

18. Australian enrolment in tertiary education has increased by more than 33% between 1995 and 2003. Australia has one of the highest tertiary graduation rates in OECD countries, higher than that of Japan and the United Kingdom (OECD, 2006).

2 OVERALL DESCRIPTION OF THE AUSTRALIAN TERTIARY EDUCATION SYSTEM

2.1 Introduction

19. This Chapter provides an overview of the Australian tertiary education system in terms of its definition, purposes, scope and key policy directions. When describing or differentiating educational sectors in Australia, the term most commonly used for this sector is 'higher education' rather than 'tertiary education' although, as will be seen below, some of the qualifications that are defined as tertiary level by the OECD are delivered by both the higher education sector and the vocational education and training sector within Australia. Because the focus of this report is on system-level policy and developments and because higher education forms a discrete sector or system within Australia, the term higher education rather than tertiary education will be used and the report will be confined largely to describing policies, trends and developments within the higher education sector.

2.2 Structure and scope

20. Australia's education system has three main sectors – schooling, vocational education and training (VET) and higher education. Adult and community education forms a fourth, less well-defined sector that has minimal regulation. Qualifications in each of the three main sectors are accredited according to a national framework called the Australian Qualifications Framework (AQF). The Framework includes a descriptor for each qualification.

21. The vocational education and training sector comprises Technical and Further Education (TAFE), established and funded by the State and Territory Governments, and a large number of registered training organisations (RTOs) which include private providers, schools, enterprises, community providers and some universities. RTOs are nationally registered under the Australian Quality Training Framework which underpins quality assurance and mutual recognition among providers. Many VET programmes and qualifications are derived from competency standards and qualifications contained in National Training Packages. Although some of the qualifications considered to fall within the ISCED 5B category may be delivered within the vocational education and training sector within Australia, the focus of this review will be on those institutions, providers and qualifications that fall within the higher education sector accreditation framework.

22. In summary, Australia's higher education system currently comprises:

- 39 universities of which 37 are public institutions and 2 are private;
- 1 Australian branch of an overseas university;
- 4 other self-accrediting higher education institutions (Australian Maritime College, Batchelor Institute of Indigenous Tertiary Education, Melbourne College of Divinity and the Australian Film, Television and Radio School); and
- non-self-accrediting higher education providers accredited by State and Territory authorities, numbering more than 150 as listed on State and Territory registers. These include several that are

registered in more than one State and Territory. All accredited higher education providers and their approved courses are listed on the AQF register.[2]

Table 2.1: AQF qualification by sector of accreditation

Schools Sector Accreditation	Vocational Education and Training Sector Accreditation	Higher Education Sector Accreditation
		Doctoral Degree
		Masters Degree
	Vocational Graduate Diploma	Graduate Diploma
	Vocational Graduate Certificate	Graduate Certificate
		Bachelor Degree
	Advanced Diploma	Associate Degree, Advanced Diploma
	Diploma	Diploma
Senior Secondary Certificate of Education	Certificate IV	
	Certificate III	
	Certificate II	
	Certificate I	

Source: Australian Qualifications Framework

23. By definition within Australia, universities are self-accrediting institutions and each university has its own establishment legislation. There are four other self-accrediting higher education providers and the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) decided in November 2005 that, in future, the regulatory framework should provide for non-self-accrediting providers with an appropriate record of accomplishment in registration, accreditation and quality assurance to become self-accrediting on a renewable and revocable basis. The non-self-accrediting higher education providers form a very diverse group of specialised, mainly private, providers that range in size and include theological colleges and other providers that offer courses in areas such as business, information technology, natural therapies, hospitality, health, law and accounting.

24. With the exception of the Australian National University, the Australian Film, Television and Radio School and the Australian Maritime College which are established under Commonwealth legislation, and the Australian Catholic University, which is established under companies law,[3] higher education institutions are established or recognised under State or Territory legislation (see Section 8.2). Many private providers are also established under corporations law.

25. The Australian Government is the primary source of public funding for Australian universities and self-accrediting institutions under the legislative framework of the *Higher Education Support Act 2003*. Eligibility for public funding is determined by the Table to which a provider is allocated within a Schedule of the Act. There are 39 institutions (37 public universities and 2 self-accrediting higher education providers) categorised as Table A providers and therefore eligible to access all Commonwealth higher education programmes, Commonwealth supported places and grants (see

[2] See: www.aqf.edu.au

[3] The Australian Catholic University also has establishment Acts in NSW and Victoria.

Section 7.3). Commonwealth supported places may also be allocated to other providers in national priority areas. The two private universities and one self-accrediting institution are categorised as Table B providers and are therefore eligible to access a limited number of grants, particularly Commonwealth research support, but do not receive Commonwealth supported places unless they are special allocations in national priority areas. In December 2005, a new category, Table C, was added to the *Higher Education Support Act 2003.* Table C will list overseas universities approved under the *National Protocols for Higher Education Approval Processes* by an authorised accreditation authority as listed in the Australian Qualifications Framework Register. Listing on Table C will enable their eligible Australian students to access Commonwealth supported loans (FEE-HELP). During 2005, a further 38 non-self-accrediting providers were approved as higher education providers under the *Higher Education Support Act 2003* for their students to access Commonwealth supported loans (FEE-HELP).

26. Private providers approved to date are a mixture of profit making and not-for-profit institutions. Many are cross-sectoral, offering both higher education and vocational education and training qualifications. They can be divided broadly into niche market operators, faith based theological colleges and Australian Government funded performing arts/media institutions. More recently, a limited number of state government funded Technical and Further Education (TAFE) colleges which have traditionally offered VET qualifications, have also begun offering a small range of higher education courses. In 2005, 5,714 students at approved private providers were in receipt of a FEE-HELP loan. Table A, B and C providers and the currently approved non-self-accrediting higher education providers are listed in Table 2.1 in the annex.

27. In recent years, there has been significant growth in private higher education provision, particularly in the non-self-accrediting category. To support this trend, there has been a shift in Government policy to allow private providers, particularly the private universities, to gain access to Government funding support. Thus, the private universities can access various funding programmes, and students in all approved higher education providers can access Commonwealth supported loans. In 2005, Carnegie Mellon from the USA was approved in South Australia as the first overseas university to operate in Australia and enrolled its first students in 2006. The South Australian State Government facilitated the establishment of the Adelaide branch of Carnegie Mellon University. Carnegie Mellon University is the first provider to be listed on Table C of the *Higher Education Support Act 2003*, ensuring access to FEE-HELP loans to eligible Australian students studying at Carnegie Mellon's Adelaide branch.

28. In spite of recent growth in private higher education provision, the majority of Australia's students are enrolled in public institutions and Australia's system continues to be more dominated by public institutions than that of many other countries.

29. Although the Australian Qualifications Framework distinguishes between qualifications accredited in the vocational education and training sector (VET) and the higher education sector, the boundaries between these two sectors are sometimes blurred. Several universities, particularly in Victoria, are established as dual sector institutions, offering VET and higher education courses and containing both VET and higher education elements, such as staff, students and administrative processes. Many of the private providers are accredited as both higher education providers and registered training organisations. A number of TAFE institutes offer bachelor degrees approved through higher education accreditation processes. Some universities or units within universities are registered training organisations and offer VET level courses on a commercial basis.

2.3 Purposes and goals of higher education in Australia

30. The Australian higher education system is seen to make a fundamental contribution to the nation's future although there is no single definition of higher education or official statement of purpose. The Ministerial Discussion Paper that began a major review of higher education in 2002 argued that the strength, diversity and flexibility of Australia's higher education system are "vital to the building of a nation:

- in which all Australians over their lifetimes have equal opportunities to be educated to a level that will maximise their potential, both in a personal sense and in terms of their capacity to make a productive contribution to the community;
- whose economic growth is sustained and supported by a dynamic synergy between research and development and innovation;
- making a significant contribution to international education and research, the global economy and international relations;
- in which all communities are nourished and enriched economically, socially, environmentally and culturally by the contributions of educational institutions;
- of rich cultural diversity, recognising the unique place of its Indigenous people and many ethnic groups; and
- in which the rights of the individual are celebrated and protected and individuals are fully aware of their responsibilities to each other and to society as a whole" (DEST, 2002b, p.1).

31. The *Higher Education Support Act 2003,* which is the current legislative basis for Commonwealth funding of higher education, indicates that it supports a system that:

- "is characterised by quality, diversity and equity of access; and
- contributes to the development of cultural and intellectual life in Australia; and
- is appropriate to meet Australia's social and economic needs for a highly educated and skilled population" (DEST, 2002b, p.4).

32. The Ministerial Discussion Paper in 2002 pointed out that the purpose of higher education is much greater than preparing students for jobs. Its main purposes are to:

- "inspire and enable individuals to develop their capabilities to the highest potential;
- enable individuals to learn throughout their lives (for personal growth and fulfilment, for effective participation in the workforce and for constructive contributions to society);
- advance knowledge and understanding;
- aid the application of knowledge and understanding to the benefit of the economy;
- enable individuals to adapt and learn, consistent with the needs of an adaptable knowledge-based economy at local, regional and national levels; and

- contribute to a democratic, civilised society and promote the tolerance debate that underpins it" (DEST, 2002b, p.2).

33. Sustainability of the higher education system is said to be achieved by institutions that are value adding, learner-centred, high quality, equitable, responsive, diverse, innovative, flexible, cost-effective, publicly accountable and socially responsible (DEST, 2002b, pp.2-3).

34. Universities are seen to be an important and distinctive component of the higher education system within Australia although it is recognised that they are not the only providers of higher education. There is an implicit assumption that universities will be comprehensive and will undertake both teaching and scholarly activity such as research, although this assumption has been challenged in recent discussion (see later this Chapter). The *Higher Education Support Act 2003* indicates that one of its objects is to support "the distinctive purposes of universities, which are:

- the education of persons, enabling them to take a leadership role in the intellectual, cultural, economic and social development of their communities; and

- the creation and advancement of knowledge; and

- the application of knowledge and discoveries to the betterment of communities in Australia and internationally" (DEST, 2002b, p.4).

2.4 Responsibilities for higher education

35. In 2007, the Australian Government is to provide approximately A$8.2 billion funding to the higher education sector. Australian Government funding support for higher education is provided largely through:

- the Commonwealth Grant Scheme which provides for a specified number of Commonwealth supported places each year (see Section 7.3);

- the Higher Education Loan Programme (HELP) arrangements providing financial assistance to students (see Section 7.3); and

- research and research training programmes (see Chapter 5).

36. The Department of Education, Science and Training (DEST) is the Australian Government Department with responsibility for administering this funding and for developing and administering higher education policy and programmes. The *Higher Education Support Act 2003* (HESA) sets out the details of this funding and its associated legislative requirements.

37. Some aspects of higher education are the responsibility of States and Territories. In particular, universities (except for the Australian National University and the Australian Catholic University) are established under State and Territory legislation. States and Territories are also responsible for accrediting non-self-accrediting higher education providers. Further description of the responsibilities for higher education is provided in Chapter 8.

38. As self-accrediting institutions, Australia's universities have a reasonably high level of autonomy to operate within the legislative requirements associated with their Commonwealth funding. This is discussed further in Chapter 8. The Australian Vice-Chancellors' Committee (AVCC) represents 38 Australian universities and provides a coordinated response to many policy issues affecting universities.

2.5 Size of the higher education system

39. Much of the data presented in this and subsequent Chapters relates to universities and, in some cases, Table A providers which are dominated by the public universities. This reflects the availability of data because as yet there is no comprehensive data collection that captures all private higher education providers. Although perhaps not presenting the complete picture, the data does relate to the majority of higher education provision in terms of student enrolments.

40. In 2005 (latest data available), a total of 957,176 students attended Australian higher education providers, an increase of 1.3% over 2004. The students represented the equivalent of 674,092 full-time students (equivalent full-time student load or EFSTL) and comprised the following student groups:

- Domestic – 717,681 (75%)
- Overseas – 239,495 (25%)

The students were undertaking the following types of study:

- Undergraduate – 665,526 (522,014 EFSTL or 77%)
- Postgraduate – 263,504 (140,282 EFTSL or 21%)
- Other (Enabling and Non-award courses) – 28,146 (11,796 EFTSL or 2%)

41. Since 1995, there has been a significant increase in student enrolments, although exact comparisons are not possible because of changes to data collection between 2000 and 2001. Figure 2.1 shows that the recent growth in student enrolments is mainly attributable to increased international student enrolments. The proportion of overseas students attending Australian universities increased from 19% in 2001 to 25% in 2005.

42. Enrolments in most fields of education increased between 2004 and 2005 (see Figure 2.2). Information Technology showed a substantial decline (down 8,335 or 11%). The fields with the highest growth were the following:

- Management and Commerce, up by 7,034 students;
- Society and Culture, up by 5.039 students;
- Health, up by 4,795 students; and
- Education, up by 3,324 students.

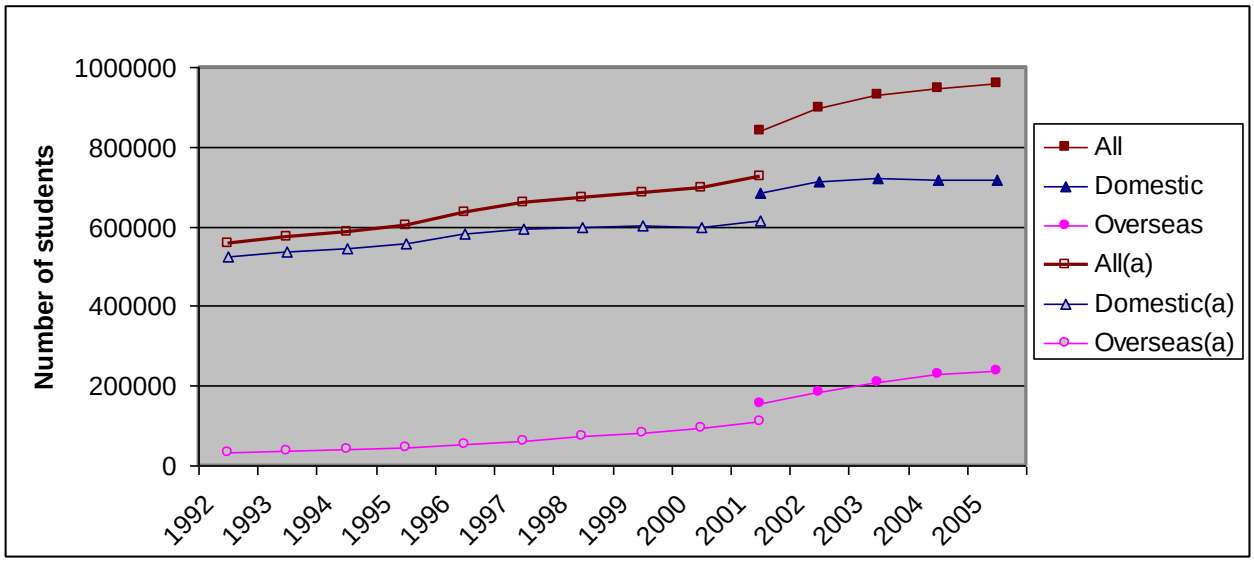
In 2005, Management and Commerce was the most popular field of education, with the largest proportion of enrolled students, at 29% of all students. The next most popular fields were Society and Culture (22 % of all students) and Health (11% of all students).

43. At undergraduate level, Information Technology (down 2,424 students or 16%) and Agriculture, Environmental and Related Studies (down 1,019 or 21%) were the only fields to show a substantial decline in commencements between 2004 and 2005. The decline in Information Technology enrolments continues a trend over the past few years. For postgraduate students, Information Technology was down 2,470 students (23%), Agriculture, Environmental and Related Studies was

down 115 (6%) while Creative Arts also showed a considerable decline (down 364 students or 8%). Only Education showed any significant increase in postgraduate commencements (up 1,274 or 8%).

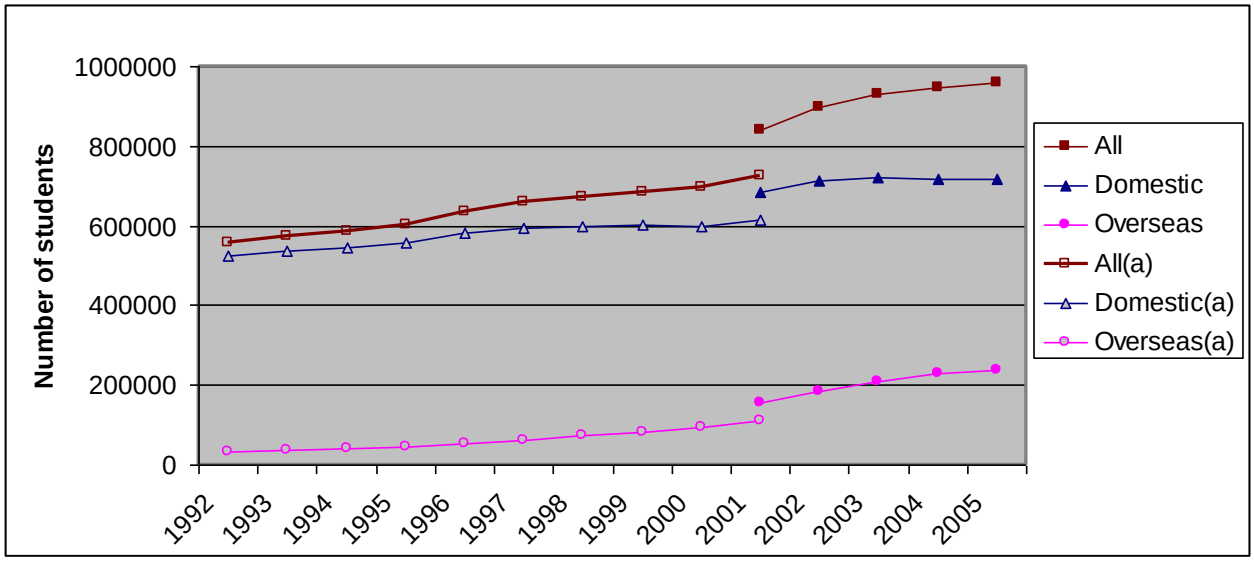
44. Table 2.2 in the annex shows trends in enrolments for all students (domestic and international) by mode of attendance, and gender. Table 2.3 shows trends in enrolments for broad fields of education. Table 2.4 shows proportions of students undertaking postgraduate and undergraduate studies.

Figure 2.1: Enrolments for domestic, overseas and all students, 1992 to 2005



Source: Selected Higher Education Student Statistics, various years.
(a) There has been a break in series from 2000 to 2001 because of different timing of data collection. Care should be taken when comparing data across this time period. Figures from 1992 to 2001 show student numbers as at 31 March in the given year, while later years reflect full year enrolments.

Figure 2.2: Enrolments for domestic, overseas and all students, 1992 to 2005

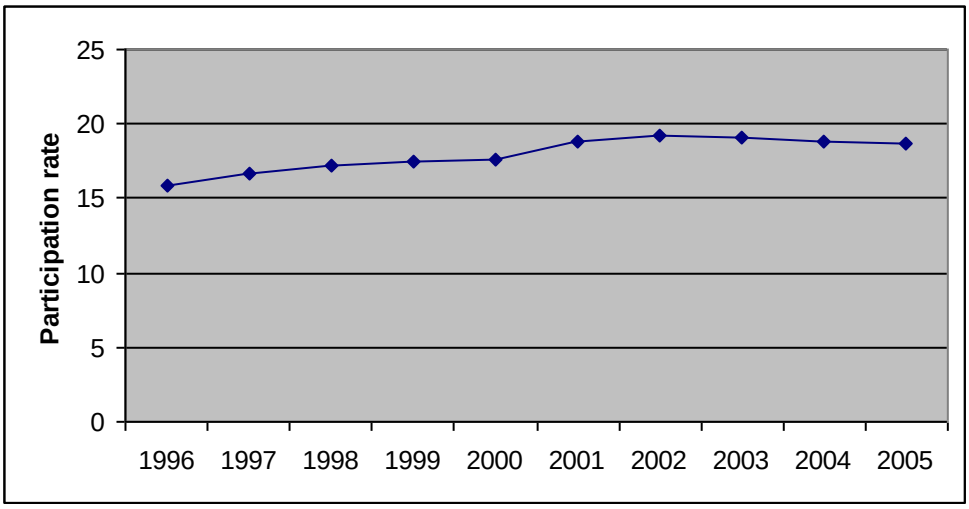


Source: Selected Higher Education Student Statistics, various years
(a) There has been a break in series from 2000 to 2001 because of different timing of data collection. Care should be taken when comparing data across this time period. Figures from 1992 to 2001 show student numbers as at 31 March in the given year, while later years reflect full year enrolments.

2.6 Participation in higher education

45. National higher education participation rates for domestic students aged 17-24 years rose between 1996 and 2000. From 2001 the participation rate initially increased and then declined to a level slightly below that experienced in 2001 by 2005 (see Figure 2.3). However, since 2002 the participation rate has declined to a level slightly below that experienced in 2001 (see Figure 2.3). There is significant variation among States and Territories with respect to educational participation (see Table 2.5). The Northern Territory has the lowest participation rate, being less than half the national average, while the Australian Capital Territory has a substantially higher rate than any other State or Territory. This higher participation rate for the Australian Capital Territory is largely due to students from other States and Territories attending Australian Capital Territory universities.

Figure 2.3: Participation rate for domestic students aged 17-24 years, 1996 to 2005



Source: Selected Higher Education Student Statistics, various years.
Participation rate reflects the number of domestic students in higher education as a percentage of the general population in the same age group.

Table 2.5: Participation rates for domestic students aged 17-24 years by State, 1996 to 2005 [(a)]

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
New South Wales	14.2	15.1	15.7	16.2	16.4	18.0	18.3	18.2	17.9	17.9
Victoria	18.1	18.9	19.4	19.5	19.3	20.0	20.1	19.9	19.6	19.3
Queensland	14.6	15.6	16.1	16.6	16.8	18.9	19.2	18.7	18.5	18.0
Western Australia	14.4	15.3	15.8	16.3	16.3	17.6	18.5	18.3	18.1	18.2
South Australia	16.2	16.8	16.8	17.1	16.8	17.5	17.9	17.8	17.7	17.5
Tasmania	13.9	14.1	14.2	15.1	14.8	16.0	16.7	16.5	17.0	15.9
Australian Capital Territory	26.5	27.8	28.6	28.3	27.2	27.2	28.7	29.9	31.0	30.5
Northern Territory	7.3	6.8	6.6	6.9	6.3	7.9	7.8	7.6	7.1	7.1
Australia	15.8	16.7	17.2	17.5	17.5	18.9	19.3	19.1	18.8	18.7

Source: DEST Student Statistics and ABS 3201.0
(a) Participation rate is the number of domestic students aged 17-24 years in higher education as a proportion per 100 of total population aged 17-24 years.

2.7 Student demand

46. The general pattern in participation rates does not necessarily reflect reduced demand from students, but rather constraints on the number of places that have been available.

47. The AVCC reports each year on applications for undergraduate university courses and provides data on student applications for the purposes of assessing future trends in demand for university places. The reports are limited to data on domestic applicants to undergraduate university courses made through the Tertiary Admissions Centres. They present analyses of the number of eligible applicants, offers received and offers accepted. Using this information, the AVCC applies discounting factors to estimate the underlying level of 'unmet demand'. It should be noted that this analysis excludes courses and students not processed by the Tertiary Admissions Centres and, in this sense, is a partial picture of student demand.

48. Table 2.6 provides trends in applications, offers and acceptances for 2001 to 2006. In 2005 and 2006, there is a return to the level of applications experienced in 2001 and 2002. This follows 2003 and 2004 where two years of high numbers of applications combined with tight supply caused high levels of unmet demand. Thus in 2005 and 2006, a reduced number of eligible applicants coincided with the introduction of additional Commonwealth supported places (see Section 2.9 below). Estimates by the AVCC suggest that, in 2006, the unmet demand was 14,200 compared with a peak of 36,100 in 2004. While reduced levels of unmet demand are good news for prospective students, research indicates that outcomes for those who miss out on a university place are still generally good. One study found that around 90% of Year 12 applicants who were not offered a university place went on to further study or employment.

Table 2.6: Eligible applications, offers and acceptances, 2001 to 2006

Eligible	Annual Figure						% Change				
	2001	2002	2003	2004	2005	2006	01-02	02-03	03-04	04-05	05-06
Applicants	209,713	222,728	229,427	228,414	221,588	218,529	6%	3%	0%	-3%	-1%
Applicants received an offer	169,264	168,803	166,309	165,085	178,854	184,869	0%	-1%	-1%	8%	3%
Applicants accepted an offer	125,096	127,373	137,060	135,259	135,412	138,367	2%	8%	-1%	0%	2%
% applicants receiving an offer	81%	76%	72%	72%	81%	85%	-6%	-4%	0%	12%	5%
% applicants accepting an offer	60%	57%	60%	59%	61%	63%	-4%	4%	-1%	3%	4%

- *Deferments were not necessarily treated as acceptances prior to 2003 by all States.*
- *Some States may include acceptances by all applicants, rather than eligible applicants only.*
- *Data is limited to domestic undergraduate eligible applications made through state Tertiary Admissions Centres. It excludes applications from students with an Interstate Transfer Index score below 53, direct applications to universities, international student applications and all applications to those universities not using the state Tertiary Admissions Centres to process applications.*
  Source: AVCC

49. Table 2.7 and Figure 2.5 in the annex show unmet demand by State. Unmet demand dropped in most States in 2005 and again in 2006, reflecting the decrease in applications and the increased allocation of places provided by the Commonwealth. The figure for South Australia for 2005 results from a change in definitions, making comparison across States and time difficult. Unmet demand figures are not available by field of education. Figure 2.6 in the annex shows the applications/offers by field of education in 2006. The number of eligible applicants compared with the number of offers made varies according to field of study. In 2006, the number of eligible applicants applying with their first preference in medical science and in veterinary studies, for example, was significantly greater than the number receiving offers. In areas such as Natural and Physical Sciences and Agriculture however, more offers were made than eligible applicants nominating this area of study as their first preference. The AVCC have publicly stated that nationally unmet demand has been basically met.

Data on applications and offers available in March 2007 indicates that, while demand has increased, offers have kept pace. Unmet demand is expected to remain at a similar low level to 2006 in 2007.

2.8 Student diversity

50. The last decade has seen changes in patterns of enrolment among Australian higher education institutions and student populations have become increasingly diverse. Students commencing undergraduate courses are admitted via a wider range of mechanisms and in 2005, domestic students who were admitted on the basis of final year at secondary school comprised only 42% of domestic commencing undergraduates in 2005, down from 45% in 2001. Other means of entry include previous higher educational qualification (25%), prior TAFE course (10%), plus lesser numbers through professional qualifications, employment experience, mature age entry and other reasons. The number of students admitted the basis of employment experience, TAFE studies and prior higher education studies has increased at a greater rate than students admitted on the basis of secondary education completed at school. The expected duration of study increased from 3 years in 1989 to 3.4 years by 2002, leading to a slight ageing of the student population over this period (Martin and Karmel, 2002).

51. The proportion of domestic students who are female has increased from 54% in 1994 to 57% in 2005. The age profile of students is shown in Table 2.8 in the annex. Since expansion of the higher education system following World War Two, Australia has had a tradition of adult participation in higher education. There are major variations in the student demographic profiles of Australian universities with some having over half their students aged 25 years or older. Many mature-age students study part-time.

52. Over the past decade, there has been a steady increase in the proportion of students who have study patterns other than the traditional internal full-time mode. In 2004 and 2005, 45% of domestic students had attendance patterns other than internal full-time. Research by the Centre for Studies in Higher Education (CSHE) at the University of Melbourne found an increase in the proportion of students working part-time, fewer students spending five days a week on campus and a "declining willingness of many students to engage to the full in university life" (James, 2001). These changes have contributed to the increased flexibility of course offerings at many Australian institutions, especially in the form of additional teaching periods, such as summer schools, and online supplementation of on-campus teaching. James (2001) has also recorded an increased level of student expectations for choice in their studies and for value for their investment of time and money.

53. The increased diversity of the student population has led to claims by some academics that the standards of incoming students have declined (Anderson et al., 2002). However, an analysis of university entrants by Martin and Karmel (2002) found no evidence that expansion of access to university had compromised the quality of entrants.

2.9 Backing Australia's Ability

54. *Backing Australia's Ability – Building our Future through Science and Innovation* is a A$5.3 billion investment by the Australian Government to boost Australia's science and innovation performance over the next seven years. This package, announced by the Prime Minister in May 2004, builds on the initial 2001 *Backing Australia's Ability* investment of A$3 billion over five years to 2005-06. *Backing Australia's Ability* represents a commitment to pursue excellence in research, science and technology through three key themes: the generation of new ideas through research and development, the commercial application of ideas and developing and retaining skills. A key feature of *Backing Australia's Ability – Building our Future through Science and Innovation* is increased emphasis on collaboration between businesses, universities and publicly-funded research organisations. Of most relevance to universities, *Backing Australia's Ability – Building Our Future*

through Science and Innovation continues significant funding increases for ideas through competitive research grants, major and systemic research infrastructure and extended funding for the Information and Communications Technology (ICT) Centre of Excellence. New measures include the CSIRO National Flagships Initiative to develop large-scale collaborative research partnerships which reflect Australia's National Research Priorities (A$305 million), funding of A$542 million over seven years (2004-05 to 2010-11) for the National Collaborative Research Infrastructure Strategy to provide researchers with major research facilities and the supporting infrastructure and networks necessary for world-class research and establishing quality and accessibility frameworks for publicly-funded research. Further details are provided in Chapter 5.

2.10 Crossroads Review and *Our Universities: Backing Australia's Future*

55. In March 2002, the Australian Government commenced a major review of higher education, following the reforms of the late 1980s that created the unified national system of higher education and led to the collapse of the binary divide and the amalgamation of Colleges of Advanced Education into larger multi-campus universities. The review entitled *Higher Education at the Crossroads(Crossroads Review)* comprised an extensive consultative process with a series of discussion papers, beginning with an overview paper followed by others each with a specific focus and questions on which submissions were invited (DEST, 2002a-g). In addition, 49 consultation forums were held involving around 800 participants. A reference group comprising a number of eminent Australians representing business, industry, students, the Indigenous community and the higher education and vocational education and training sectors provided advice to the review. Among the drivers for the review were concerns about funding pressures and the need for growth of the higher education sector.

56. The review culminated in a new policy entitled *Our Universities: Backing Australia's Future* released in May 2003 in which the Australian Government announced a number of significant new initiatives and directions and providing an additional A$11 billion over ten years (Nelson, 2003a). An additional 10,665 new Commonwealth supported places were allocated to higher education providers in 2004 for commencement in 2005, including 272 places allocated to private higher education providers in the identified national priority areas of teaching and nursing for introduction in 2005. Overall, these places and places funded through other initiatives introduced since *Our Universities: Backing Australia's Future* will grow to around 50,000 (pipelined) by 2011 as students continue in their courses.

57. The new student places and additional funding associated with *Our Universities: Backing Australia's Future* were linked with a suite of major reforms in areas such as performance-funding of teaching, workplace productivity, governance, student financing, cross-sectoral collaboration and quality. The legislative framework for these reforms is the *Higher Education Support Act 2003* (HESA) introduced at the end of 2003 and progressively implemented during 2004 and 2005. All of these initiatives will be discussed further in subsequent Chapters.

58. One of the initiatives introduced through *Our Universities: Backing Australia's Future* is the Student Learning Entitlement which provides access from the beginning of 2005 to all eligible Australian citizens, New Zealand citizens and holders of Australian permanent visas to seven years of equivalent full-time study in a Commonwealth supported place. Australian citizens and holders of permanent humanitarian visas are also eligible for a loan (HECS-HELP). HELP debts are indexed in line with the Consumer Price Index, but are otherwise interest free, and are repaid after a certain income level is reached (see Section 7.3). To encourage lifelong learning, individuals will receive an additional entitlement after a specified number of years. Eligible students taking up fee-paying places in either undergraduate or postgraduate courses may access a loan under FEE-HELP.

59. *Our Universities: Backing Australia's Future* also announced the introduction of Commonwealth Learning Scholarships for students from low-income backgrounds. One type of scholarship assists with educational costs and the other assists with accommodation costs. Both are merit-based and non-repayable. See Section 6.4 for further details.

2.11 Institutional diversity

60. One of the issues discussed within the *Crossroads Review* was the need to encourage more diversity among higher education institutions, particularly universities, within Australia. The argument in favour of more diversity was that the regulation and funding of higher education in Australia constrained the development of new and different forms of providers to meet a range of student and community needs and prevented any Australian institution from joining the ranks of the best universities in the world. The arguments opposing this view highlighted the diversity that already existed within the higher education sector in terms of dimensions such as size, student profile, course profile, institutional age, prestige, funding sources and relative emphasis on research, teaching and engagement. For example, in 2005, universities ranged from enrolments of 4,052 domestic students (University of the Sunshine Coast) to 37,782 domestic students (Monash University) and 32 domestic doctoral research students (The University of Notre Dame) to 2,849 domestic doctoral research students (University of Melbourne). During the *Crossroads Review* in 2002, extensive data tables were produced to illustrate diversity among universities in terms of enrolments, income, performance in research and teaching, and staff profiles. Although now a little dated, these data tables still give a good overview of the characteristics and diversity of Australian universities.[4]

61. Over the past decade there has been an increasing tendency for universities which are similar to form groups or consortia. These serve a number of purposes including advocacy on behalf of the group, sharing good practice and benchmarking. There are four formal groups of universities – the Group of Eight (the older, research-intensive universities), the Australian Technology Network (ATN), the Innovative Research Universities (IRU) and the New Generation Universities (NGU). Regional universities comprise a less formal grouping.

62. Some of the reforms introduced through *Our Universities: Backing Australia's Future* at the end of 2003 are aimed at encouraging increased diversity through more flexible funding arrangements, the ability of universities to increase numbers of undergraduate fee-paying students, funding for teaching excellence and the extension of Commonwealth support to a broader group of providers and students. The Research Quality Framework will also encourage further diversity through concentrating research funding on quality and impact factors. See later Chapters for details.

63. One of the constraints to diversity of institutional type among universities in Australia is the set of criteria which must be met before a new university can be established. These criteria are contained in the *National Protocols for Higher Education Approval Processes* which include the processes and criteria for gaining approval to operate as a university in Australia. The Protocols specify that Australian universities must offer awards across a range of fields, teach in a way that engages with advanced knowledge and inquiry, and have a culture of sustained scholarship "extending from that which informs inquiry and basic teaching and learning, to the creation of new knowledge through research, and original creative endeavour". This has been interpreted as teaching across at least three broad fields of study and undertaking research, thus preventing the establishment of universities in Australia that only teach or only undertake research or are specialised in a narrow field of study. During 2004 and 2005, there has been discussion about changing these criteria to encourage more diversity among types of universities. An Issues Paper was distributed (DEST, 2005b) and a national workshop was held to clarify thinking on the topic. In November 2005, MCEETYA decided to retain

[4] See: http://www.backingaustraliasfuture.gov.au/publications/varieties_of_excellence/statistics.htm

the existing requirements for universities in terms of teaching, scholarship and research, with some variations targeting the need for new universities to build up teaching and research across at least three fields over an initial five-year period.

64. It is interesting to note that the discussions about diversity in higher education in Australia have focused mainly on diversity among universities. The non-self-accrediting providers add significant diversity to the sector, although it is more difficult to demonstrate this diversity because there is not yet any national data collection for these providers. National data collection for all higher education providers is being planned and will possibly commence in 2007 or 2008.

3 HIGHER EDUCATION AND THE LABOUR MARKET

3.1 Introduction

65. The focus of this Chapter is on the links between higher education and the labour market and policies to improve these links. It provides an account of trends in graduate employment outcomes, primarily for those with bachelor degrees, and a summary of recent policy developments over that period.

66. A 1995 DEST report forecasting the prospects for the Australian workforce in 2005 predicted, amongst other things, that employment opportunities for the coming decade would depend in part on the skill level of the occupation (DEST, 1995). It suggested that the employment of highly skilled occupations such as managers and health professionals who met domestic consumer needs would experience strong employment growth, along with those employed in export or import competing industries, such as engineers. The predictions were based on the assumption that "their services will be required by these industries as they produce new technologies, increase the value of their products and services and better meet consumer needs" (DEST, 1995, p.4). The report projections suggested that the proportion of people in the workforce with higher education qualifications would rise to 26% in 2005.

67. It is clear that the status of graduates has in fact become a crucial divide in the labour market. In 2005, the Australian Bureau of Statistics (ABS) *Survey of Education and Work* found that the proportion of workers with a non-school qualification – that is, both higher education and the vocational education and training sector – increased from 41% in May 1995 to 51% in May 2005. Those with a bachelor degree or above underwent the greatest increase – from 12% in May 1995 to 20% in May 2005 – that is, one in five workers, up from one in eight in 1990. The survey also shows that, of persons with a non-school qualification, 82% were in employment, compared with 63% of those without a non-school qualification. In 2004, 2.9% of bachelor degree graduates were unemployed, a slight improvement over the 3.1% level of 2003. The unemployment rate for these graduates has been steadily declining since 1993 when it was 4.8%. In contrast, for the population who did not complete year 12, the unemployment rate was 15% in 1993, declining to 10% in 2003 (ABS, 2004).

68. To set the broader context, the Australian workforce has grown rapidly over the last 20 years with an additional 3.2 million workers in a consistently strong period of economic expansion. Skills shortages have been a major ongoing issue over that period. One response has been the establishment of the National Industry Skills Initiative (NISI), supported by the Australian Government and industry since 1999. It targets national skills shortages on an industry-by-industry basis and provides a three to five year outlook as the basis for advice and market intelligence to DEST and other agencies, mainly for vocational education and training planning. While not directly influencing higher education policy, the Skills Reports from NISI identify drivers of change and skills in demand relevant to all sectors in Australia. In common with many countries, the Australian labour market has been responding to the forces of technological advancement, global competition and workforce ageing in a rapidly growing knowledge economy (Noonan, 2005).

3.2 Data sources

69. Graduate Careers Australia (GCA) is a key provider of data on the employment outcomes of graduates. It is a peak body with representatives from employers, universities and government. Although it is independent of Government, the GCA is supported with funding from the Australian Government. It provides research on the first destinations and salaries of graduates. It supports and encourages employment and career opportunities for graduates. The GCA conducts an annual survey of all graduates from Australian universities around four months after the completion of their qualifications. In 2005, 62% of Australian resident graduates replied to the survey.

70. Other sources of data include the Australian Bureau of Statistics (ABS) *Education and Work* annual reports and time series. Also, the Department of Employment and Workplace Relations (DEWR) uses its labour market research to provide regular *Skills in Demand Lists*. In addition, private recruitment organisations provide regular surveys of selected employers for industry-specific reports.

71. Direct comparison between the various data sources is limited, due in part to their different purposes and the different categories of occupations used. The GCA data is the most relevant to higher education but it is limited to the extent, firstly, that it relies on reasonable response rates to surveys across the fields of study and, secondly, that it is conducted soon after graduation. This gives a very useful snapshot of graduate outcomes but needs to be treated with some caution, particularly with respect to field of study variations.

3.3 The graduate labour market 1985-2005

72. The labour force participation trends related to educational attainment provide the most direct evidence for the relationship between the production of university graduates and their position in the labour market. A report on the national labour force trends from 1985 to 2005 by the National Centre for Social and Economic Modelling (NATSEM) provides a broad overview (AMP/NATSEM, 2005). NATSEM calculates that there was a net increase of more than 1.37 million in the number of people employed in Australia over the last 20 years. ABS data used by NATSEM for 1990 and 2003 shows changes in employment rates according to qualifications (see Table 3.1 in annex). The total number of graduates employed in Australia doubled from 955,900 in 1990 to 1.92 million in 2003.

73. While the labour market expanded by 18% from 1990 to 2003, the jobs available that did not require a formal qualification grew by only 4% and those with trade qualifications by 8%. In contrast, seven out of 10 new jobs went to university qualified graduates. The main growth area, in terms of work opportunities, was in the white collar professions. Of the 70% of new jobs taken by those with degrees, 43% went to women graduates despite this group representing only 5% of those employed in 1990. Indeed, nearly one in four working women now holds a university degree, up from one in 10 in 1990 (AMP/NATSEM, 2005, p.10).

74. The relative shortages and oversupply of graduates has, over many years, typically been the direct result of economic cycles, particularly with respect to the sudden high demand created by boom industries, often followed by an oversupply of graduates as the labour market needs level out or decline dramatically, as in the case of mining and information technology industries.

75. Using the DEWR Skilled Vacancy Index, Mitchell and Quirk (2005, p.7) show the annual growth over the period November 2004 to November 2005 set against the longer-term pattern of annual growth from 2000 to 2004 (see Table 3.2 in annex). The Table shows broad categories of professionals and identifies the health sector as an area of growing shortages with a 21% growth in vacancies in 2005 compared with an average annual growth of -5% from 2000 to 2004. It also shows a lower rate of growth in vacancies for 2005 in accounting, and marketing/advertising. Overall, the

rate of growth in professional vacancies for the 12 months to November 2005 was 6% as against an overall annual average growth of -11% for 2000 to 2004.

76. Complementing this is a recent survey of 1,000 employers by a national recruitment organisation (Hays, 2005). It identifies critical shortages in, for example, accounting and finance and information technology. These and similar shortages present challenges for both higher education and migration policies. For example, an analysis of skills shortages in the engineering profession notes that there has been a long-term decline in commencements of domestic students in engineering since 1997 (Birrell, Sheridan and Rapson, 2005). Although this was balanced to some extent by an increase in the number of overseas student enrolments it has not reduced the acute shortage of engineers, nor has the immigration programme had the desired impact given the global opportunities in that profession.

77. In March 2006, the Business Council of Australia (BCA) released its report on innovation and the importance of human capital, *New Concepts in Innovation - the keys to a growing Australia*, which highlights the significance of graduate skills. In the past the BCA has raised concerns that graduates are not taught problem solving skills and the abilities they develop are more suited to further study than jobs. The BCA raises business sector concerns about the "lack of skills regarding creativity, initiative, oral business communication and problem solving among graduates" and "the lack of entrepreneurial skills among Australians".

78. The BCA has expressed their aim to "ensure that curriculum at the primary, secondary and tertiary levels of the education and training system explicitly include the learning and assessment of employability skills and other capabilities that allow people to contribute positively to enterprise innovation, including communication, teamwork, problem solving, ongoing learning, creativity, cultural understanding, entrepreneurship and leadership skills". The Business, Industry and Higher Education Collaboration Council is currently exploring a number of possibilities to strengthen graduate employability skills and to address graduate skills shortages.

3.4 Labour market variations and education in relation to employment outcomes and earnings

79. The GCA surveys of bachelor degree graduates from 1994 to 2004 show the proportion of graduates who were in full-time employment, seeking full-time employment, in full-time study, or undertaking other activities (see Table 3.3 in annex). The 1994 rates of employment (46%) were the lowest for the decade with a correspondingly high proportion of those in part-time or casual employment seeking full-time employment (16%). The proportion that chose to go on with further full-time study – in a second undergraduate course or in postgraduate studies – was 24%. In 2000, when the proportion of graduates in full-time employment increased markedly to 55%, the numbers seeking full-time employment dropped to 11%. However, the proportion in full-time study rose to the highest level for the decade at 24%. In 2004, the proportion of recent graduates in full-time employment was 53%, down slightly from 54% in 2003. In 2004 the proportion of graduates seeking full-time employment while in part-time or casual employment increased slightly from 2000 to 13%. The proportion of graduates undertaking further full-time study increased to 23% in 2004.

80. The most recent graduate outcomes reported by the GCA in 2005 show an improved level of demand for new graduates (GCA, 2005). Further, of the 2004 graduates actually available for full-time employment in April 2005, 81% were in full-time employment and 12% were working on a part-time or casual basis while continuing to seek full-time employment. There was an ongoing drop in the percentage of those not working while seeking full-time employment, reflecting the national increase in demand for skilled staff.

81. One general indication of the link between higher education and the state of the labour market is the increase or decrease in the percentage of students who choose to continue in full-time study after

their undergraduate degree. Over the last decade, the GCA observes that generally between one-fifth and one-quarter of students go on with further study (GCA, 2005, p.11). It is argued that when the economy is strong, and more opportunities are available in the workforce, fewer graduates continue in full-time study. The exception in 2000 was noted above. In 2005, 22.5% of graduates elected to continue in full-time study as the job market improved, down from 23.4% in 2004.

82. The GCA reports that in recent years it is more likely for graduates seeking full-time employment to have been working on a part-time or casual basis than to have been without any work at all. This follows a more general trend for an increase in the numbers of full-time undergraduate students engaged in part-time paid work (McInnis and Hartley, 2002). The growth in part-time and casual employment is a more general phenomenon across the workforce as a whole due in part to an ageing population, the promotion of job-sharing arrangements, and the changing nature of work.

83. Table 3.4 in the annex shows the annual average rate of weekly earnings, median graduate starting salaries, and their relativity from 1995 to 2005 (GCA, 2005). Not shown in the table are the high relative salaries for graduates in the 1970s and 1980s when graduate salaries were generally close to, or above, 90% of weekly earnings. The figure of 80% in 1995 (the lowest recorded since 1977) occurred after a gradual five year decline. In the five years since the high level of relativity of 86% in 2001, a similar pattern of decline by 2005 is evident. These cycles can be related to broader trends in the economy, but now must be considered against the fact that the vast majority of new jobs are going to graduates.

3.5 Field of education variations

84. There are notable variations by field of education in the numbers of graduates seeking employment, and also in terms of their starting salaries. As noted above, this is partly explained by the timing of the survey in relation to some areas of employment where the peculiarities of the specific labour market come into play. For example, in some fields of study, corporate and government employers typically take on substantial numbers of graduates at the commencement of the calendar year, whereas other employers tend to fill places as they arise. Some occupations require supervised full-time employment upon graduation for professional registration. For example, medical graduates always have high proportions in full-time employment (98% in 2005) due to the requirement that they serve an internship in a public hospital. On the other hand, occupations with lower rates of employment may involve a different set of expectations. For example, a typically large proportion of visual and performing arts graduates are looking for full-time employment in a professional capacity (40%) and this largely explains the significant number of graduates from that field working in part-time or casual employment (27%) while looking for full-time employment.

85. In 2005, fields of study with high proportions of full-time employment that can be attributed to shortages in the labour market were mining engineering (99%), pharmacy (99%), initial nursing education (96%), civil engineering (96%) and surveying (95%). In contrast, 26% of computer science graduates were seeking full-time employment which, although relatively high, is improved over 2004 when it had reached 30%.

3.6 Impact of international labour markets

86. The extent and nature of global movements of knowledge workers has been the subject of considerable discussion and ongoing debate in Australia (Krause, McInnis and Baldwin, 2002). The results of various studies of ‘brain gain and brain drain’ have been somewhat inconclusive due in part to definitional problems. For example, ‘knowledge worker’ tends to be used interchangeably with ‘skilled worker’. Australia experienced a net gain of workers in the ‘highly skilled’ occupation category from the mid 1990s, but in most cases, the gains have been comparatively small. While it is

true that for the period 1995 to2000, Australia experienced a net loss of skilled workers in the Australian resident category, this was offset for almost every occupation by increases in permanent settlers in the same category.

87. Of the notable trends in specific occupational groups, the most significant net gain was that of company secretaries and building and engineering professionals, and the most obvious loss was workers in the ABS category of natural and physical science professionals. To inform immigration planning, the Department of Immigration and Citizenship (DIAC) produces a *Migrant Occupations in Demand List*. Over the last five years this has included, for example, information technology managers and computer professionals (in designated specialist areas only), accountants, nurses, midwives, pharmacists, physiotherapists, and sonographers. The issue of skills shortages is common to most western countries and in the search for graduates in some fields, such as finance and mining engineering, there is intense global competition for professionals.

3.7 The response of higher education institutions

88. The higher education sector has been highly responsive to the changing labour market opportunities for graduates. However, student demand is the most direct driver for higher education providers, not labour markets. That said, universities have not been passive providers responding to perceived gaps in the labour market. They have been highly active in a number of ways. In many fields of education, universities fill student places by aligning their courses with the promise of career opportunities. The clearest evidence of the responsiveness of the higher education sector is seen in the proliferation of 'purpose-built' vocationally-oriented degrees directed at specific labour markets in the professions and para-professions. It is also evident in masters by coursework degrees which have been among the fastest growing fee-paying programmes over the last 10 years. These professional programmes anticipate and sometimes generate changes in the labour market. They are also developed in direct consultation with the relevant professions. In the case of universities with strong ties to their regions, this extends to meeting professional education needs of specific local industries.

89. The emergence of combined degrees has been a particular feature of Australian undergraduate programmes. Courses combining, for example, Law/Arts, Engineering/Law, and Science/Engineering are now common and usually involve selective admissions. In some faculties, a majority of students are enrolled in combined degrees. The link to the labour market is significant. Students have been encouraged to position themselves to take up a broader range of options in the labour market for both the short and the longer-term. Combined degrees and other highly flexible course structures enable Australian undergraduates to make choices based on their own perceived future career needs. Many employers prefer to draw on graduates with a broad base of skills and understandings that, with in-house professional development, can be adapted to rapidly changing work contexts.

3.8 National policy responses and priorities

90. DEST provides the most direct policy links between the higher education sector and labour market developments. Included in the package of the *Crossroads Review* reforms was the introduction of funding agreements between the Government and higher education providers. Importantly, the conditions of the funding agreements also include the obligation on universities to sustain specialised and nationally significant courses (see Section 8.3). This applies to courses that prepare students for entry to any occupation that is experiencing a national skill shortage. Priority discipline areas have also been identified for additional student places and support (see Section 8.3).

91. Government policy influences the relationship between higher education and the labour market through other ministries and departments, particularly the Department of Employment and Workplace Relations (DEWR) and the Department of Immigration and Citizenship (DIAC). The latter has a key

role in developing policies to attract overseas graduates in areas of skill shortage. Skills recognition authorities and professional associations also have a clear interest in labour market policy. They monitor the extent to which universities are meeting the needs of their profession and set standards for professional registration. Many of these bodies have a direct influence on course design and the recognition of the qualifications of overseas graduates (see Section 8.4).

92. As part of the *Our Universities: Backing Australia's Future* package of higher education reforms, the Australian Government funded the Australian Council for Educational Research (ACER) to develop and administer a test of generic skills that can be assessed at university entry and exit level. The Business, Industry and Higher Education Collaboration Council (BIHECC), established in 2004, has focused on the potential of the Employability Skills Framework, an instrument developed by the Australian Chamber of Commerce and Industry and the Business Council of Australia. In 2005 DEST commenced work with the BIHECC to develop appropriate strategies and mechanisms to assist employers in graduate selection (see section 8.5).

93. The BIHECC advises the Australian Government on ways to increase collaboration between the higher education sector, the business and industry sector, and the wider community. Council membership includes high-level leaders drawn from peak representative bodies in the business, industry and higher education sectors.

4 THE REGIONAL ROLE OF HIGHER EDUCATION

4.1 Background

94. As described in Chapter 1, Australia is a large country with a relatively small and very dispersed population outside the major metropolitan centres. Maintaining the full range of services to regional areas is a challenge for the Australian and State and Territory Governments. This Chapter describes the issues related to regional provision of higher education and the range of mechanisms in place to maintain that provision and contribute to regional development.

95. One significant driver for maintaining higher education provision in regional areas is the relatively lower educational participation rates for students from rural and isolated backgrounds than for students in metropolitan areas. Overall educational attainment is also lower among regional communities. Thus, young people in regional areas are more likely not to have parents who have participated in higher education and often their financial circumstances act as a deterrent to higher education, particularly if this involves the added expense of moving away from home.

96. Students from rural and isolated areas form one of the defined equity groups whose access, participation, success and retention in education are monitored (see Chapter 6). The total number of students in higher education from rural and isolated areas has grown steadily since 1991. In 2004, rural students constituted 17% of domestic students and isolated students were 1% (a total of 18% from rural and isolated areas). This compares with approximately 30% of the Australian population living in rural areas and isolated areas, thus demonstrating that participation by rural and isolated students is less than expected from their population share. Put simply, current estimates suggest that, on a per capita basis, for every 10 urban people who attend university, roughly six Australians from rural or isolated areas do.

97. The second significant driver for maintaining higher education provision in regional areas is the contribution this makes to regional development by way of general economic and social benefits as well as opportunities to address skills shortages. For this reason, the Business and Higher Education Round Table has taken an interest in regional provision of higher education and, in 2003, published a newsletter on this topic that included case studies from a range of universities (B-HERT, 2003).

98. In 2001, an atlas of higher education was prepared to highlight those regional areas least well served by higher education and to assist in planning for educational provision in regional areas (Cumpston et al., 2001). The atlas identified each area as either a net exporter or net importer of higher education students. It also provided a profile of each region with respect to age, employment, educational qualifications and study patterns.

4.2 Regional universities and regional campuses

99. There is no definition of a regional university in Australia although a number of universities situated outside the metropolitan centres at times form an informal grouping known as regional universities. Some of these regional universities have centres or campuses in the major cities, often to attract international students. The situation is further complicated by the large number of metropolitan universities that have one or more campuses or centres located in regional areas.

100. There are many situations in which regional university campuses or centres share facilities with TAFE institutions. Some of these shared campuses or precincts have been effective in broadening educational opportunities in regional areas in cost effective ways. Many of these regional campuses and centres have also been very effective in developing strong links with local government and regional development organisations.

101. Regional universities and all those universities that have regional campuses face increasing pressure to offer a broad range of courses and services that extend beyond those that would be considered viable for the population being served. Institutions that withdraw courses or reduce services for financial reasons are subjected to concerted community campaigns advocating against such moves.

102. Rural communities see a university presence within their community as a way of encouraging their young people to stay within the region rather than move to the metropolitan cities. However, research on the participation in higher education of young people from rural and isolated backgrounds suggests that once the decision to attend university is made, proximity of a university campus is not the determining factor. It is more likely that the lower participation in higher education of young people from rural and isolated areas is related to socio-economic factors and general attitudes to the value of education within rural communities (James et al., 1999; Alloway et al., 2004). The most successful universities in regional areas are those that develop strong relationships with their communities and build positive community attitudes to education as a long-term goal.

103. Many universities in regional areas have missions that are closely linked to their regions and this link is enshrined within the legislative acts under which they operate. The governing bodies of these universities also have strong regional membership.

104. Australia has been a leader in the provision of distance education to serve regional communities. Distance education has been offered through traditional universities all of which also undertake research and cater for internal, campus-based students. For example, the University of New England in the regional centre of Armidale (approximately 500 km from Sydney) was founded in 1938 as a university college of the University of Sydney. It became a fully independent university in 1954 and commenced external or distance teaching in 1955. Still today, over 70% of its students study by distance. Other major providers of distance education are Charles Sturt University, Deakin University and the University of Southern Queensland. Although some regional universities specialise more in distance education and have the majority of their students studying through this mode, the introduction of e-learning has meant all universities offer at least some courses through forms of electronically supported distance delivery or flexible delivery. Funding for internal and external students is identical and in Australia, unlike some other countries, there is parity of esteem between distance education and other forms of delivery, including on-campus provision.

4.3 Initiatives to support regional provision of higher education

105. The Australian Government, recognising that regional universities incur additional costs because of their location, find it more difficult to maintain economies of scale, and are remote from industry support and funding, introduced in 2004 a regional loading into university funding. This is providing a total of A$146 million over five years on a graded scale to universities located outside metropolitan areas.

106. The Collaboration and Structural Reform Fund (CASR) was established in 2005 to achieve better higher education outcomes in teaching, learning, research and innovation by promoting structural reform and collaboration in the higher education sector (see section 8.3). From its inception CASR has been an agent for change in regional areas across Australia, as it is aimed at encouraging collaboration between universities and their regional or local communities, and other organisations

including local and State or Territory governments. A number of CASR projects have done this, for example, the joint project between the University of Tasmania and local government in the Cradle Coast region in north-west Tasmania to establish an Institute for Enterprise and Regional Development. The focus of the Institute is regional renewal: it aims to drive the transformation of the region from a condition of social and economic disadvantage to a thriving 21st century community. Partnerships between tertiary institutions and industry can be further demonstrated by the Victoria University's 'Re-engineering Engineering' project. The project has two aims: to develop new industry-led and problem-based engineering, and to allow for vocational training pathways from TAFE and other providers. The project involves collaboration with industries that face professional and skill shortages.

107. Regional collaboration has been strengthened through a number of initiatives such as the Australian Universities Community Engagement Alliance project for which the Australian Government has provided establishment funding. The Alliance will create the opportunity for peer and community discussion, and promote social, environmental, economic and cultural development in communities across Australia.

108. As part of the 2006-07 Budget, the Australian Government will provide A$10 million over four years to support small businesses operating on university campuses. Universities with regional campuses will be able to apply for funds for initiatives to attract small businesses to their campuses.

109. The Capital Development Pool programme provides funding for capital projects, including teaching infrastructure to eligible higher education providers for capital projects that support teaching and learning (see section 8.3). One of the priorities identified for funding in this programme has been the development of campuses in regional centres and suburban growth corridors, including the development of ICT infrastructure to support flexible delivery to broaden regional access. Funding of A$45 million was allocated to higher education providers through this programme late in 2005 for projects in 2008. The majority of these funded projects are new and continuing campus developments in regional centres and suburban growth corridors.

110. The higher education review conducted in 2002 and 2003 identified broadband access as a particular issue for regional campuses and regional universities. Several programmes committed funds to address these problems and now regional campuses appear to be better served by broadband. In 2002, the Minister for Education established the Higher Education Broadband Advisory Committee and subsequently A$423 million was committed over 2002 to 2004 to establish the Australian Research and Education Network as the next generation communications network for universities and the wider research community. Much of this funding was directed towards upgrading communications networks for regional universities.

111. The Regional Protection Scheme (RPS) helps to protect designated regional higher education providers from losses of income arising from the Australian Government's 1999 *Knowledge and Innovation* reforms to the funding of university research and research training (see Chapter 5). The RPS was established in 2001 and funding has been extended from 2004-05 through to 2007-08. The budget over the four extra years of funding is A$12 million, compared with A$11 million that was allocated through the Scheme over the three previous years. The RPS recognises the important role that regional universities play in their local communities and is designed to assist them to maintain and strengthen their research capabilities so they can conduct competitively funded research which is of benefit to regional Australia.

112. The additional Commonwealth supported places introduced from 2002 included a number earmarked for regional campuses. From 2002, an additional 670 fully-funded commencing university places were provided to regional universities and regional campuses of metropolitan-based

universities. By 2005, this amounted to an additional 1,830 places each year as students moved through their courses.

113. In the 2000-01 budget, the Australian Government announced an additional 100 Commonwealth supported student places to be filled by medical students under a new bonded scholarship scheme to increase the number of doctors in rural areas. On completion of basic medical training, the students who receive these scholarships will be expected to serve in rural Australia for a six-year period.

114. The Commonwealth Department of Health and Ageing provides funding to establish and support University Departments of Rural Health. These encourage students of medicine, nursing and other health professions to pursue a career in rural practice by providing opportunities for students to practise their clinical skills in a rural environment. The programme also supports health professionals currently practising in rural settings. There are 10 University Departments of Rural Health in regional areas of Australia.

4.4 Higher education and regional development

115. As well as ensuring adequate provision of higher education for reasons of equity and access, there is also a strong acknowledgement of the social and economic benefits brought to regional areas by local universities. Several studies have demonstrated these benefits (see for example, Cabalu et al., 2000). Garlick (2000, p.17) highlighted the leadership role that higher education institutions can play in regional economies.

> *There are few organisations outside the university or higher education institution today that have the interest, independence, authority, networks and information, critical mass and longevity of existence to take on an economic development leadership role in the region, free of outside controls.*

116. Phillips Curran (2001) used the method developed by Cabalu et al. (2000) in their assessment of the total direct and indirect economic impact to the State of South Australia of the three South Australian universities, which in 1999 they estimated to be A$1.74 billion. In their submission to the *Crossroads Review* of higher education, the Business and Higher Education Round Table (B-HERT) highlighted how regional communities look to their universities to "provide them with skills, knowledge, research and development activities, intellectual argument and analysis" (B-HERT, 2002, p.14).

117. Cumpston et al. (2001) drew attention to the broad range of benefits that universities bring to regional communities, including:

- economic competitiveness – by stimulating economic development through innovation, technology transfer and research and development;
- urban and rural regeneration – through their roles as a large employer and business entity in the region;
- regional labour markets – through providing the human capital to develop regions;
- access to learning – by strengthening educational participation;
- culture – by contributing to local cultural activities and quality of life;
- heath and social wellbeing – through educational programmes and infrastructure;

- sustainability – by the knowledge, attitudes and expertise they bring; and
- regional governance – as honest brokers in a region's development.

4.5 Emerging issues

118. There are some significant issues emerging within higher education that may impact on the regional provision of higher education. Early indications show a likely shift in demand by students for higher education places in 2006 away from regional universities towards the more prestigious metropolitan universities. The exact cause of this shift is not fully understood, but fee deregulation and moves to increase the differentiation among institutions may be contributors. Another factor is likely to be the stronger employment market and the associated tendency for young people in regional areas to take up employment when it is available rather than pursue further studies.

5 THE ROLE OF HIGHER EDUCATION IN RESEARCH AND INNOVATION

5.1 Introduction

119. This Chapter provides information relating to the role of higher education in research and innovation. Since 1999 in particular, there has been considerable debate and substantial public policy reform in Australia in relation to:

- levels of public research funding;
- national research priorities;
- the assessment of quality and impact of publicly funded research;
- collaboration between universities, other research agencies and industry; and
- the commercialisation of intellectual property generated by publicly funded research.

120. This has occurred within the broader context of the Australian Government's aim to build a strong and vibrant national innovation system.

5.2 The teaching – research balance

121. There are no national surveys or statistics collections that provide for a direct comparison between teaching and research effort, in staff time or expenditure, within the Australian higher education system. It is possible, however, to estimate research expenditure as a percentage of total expenditure and human resources devoted to research and development as a percentage of total staff full-time equivalence by combining data from a number of different statistical collections.[5]

122. In 2002, approximately 32% of national university expenditure was attributed to research and experimental development. This figure has remained quite constant over time, with a comparable figure of 31% recorded in 1996. The percentage of expenditure attributed to research and development varies considerably across universities, ranging from a high of approximately 70% in one exceptional instance to a low of 4%. The median percentage was 25%. These figures reflect the considerable diversity within the Australian higher education system with regard to research intensity. This in turn partly reflects the historical development of the sector. Some institutions have long histories as teaching and research universities, while others have been established only in the last 15 years or so as the result of amalgamations of prior Colleges of Advanced Education and Institutes of Technology, neither of which were funded to undertake research.

[5] The DEST annual *Higher Education Finance Statistical Collection*, the DEST annual *Higher Education Staff Statistical Collection* and the Australian Bureau of Statistics biennial *Survey of Research and Experimental Development*.

5.3 Major sources of research funding

123. The total expenditure on R&D in Australian universities in 2002-03 was A$3.43 billion, representing 27% of total Australian expenditure on R&D (see Figure 5.1 in annex).

124. Total R&D expenditure in the higher education sector (HERD) increased from A$1.53 billion in 1986-87 to A$3.43 billion in 2002-03 (in constant 2002 prices). In constant prices, this equates to a more than two-fold increase in expenditure over the period (see Figure 5.2 in annex). Australia's HERD as a percentage of GDP (0.45% in 2002) is slightly above the OECD average (0.41% in 2002), having risen from 0.32% in 1986.

125. The Australian Government is the major source of research funding for universities, representing 86% of university research expenditure in 2002-03. State and local governments fund 3% of the research expenditure, while the industry and business sectors fund 5%.

126. Australia's business expenditure on R&D (BERD) as a percentage of GDP (0.89% in 2003) falls considerably below the OECD average (1.51% in 2003), though the gap has been closing with the average annual real growth rate for the decade to 2003 exceeding the OECD average. Total BERD almost trebled between 1986-87 and 2002-03, while the percentage contribution of business to higher education R&D expenditure doubled from 2% to 5%. The Government has introduced a number of programmes over recent years to encourage greater investment in R&D by the business sector.

5.4 Current research funding allocation mechanisms

127. The Australian Government provides support for higher education research, research training and research infrastructure through peer reviewed competitive research funding schemes and through performance-based block research funding schemes and targeted programmes. Competitive research funding schemes are administered by a number of bodies, the two largest of which are the Australian Research Council, which is part of the Education, Science and Training portfolio, and the National Health and Medical Research Council, which is part of the Health and Ageing portfolio.

128. Performance-based block research funding schemes are administered by DEST and are appropriated through the *Higher Education Support Act 2003*. The main schemes are the Research Training Scheme (RTS), the Institutional Grants Scheme (IGS) and the Research Infrastructure Block Grants (RIBG) Scheme. These schemes are described below.

129. In 2003 the RTS, IGS and RIBG were reviewed as part of an evaluation of the Australian Government's *Knowledge and Innovation* reforms (DEST, 1999) and some changes were introduced to the RTS and the IGS as a result. The Government announced *Knowledge and Innovation: a policy statement on research and research training* in December 1999, which provided a new policy and funding framework for higher education research and research training.

Peer reviewed competitive research funding schemes - Australian Research Council

130. The Australian Research Council (ARC) is an independent statutory agency within the Education, Science and Training portfolio of the Australian Government. The ARC plays a key role in the Australian Government's investment in research and innovation.

131. The ARC has responsibility for administering the National Competitive Grants Programme (NCGP), which supports research and research training in all fields of science, social sciences and the humanities (with the exception of clinical medicine and dentistry). The Minister for Education, Science and Training has responsibility for determining the amounts of financial assistance to be made available under the two broad programme streams in the NCGP, Discovery and Linkage, and

for approving financial assistance to individual researchers, teams and research centres. The ARC provides advice to the Minister for Education on these and a range of other research-related matters.

132. Financial assistance is provided under the NCGP on a competitive basis and research proposals are the subject of national and international peer assessment. In 2004-05, A$481 million was allocated through the NCGP.

Peer reviewed competitive research funding schemes - Health and Ageing Portfolio

133. Along with other research organisations conducting health and medical research, higher education providers are able to compete for funding allocated within the Health and Ageing Portfolio including by the National Health and Medical Research Council (NHMRC). Research proposals are subject to peer review. The research income obtained by higher education providers from the Health and Ageing portfolio and the NHMRC, as reported by higher education providers in their research income returns for 2003, totalled A$226 million.

Performance-based block research funding schemes

Research Training Scheme

134. The Research Training Scheme (RTS) provides block research funding, on a calendar year basis, to eligible higher education providers to support research training for students undertaking doctorates and masters degrees by research. In 2005, changes to the RTS were implemented which have provided universities with greater funding certainty and allow providers to streamline their administration of their higher degree by research (HDR) students. The main change was the replacement of a 5% cap on RTS (and IGS) funding with a 5% safety net. The removal of capping means that no university will lose more than 5% of RTS (or IGS) funds from one year to the next. Additionally, high-performing universities can increase their allocations by more than 5%. Completions, research income and publications make up the performance index where HDR student completions are weighted at 50%, research income at 40% and research publications at 10%.

135. The total funding allocated by the Australian Government in 2006 to Australian universities through the RTS equalled A$562.6 million.

Institutional Grants Scheme

136. The Institutional Grants Scheme (IGS) provides block research funding, on a calendar year basis, to eligible higher education providers to support research and research training activities. The IGS may be used to fund any activity related to research and higher education providers have discretion in the way they spend their IGS funds. The IGS allocation mechanism reflects providers' relative success in a performance index comprising research income (60%), Commonwealth funded research student load (30%) and research publications (10%).

137. The total funding allocated by the Australian Government in 2006 to Australian universities though the IGS equalled A$296.1 million.

Research Infrastructure Block Grants Scheme

138. Research Infrastructure Block Grants (RIBG) provide block research funding on a calendar year basis to eligible higher education providers to enhance the development and maintenance of research infrastructure. RIBG funds are allocated to eligible higher education providers based on their relative share of Australian competitive grant income.

139. The total funding allocated by the Australian Government in 2006 to Australian universities through the RIBG equalled A$199.9 million.

Australian Postgraduate Awards (APAs)

140. The APA Scheme provides block grants, on a calendar year basis, to eligible higher education providers in support of training of higher degree by research students. APA scholarships are awarded by institutions to students of exceptional research potential undertaking a Doctorate or Masters by research degree. APAs are provided to assist with students' general living costs.

141. Awards are available for a period of two years for a Masters by research degree or three years, with a possible extension of six months, for a Doctorate by research degree. Award holders receive an annual stipend and may also be eligible for other allowances. The total funding allocated by the Australian Government in 2006 to Australian universities through the APA Scheme equalled $93 million in 2006.

142. The Australian Government is introducing a new performance-based block funding scheme from 2007, the Commercialisation Training Scheme (CTS), which will support research commercialisation training for domestic higher degree by research (HDR) students. These students, referred to as 'CTS students', will be exempt from payment of student contribution amounts and tuition fees for units undertaken as part of CTS training. Approximately $5 million will be allocated to participating Australian universities under the CTS each year.

143. The Government's new National Collaborative Research Infrastructure Strategy (NCRIS), a key initiative of the 2004 *Backing Australia's Ability – Building our Future through Science and Innovation* package, is providing A$542 million over seven years (2004-05 to 2010-11) to targeted, high return investments in world class facilities that will be accessible by researchers across Australia and will enable fuller participation by Australian researchers in the international research system. NCRIS follows on from the major programme of investments provided through the SII and the MNRF programme.

144. In November 2006, the Minister for Education, Science and Training announced the allocation of A$500 million of NCRIS funds to develop national infrastructure platforms in nine areas of research capability (bio-molecular platforms; integration biological systems; characterisation; fabrication; biotechnology products; national biosecurity network, optical and radio astronomy, integrated marine observing system, structure and evolution of the Australian continent) and provisional allocations, pending the development of investment plans, in three more areas (population health and clinical data linkage; terrestrial ecosystems research network and platforms for collaboration).

5.5 Establishing National Research Priorities

145. Australia's National Research Priorities were announced by the Prime Minister in late 2002 and were enhanced and refined in 2003 to take greater account of the contributions of social sciences and humanities research. The National Research Priorities were identified by the Australian Government through an extensive process of consultation as areas that can be expected to deliver significant social, economic or environmental benefits to Australia, and where a whole of government focus has the potential to improve research and broaden policy outcomes.

146. The National Research Priorities are An Environmentally Sustainable Australia; Promoting and Maintaining Good Health; Frontier Technologies for Building and Transforming Australian Industries; and Safeguarding Australia. These Priorities are broadly based, thematic and multi-

disciplinary in nature. Each of the Priorities is underpinned by a range of priority goals that provide focus and help flesh out the broad themes.

147. The National Research Priorities initiative, an important element of the Australian Government's *Backing Australia's Ability* initiative, was established as a new national research priority-setting mechanism to complement existing processes. In keeping with the 'whole-of-government' approach to setting priorities, all Australian Government research and research funding bodies are expected to contribute to the Priorities, to the extent possible within their mandates. Industry R&D programmes and university block grants are not included. Agencies are expected to enhance the scale and focus of research effort in the Priority areas, by increasing the level of inter-institutional and inter-disciplinary collaboration, and by fostering networks of research activities.

Institutional research strengths

148. The adoption of national research priorities reflects an international trend for countries to pursue targeted investment in areas of research strength that will translate into competitive advantage. In the Australian context, Research and Research Training Management Reports (RRTMRs), which were introduced as part of the 1999 *Knowledge and Innovation* reforms, have been used as tools to encourage universities to adopt a strategic approach to the setting of goals and management of their research and research training activities (among other objectives). For the 2005 RRTMRs, universities were asked to provide research and research training performance information against self-identified areas of research strength, where they are competitive at local, regional, national and/or international levels, and to demonstrate their institution's distinctive contribution to the national research and innovation system.

Regional development

149. The Australian Government recognises that regional higher education institutions play vital economic, social and cultural roles in their local communities (see Chapter 4). They generate employment and contribute to the development of regional Australia. The Regional Protection Scheme was introduced to help protect designated regional universities from losses of income arising from the 1999 *Knowledge and Innovation* reforms to the funding of university research and research training. The Government has continued this support, aimed at assisting regional universities to build their capacity to carry out research that is of benefit to Australia's regional areas. The scheme is capped at A$3 million per year, adjusted over time (see Section 4.3).

Research in partnership with industry

150. There has been a concerted push by the Australian Government to encourage universities to work in closer collaboration with industry and business to foster innovation. This is discussed further below.

5.6 Assessing the quality and effectiveness of research

151. The current higher education policy framework provides for the assessment of the quality of research through a number of mechanisms. Most of these mechanisms rely on broad assessments of quality or proxy measures of quality, such as research inputs and outputs, rather than direct measures of the impact of research. The Australian Government is planning significant reform in this regard and this is described further below.

Broad assessments of quality

152. In 2004 the Australian Government introduced a new accountability framework for publicly funded institutions called the Institution Assessment Framework (IAF) (see Section 8.3). The IAF produces an across-the-board assessment of institutional achievements, including in research and research training, based on quantitative and qualitative data from universities and external sources. It examines overall performance in relation to higher degree by research student load, research income by source of funds, research-active staff and qualifications of higher degree by research student supervisors, and examines performance for each distinctive institutional research strength identified by the institution. In preparation for the IAF process, each institution can be required to prepare a Research and Research Training Management Report (RRTMR) that includes qualitative and quantitative information about its research planning and performance. The IAF does not impact on funding.

153. The Australian Universities Quality Agency conducts audits of Australian universities every five years (see Section 9.5). The audits focus on assessing performance against the institution's own stated objectives and strategic priorities, including in the area of research and research training. The audits utilise both qualitative and quantitative methods to assess the university's effectiveness in defining its distinctive research profile, setting aligned strategic goals and targets, and implementing strategies to achieve those goals and targets. Audit outcomes do not impact on funding but institutions are required to report on how they address recommendations.

Current input and output measures of quality

154. As previously described, performance-based block funds in support of research and research training use measures that are proxies of quality. Research income derived from Australia's national competitive research grant schemes acts as a proxy measure of quality by virtue of the peer review, which is a key tenet in the assessment of research proposals. Income derived from business and industry acts as a proxy measure of the quality of research and its commercial application and/or broader utilisation.

155. Research publications measures are peer-review based and, similarly, higher degree by research student completions can be viewed as an indirect proxy of research quality, given it includes judgement of the quality of students' major research outputs (i.e. theses).

Proposals for the future assessment of research quality and impact

156. The Australian Government is committed to ensuring that resources provided to carry out research are directed to areas of research excellence that generate wider benefit to society. A clear rationale for examining the quality and impact of research is that high quality research has the best chance of success in a global market to ensure a further deepening of Australia's innovation base. The Australian Government has therefore decided to implement a Research Quality Framework (RQF) that will enable a more consistent and comprehensive approach to assessing the quality and impact of research undertaken in Australian universities.

157. In December 2004, the then Minister established an Expert Advisory Group (EAG), chaired by Professor Sir Gareth Roberts who led the UK-wide review of research assessment, with the brief to develop a preferred model for an RQF in consultation with the higher education sector and publicly funded research agencies. In December 2005, the EAG released its *Final Advice* (DEST, 2005e) on a preferred model for the RQF . Following the release of the *Final Advice* the Minister established the RQF Development Advisory Group, chaired by Australia's Chief Scientist, Dr Jim Peacock AC, to further the RQF process. The RQF Development Advisory Group reported to the Minister at the end

of October 2006. On 14 November 2006 the Minister announced that the Australian Government will implement an RQF in 2008 and released the Development Advisory Group's *Recommended RQF* (DEST, 2006).

158. The Development Advisory Group revised the preferred model developed by the Expert Advisory Group as follows:

- Research Groups: will form the unit of assessment for the RQF and will define the focus of their research activities by 4-digit Research Fields, Courses and Disciplines (RFCD) codes and appropriate key word descriptors.

- Attribution: the research outputs and body of work listed by an academic during the six-year assessment period will be attributed to the institution at which the researcher is employed at the time of the Staff Census Date (31 March 2007), not at the time of production/publication of the outputs.

- Quality assessment augmented by metrics: the peer review assessment process will be assisted by the inclusion of relevant and appropriate quantitative measures of research quality which will be applied to a Research Group's "body of work" (that is, the four best outputs per researcher and the full list of research outputs for the Group). These measures may be a combination of generic and panel-specific measures to be determined by the Assessment Panels and communicated to the sector through the RQF Guidelines.

- Five-point assessment scale for both quality and impact: the RQF will produce separate assessment and reporting for Quality and Impact, against a five-point rating scale for each.

- Accommodating longer-term impact: work judged for impact must achieve a threshold quality rating of '2'. Impact may be related to original research conducted in the preceding six years provided the research can be shown to have a direct relationship with the research being assessed for quality.

- An additional Assessment Panel has been created to better cater for the professional disciplines.

159. The RQF will still allow universities to choose the particular research groupings they wish to put forward for assessment. Universities will provide evidence portfolios comprising the outputs of eligible researchers within the nominated research groupings. Each Research Group must submit one Context Statement as the foundation of its Evidence Portfolio, which includes:

- information about the type, composition and focus of the Research Group;

- supplementary factual information that demonstrates the capacity of the Research Group— for example:

    - the total number of research outputs organised by research category;

    - evidence of collaborative activity;

    - editorial or peer review service to journals;

    - the numbers of research-only staff, Early Career Researchers and HDR student load and completions;

    - HDR employment destinations (where known); and

- esteem indicators, such as the number of Fellows of Learned Academies and Australian Research Council (ARC) Federation Fellows;

- a statement of the Research Group's competitive grant income in the following categories:
  - DEST category 1;
  - international sources (peer reviewed only); and
- information linking any previous research of the Group to its impact in the assessment period.

160. The basis of the quality assessment for a Research Group will be:

- the four best Research Outputs for each researcher in the Group;
- the full list of Research Outputs for the Group produced in the six-year assessment period; and
- the evidence of research quality provided as part of the Context Statement.

161. The basis of the impact assessment for a Research Group will be an Impact Statement of up to 10 pages, including:

- an evidence-based statement of claims for the Group against generic and panel-specific impact criteria, including verifiable indicators in support of those claims;
- up to four case studies that illustrate the Group's claims of impact; and
- details of end users who can be contacted by Assessment Panels to verify the Research Group's claims.

162. Evidence portfolios will be assessed by 13 disciplinary assessment panels. Assessment Panels will have 12 members comprising Australian experts, a minimum of three international experts and a minimum of three end users. A five point rating scale will be used for measuring both "Quality" and "Impact". The results of the RQF will be reported and internationally benchmarked.

163. The RQF will come into operation in 2008 (trials will take place in 2007), with the next RQF exercise to be undertaken six years later in 2014, or earlier depending on the outcomes of an evaluation following the first RQF. Under this timeframe, data gathering and assessment will take place in 2008, with financial consequences to flow from 2009.

164. More broadly, research that is of high quality and impact depends on a number of factors, including ready access to the results of other research. Research will have a limited impact if other research providers, business and industry groups and the community are unaware that the research exists and are unable to access it. In the Australian research system, collective efforts are underway – by Government, institutions, organisations and individuals – to change practices in managing research outputs and infrastructure. This will enable those outputs to be discoverable, accessible and shareable. The aim is to improve the quality of research outcomes, to reduce duplication and better manage research activities and reporting. These efforts, collectively referred to as the Accessibility Framework, are being supported by Australian Government funding for technology demonstrator projects and enabling infrastructure, for example, to support the development of state of the art institutional repositories to store data and scholarly publications. Developments related to accessibility complement the RQF initiative.

165. Existing investments in research infrastructure are also providing the foundations for improving Australia's e-research capabilities. An e-research Coordinating Committee was established in April 2005 tasked with developing an e-research strategic framework (broadly modelled on the United Kingdom's e-Science initiative) and which reported in April 2006. E-research uses advanced technologies to improve access to, and management of, research data and provide better remote access to major research facilities, a key issue for Australian researchers. As such, the development of an e-research strategic framework is regarded as an important underpinning element for the successful implementation of the National Collaborative Research Infrastructure Strategy, the RQF and the Accessibility Framework.

5.7 Changes in research funding and effort

Research funding

166. Research and innovation policy reform has been a significant focus of the Australian Government since 1999. Total Australian Government funding to the higher education sector through the ARC, performance-based block funding and other support mechanisms increased by 40% in the 10 years from 1996 to 2006, from A$1.6 billion to A$2.26 billion (see Figure 5.3 in annex). Universities have also benefited from substantial increases in Australian Government support for R&D through the Health and Ageing portfolio. Total funding to the NHMRC and other health programmes more than doubled from A$167 million in 1996 to A$432 million in 2006.

167. The 1999 *Knowledge and Innovation* reforms introduced performance-based formula funding for university research block grant funding schemes, including research training allocations, in order to encourage a diverse higher education system and reward performance as measured by research income, research student enrolments and completions and publications (DEST, 1999).

168. The reforms also included a significant reorganisation of the ARC and its national competitive grants programme. The role of the council in linking university research with the national innovation system and with business and government was strengthened. The national competitive grants programme was restructured into two key elements. The *Discovery* element of the programme recognises the importance of Australia's universities as major sources of fundamental research, dedicated to the creation of knowledge, within a wider framework that encourages links with users of the research. The *Linkage* element addresses impediments to national and international collaboration necessary for Australian research to contribute to a strong and vibrant knowledge economy. It is aimed at ensuring better collaboration with researchers in other universities and across the innovation system, particularly with industry and business.

169. The *Backing Australia's Ability – An Innovation Action Plan for the Future 2001 (BAA)* initiative was introduced by the Australian Government in 2001, to promote science and innovation (DEST, 2001). The initiative was the largest (A$3 billion over the five years 2001-02 to 2005-06) and most comprehensive set of measures ever put in place by an Australian Government in support of science and innovation. BAA included significant increases in funding for university research: a doubling of funding for the national competitive research grants administered by the ARC; an increase of A$337 million over five years for the existing Research Infrastructure Block Grants Scheme; and an extra A$246 million over five years for the Systemic Infrastructure Initiative. It also included funding for an Information and Communications Technology (ICT) Centre of Excellence and a National Stem Cell Centre. In addition to supporting R&D, the Action Plan contained a number of initiatives aimed at 'the commercial application of ideas' (discussed further below).

170. *Backing Australia's Ability* also introduced the Postgraduate Education Loans Scheme (PELS), which extended the concept of income contingent loans to postgraduate coursework students in a

similar arrangement to that already available for undergraduate students in the form of the Higher Education Contribution Scheme (HECS). PELS has now been subsumed by the FEE-HELP scheme (see Section 7.3).

171. In 2004, the Australian Government announced an extended package *Backing Australia's Ability – Building our Future through Science and Innovation* totalling A$5.3 billion over seven years from 2004-05 (DEST, 2004b). This package contained a number of commitments, including maintenance of the doubling of funding to the ARC to 2010-11; increases to the Research Infrastructure Block Grants programme of A$555 million to maintain support at 20 cents for each dollar of Australian competitive research grant income; and substantially increased funding for the ICT Centre of Excellence.

Research effort

172. The distribution of higher education research effort by field of research, as measured by percentage of total R&D expenditure, remained relatively constant over the 10 years from 1992 to 2002, however the science-based fields increased their share by four percentage points, while the non science-based fields decreased their share by the same amount (see Figure 5.4 in annex). The medical and health sciences continue to be the single field attracting most research effort (25% in 2002), followed by the biological sciences (12%), engineering and technology (11%) and agricultural, veterinary and environmental sciences (7%).

173. In the 10 years to 2002, the higher education sector reported a significant decline in the percentage of R&D expenditure directed to 'non-oriented research' (see Figure 5.5 in annex). This may reflect a change in research behaviour, but may also be the result of enhanced university data collection systems. In 2002, research effort was principally directed towards the following socio-economic objectives: health (28%); non-oriented research (21%); social development and community services (10%); environment (6%); manufacturing (6%); economic framework (5%), and information and communication services (5%).

5.8 Policies and methods to stimulate research competition

174. Current performance-based block funding grant schemes act to put universities in competition with each other for research funding.

175. In addition to universities, the Australian Government directs R&D funding towards a number of major publicly funded research agencies (PFRAs), including the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Australian Nuclear Science and Technology Organisation (ANSTO), the Defence Science and Technology Organisation (DSTO) and the Australian Institute of Marine Science (AIMS). They are funded by the Government through triennial funding agreements and are major contributors to the national research effort. In 2002, for example, CSIRO had 6,400 staff, with more than 1,700 holding PhDs and CSIRO ranks in the top 1% of the world's scientific institutions in 11 of 22 disciplinary fields of research. The PFRAs conduct much of their research in partnership with universities as well as with other science agencies and private companies. The Government has recognised, however, that a strong national innovation system will require greater efficiencies and coherence, with stronger collaboration between universities and other research agencies.

176. In the Government's recent review of higher education, the *Crossroads Review*, some universities argued that Australian Government research funding directed to the PFRAs should be opened to greater competition and made accessible to universities.

177. The Government, however, has focused its attention on increasing collaboration between universities and other publicly funded research agencies and has commissioned a number of reviews on this topic. The *Review of Closer Collaboration between Universities and Major Publicly Funded Research Agencies*, for example, in 2003 examined models for closer collaboration, commercialisation and funding, to improve research outcomes from more efficient use of resources through enhanced critical mass and strengthened institutional performance (DEST, 2004c). The Review findings supported the maintenance of the current differentiated approach to funding universities and PFRAs via existing block funding arrangements. The development of a system-wide performance measurement system for PFRAs, universities and other science-based organisations to enable the comparison of research and funding programmes and outcomes was also recommended, along with a greater emphasis in Government policy on co-location of universities and PFRAs.

178. In 2003, the Government also established a taskforce to develop a nationally integrated research infrastructure strategy to apply to public higher education institutions and PFRAs. The 2004 *Backing Australia's Ability – Building our Future through Science and Innovation* package constituted a response to these reviews, including A$542 million over seven years for the National Collaborative Research Strategy. Under the strategy, the Australian Government's investment in infrastructure is being focussed in 12 areas of research capability. The priority areas for investment were identified through a national coordinated process. The investment proposals (of which nine have been completed so far) are being structured to encourage collaboration among universities and government, independent and private sector research organisations

5.9 Stimulating co-operation between higher education and industry

179. Government policy in Australia has placed substantial emphasis on stimulating collaborative research between higher education and industry.

180. The Co-operative Research Centre (CRC) programme was established in 1990 to improve the effectiveness of Australia's research and development effort. It links researchers with industry to focus R&D efforts on progress towards utilisation and commercialisation. The close interaction between researchers and the users of research is a key feature of the programme. Another feature is industry contribution to CRC education programmes to produce industry-ready graduates. Following the latest selection round in 2004, there were 72 CRCs operating in six sectors: environment, agriculture and rural based manufacturing, information and communications technology, mining and energy, medical science and technology, and manufacturing technology. Since the commencement of the CRC programme, all parties have committed more than A$9.6 billion (cash and in-kind) to CRCs. This includes A$2.2 billion from the CRC programme, A$2.6 billion from universities, A$1.8 billion from industry and more than A$1 billion from CSIRO. These figures do not include commitments made in the 2004 selection round. A recent study of the economic impact of CRCs conservatively estimated that for every A$1 spent by the Australian Government on the CRC programme, GDP is cumulatively A$0.60 higher than it would have been had that A$1 instead been allocated to general government expenditure (Allen Consulting Group, 2005).

181. As noted above, the ARC also supports collaborative research projects between higher education researchers and industry. The ARC Linkage programme is a competitive research grant scheme that encourages long-term strategic research alliances between universities and industry, fosters opportunities for postdoctoral researchers to pursue internationally competitive research in collaboration with industry and provides industry-oriented research training. To be successful in winning ARC Linkage programme grants, industry must contribute to the project. For the 2005 funding round, the ARC allocated A$59 million, compared with industry cash contributions of A$32 million and in-kind contributions of A$52 million (ARC, 2006).

5.10 Collaboration between universities and publicly funded research agencies

182. Australia's universities and publicly funded research agencies (PFRAs – led by the CSIRO) cooperate on research and development activities through a number of mechanisms and programmes. As a review of closer collaboration between universities and major PFRAs found in March 2004, individual researchers in the institutions typically engage in extensive collaboration. This collaboration is often facilitated by a number of collaborative research programmes that bring together researchers in both the public and private sectors, including:

- Cooperative Research Centres
- Rural Research and Development Corporations
- Australian Research Council Linkage Programmes
- National Health and Medical Research Council programmes.

In addition, PFRAs have specific programmes that afford opportunities for collaborative research with universities, most notably the CSIRO's National Research Flagships, which are partnerships of leading Australian scientists, research institutions, commercial companies, CSIRO and selected international partners.

5.11 The role of higher education in innovation and knowledge transfer

183. A key focus of Australian policy developments over recent years has been on enhancing the capacity of universities to contribute more actively to innovation and knowledge transfer through the commercialisation of their intellectual property (IP). While it has been common for many years for universities to have commercialisation offices or companies, commercialisation of IP has until recently been seen as a secondary priority compared with the core teaching and research missions. While some universities have been in a position to provide their commercialisation arms with the quantum of resources necessary to facilitate successful commercialisation of IP, the research budgets of many universities are too small to justify the investment. There is a growing view in Australia that smaller universities need to share resources to improve access to commercialisation support and expertise. There are already signs that universities are collaborating in this area, with the University of Wollongong entering into an arrangement with the commercialisation arm of the University of Queensland, Uniquest, to cooperate in the application of the two organisations' commercialisation expertise and resources.

184. In another significant development in the commercialisation of IP in Australia, the commercialisation arms of two of Australia's leading research universities (University of Queensland and University of Melbourne) created Uniseed, a pre-seed and seed venture fund, in 2000. This bridged the gap between research in the two universities and the commercial community of venture capital and investment. Since then, the University of New South Wales and Westscheme (a Western Australian superannuation scheme) have joined the Uniseed venture, further boosting the fund's resources. Uniseed now has a reported A$61 million under management.

185. A similar, smaller joint venture involving the Australian National University, the Government of the Australian Capital Territory and a superannuation fund was established in early 2005. This partnership has A$20 million available for investment.

186. Looking beyond the commercialisation of IP, Australian universities have increased the proportion of their research funding derived from non-government sources in recent years. Business as a source of funding for university research activity increased from around A$64m in 1994 to

A$243m in 2004. This is around 6% of higher education research funding from all sources, but business sources have increased their contribution to university research expenditure at rates well ahead the overall increase in total university research expenditure in the same period.

187. The Australian Government announced a Pre-Seed Fund programme, as part of the *Backing Australia's Ability* 'the commercial application of ideas' theme, to help the commercialisation of research and development undertaken by universities and public sector research agencies. The programme encourages the private sector to take a more active role in funding and managing the commercialisation of research from those institutions. The Pre-Seed Fund programme has established four early-stage venture capital funds to invest in projects or companies spinning out from universities or government agencies. The funds are managed by venture capitalists experienced in research commercialisation and the development of sustainable businesses.

188. In addition, the Commercialising Emerging Technologies (COMET) programme facilitates innovations, developed by individuals, small Australian companies and researchers, to reach their commercial potential by providing the inventors with advice and financial assistance to plan their commercialisation, to attract capital for their project and to establish strategic partnerships to take the innovation to market. Advice is provided through a network of private sector business advisers and financial assistance is available to subsidise access to service providers in marketing, commercialisation, intellectual property and business planning.

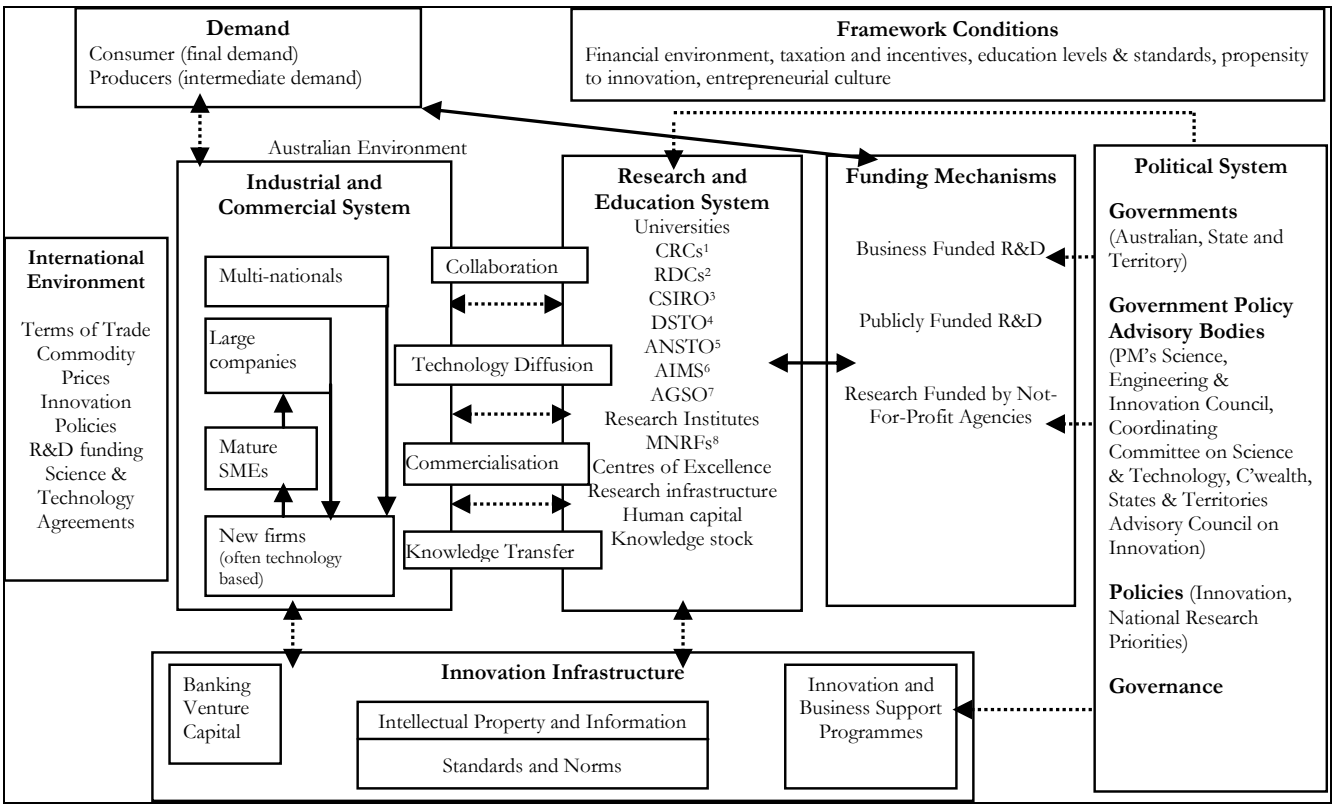
The Commercial Ready programme is targeted at Australian small to medium enterprises and is aimed at encouraging the growth and successful innovation of Australian companies by increasing the level of research and development and proof-of-concept and early-stage commercialisation. While the programme is not targeted directly at universities, it helps support technology transfer to small and medium enterprises.

5.12 Science and Technology Policy-Making Framework

Australia's Innovation system

189. Innovation policy-making in Australia takes place in the context of the broader innovation system. As represented in the diagram at figure X, the Australian innovation system is highly integrated – both with external social and economic structures, and internally, with numerous linkages between stakeholders. Government advisory and decision-making bodies therefore take into account different portfolio interests and responsibilities, public and private sector interests, existing innovation structures and different funding sources when forming policy. Crucially, policy deliberation takes place in the context of broader economic conditions and desired social and economic outcomes for policy formation that is appropriate to a diverse range of activities.

Figure 6.1: The Australian Innovation System



1. Co-operative Research Centres
2. Rural Development Centres
3. Commonwealth Scientific and Industrial Research Organisation
4. Defence Science and Technology Organisation
5. Australian Nuclear Science and Technology Organisation
6. Australian Institute of Marine Science
7. Australian Geological Survey Organisation
8. Major National Research Facilities

Source: Adapted from Department of Industry, Tourism and Resources Submission to the House of Representatives Standing Committee on Science and Innovation Inquiry into the Pathways to Technological Innovation

Centres of Excellence

190. Australian Research Centre (ARC) Centres of Excellence build collaborative activity together with scale and focus. The programme aims to:

- undertake highly innovative research at the forefront of developments within areas of national importance, with a scale and a focus leading to outstanding international and national recognition;
- enhance the scale and focus of research in areas designated as national research priorities;
- promote research that will enhance Australia's future economic, social and cultural wellbeing;
- link existing Australian research strengths and build new capacity for interdisciplinary, collaborative approaches to address the most challenging and significant research problems;

- build Australia's human capacity in a range of research areas by attracting, from within Australia and abroad, researchers of high international standing as well as the most promising research students;

- provide high-quality postgraduate and postdoctoral training environments for the next generation of researchers in innovative and internationally competitive research;

- offer Australian researchers access to world-class infrastructure and equipment, and to key research technologies;

- develop relationships and build new networks with major international Centres and research programmes that help achieve global competitiveness and recognition for Australian research; and

- establish Centres of such high repute in the wider community that they will serve as points of interaction among higher education institutions, governments, industry and the private sector generally.

191. Centres constitute the ARC's longer-term investment strategy in research, enabling continued support for productive research. 19 ARC Centres of Excellence have been funded, with a further three co-funded with other Australian and State Government bodies and other agencies. The Centres act as a focus for research activity in their fields of expertise and have attracted researchers of international standing. They cross all disciplines and many operate in identified National Research Priority areas. All are expected to engage with potential research users and collaborators and to conduct research of international standard. Examples of recently funded centres are:

- Centre for Antimatter-Matter Studies;

- Centre for the Coherent X-Ray Science; and

- Centre for Innovative Science for Sustainable Management of Coral Reef Biodiversity.

5.13 National legal framework

192. Australia offers a full range of measures to protect intellectual property including patents, plant breeder's rights, copyright, trademarks and designs. IP Australia is the Australian Government agency responsible for granting IP rights.

193. In 2001, the ARC, NHMRC, the AVCC and a number of other peak bodies and government agencies jointly issued *National Principles of Intellectual Property Management for Publicly Funded Research Guidelines* (ARC et al., 2001). These guidelines assert that, recognising the Common Law rights of research institutions as employers, the ownership and associated rights of all IP generated by NHMRC and ARC supported research will initially be vested in the research institutions administering the grants. The guidelines also assert the need for institutions to have IP policies in place for determining the subsequent ownership and/or assignment of IP rights and for defining the way in which benefits from the development and exploitation of the IP will be allocated.

194. Almost all Australian universities assert ownership of IP created by their staff. The most common policy position within Australian universities is one whereby returns are equally shared between the inventor, the commercialisation arm or company and the university. The University of Melbourne has recently adopted a very different policy position, whereby ownership of all IP is assigned to researchers. Some commentators have raised concerns that this approach has

accountability problems as institutional oversight of the commercialisation of publicly funded research is weak and researchers lack the time, expertise and funds to commercialise their research.

195. A recent report jointly commissioned by the AVCC and the Business Council of Australia signalled the need for a clearer national policy or framework on the ownership and management of IP policies in publicly funded research institutions, particularly universities (Allen Consulting Group, 2004). It identified three issues that are causing concern.

196. First, unlike the United States and elsewhere, Australia does not have experimental use exception provisions in Australian patent legislation, thus inhibiting research and development in Australia.

197. Second, one State Government has introduced legislation requiring universities to develop guidelines that apply to the development of commercial proposals and to maintain a register of commercial activities in order to be granted exemption from a requirement to obtain the approval of the State Treasurer to incorporate a spin-off company or to enter into a joint venture arrangement. The State Auditor-General has also expressed a view that university governing bodies should approve all commercial activities. These provisions introduce time delays, administrative burdens and concerns from commercial partners about confidentiality, which are perceived to inhibit the commercialisation of IP.

198. Third, some universities, due to clauses in their original establishing legislation, are constrained in their commercialisation of IP by the requirement to seek approval from their governing body or notify their State Education Minister. Once again, this is judged to lead to detrimental time delays and loss of confidentiality.

199. The 2004 *Review of Closer Collaboration between Universities and Major Publicly Funded Research Agencies* recommended that the *National Principles of Intellectual Property Management for Publicly Funded Research* be reconsidered, including ways to publicise the Principles and encourage their utilisation (DEST, 2004c).

6 ACHIEVING EQUITY IN AND THROUGH HIGHER EDUCATION

6.1 Introduction

200. This Chapter identifies the policies through which the Australian higher education system helps to advance national equity objectives. It provides evidence of the link between the system and equity goals specifically with respect to participation of targeted equity groups. The Chapter sets out the context for equity policy developments and then provides an account of the progress of identified equity groups that have been the subject of a range of policy initiatives over the last 20 years. Recent and current Government programmes to address the low access and participation rates of disadvantaged groups are then examined. The major observations from this Chapter are that improving participation continues to present a major challenge to Government and higher education providers.

6.2 National policy for equity in higher education 1994-2005

201. The development of programmes and the provision of funds to universities specifically to assist disadvantaged students has been part of a long-term concern by governments about inequality of access since the 1970s (Anderson and Vervoorn, 1983; NBEET, 1996). The current higher education equity policy framework was essentially set out in 1990 in the publication *A Fair Chance For All*. The overall objective was 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 society as a whole" (DEET, 1990, p.8).

202. Specific equity groups were identified as being significantly under-represented in higher education. These groups have been the focus of national monitoring and have determined the allocation of Commonwealth funds. The six groups identified in 1990 were:

- people from socio-economically disadvantaged backgrounds;
- Aboriginal and Torres Strait Islander people;
- women, particularly in non-traditional courses and postgraduate study;
- people with disabilities;
- people from non-English speaking backgrounds (NESB); and,
- people from rural and isolated areas.

203. It was intended that institutions would develop their own equity plans building on the national objectives. Universities were required to provide the Government with annual equity plans outlining strategies for improving the access, participation, success and retention of these designated groups of students. Institutions were asked to "give attention to the national priority groups, to the nature of disadvantage within their own student population and catchment area and to their own areas of excellence in achieving equity. It was believed that this approach allows national needs to be reflected, yet still lets institutions address their particular concerns" (DEET, 1990, p.11). Objectives,

targets and strategies were set for each of the defined equity groups, although it was not intended to limit institutions to these strategies or objectives but to maintain a dynamic approach to equity, based on institutional profiles and national goals.

204. In 1994, definitions, performance indicators and reference values for each equity group were developed and set out in the publication *Equity and General Performance Indicators in Higher Education* (Martin, 1994). The indicators used for monitoring performance at institutional level are:

- access (the proportion of the equity group among commencing domestic students);
- participation (the proportion of the equity group enrolled among domestic students);
- retention (the proportion of equity group students who re-enrol at an institution in a given year compared with the students who were enrolled in the previous year, less those students who have completed their course); and
- success (the mean student progress rate for the previous year for the equity group, this being the proportion of units passed within a year to the total units enrolled).

205. To monitor performance at the national and institutional level, access and participation indicators are generally referenced against the proportion of people in the equity group within Australia overall. Retention and success are referenced against all other students at the national or institutional level as appropriate. Indicators are reported as percentages or ratios as appropriate.

206. In 2003, equity was one of the four principles underpinning the *Our Universities: Backing Australia's Future* reform package, the others being quality, sustainability and diversity. The goal of the current Government's higher education equity policy is to remove barriers to access to higher education for all Australians, with a particular focus on assisting groups experiencing significant educational disadvantage. The *National Higher Education Equity Framework* is based on the assumption that there are factors or characteristics which, for certain social groups, inhibit access to and ability to succeed in higher education.

207. An individual is educationally disadvantaged if their prior educational experiences have resulted in their not having the educational pre-requisites to gain admission to a course or not having the belief or knowledge that higher education is an option for them, even though they may have the ability to undertake higher education. There could be any number of reasons for this: non-completion of senior secondary school, the quality of schooling received, availability of employment opportunities, family aspirations, socio-economic status, health issues and so on.

208. It would be difficult to capture all causes of educational disadvantage in any one set of definitions or target groups. Since the benefits of higher education are significant, for both individuals and communities, the equity framework assumes that the under-representation of certain identifiable groups of students reflects the educational disadvantage they share. A generalised approach which targets these under-represented groups, on the basis of their shared characteristics, is continuing at the national level, in terms of developing national policy and allocating funds, as well as at the level of institutional planning and programme implementation.

209. As indicated above, the current equity target groups were first designated in 1990 in *A Fair Chance for All*, and broadly followed the disadvantaged social groups identified during the mid 1970s in the schools sector. They include only domestic students. Data collected from students at enrolment is used for classification of group membership. Following a review of equity groups conducted in 2004, the target group of women in non-traditional courses was replaced with the broader equity objective of overcoming educational disadvantage associated with gender.

210. Until 2003, institutions were required to submit an annual Equity Plan as part of the Educational Profiles process (see Section 8.3). This contained some elements of plans, but was largely a report on past activities and achievements. During 2003 there was an extensive consultation process with university representatives to find ways to reduce the reporting burden on institutions, while still satisfying Government accountability requirements. Since 2003, institutions have been asked to provide an Equity Update, commenting on significant developments or differences from previous years' reports.

6.3 The participation of equity target groups

211. Analysis of equity performance over past years supports the Government's concern that a renewed focus on improving access is necessary (CSHE, 2002, pp.14-15). While the number of students in the defined equity groups has increased, their share of total enrolments has not improved significantly.

212. Table 6.1 in the annex shows the relative performance of these groups (except for Indigenous students) in 1991, 2002, 2004 and 2005. The number of students from equity groups who are participating in higher education has increased significantly overall, as has the number of higher education students. Against the domestic student population, the proportion of students with disabilities has increased significantly while the proportions of the other equity groups have declined. Overall, once enrolled at university, students from equity groups have tended to achieve success and retention outcomes comparable to that of other students, indicating that increasing access continues to be the key issue for improving equity outcomes. The composition and progress of each group follows.

Students from socio-economically disadvantaged backgrounds

213. Socio-economic background is measured by the postcode of the permanent home address of students using the four-digit code that identifies urban and rural districts for mail delivery coded to the Australian Bureau of Statistics (ABS) Index of Education and Occupation. All Australian postcode districts are classified using an index of low, medium and high socio-economic status derived from national census data. This equity group is defined as those whose home postcode falls within the lowest quartile of the population. As Table 6.1 in the annex shows, the number of students from socio-economically disadvantaged backgrounds remained relatively low in 2005. Although the overall number of students at university in this group increased from 1991 to 2005, their proportion of all domestic students showed a slight downturn over that period.

214. People from lower socioeconomic backgrounds are defined as 25% of the national population, yet occupy just over 15% of university places. Per capita estimates suggest that only five people from lower socioeconomic backgrounds attend university for every 10 people of medium or higher socioeconomic backgrounds. They are particularly under-represented in award courses and in courses leading to professional qualifications. This degree of inequity has remained relatively stable for over a decade. The effect of low SES is compounded for people who are also from rural or isolated areas as well as for Indigenous people.

Students with disabilities

215. People with disabilities clearly experience disadvantage in accessing higher education, though to varying degrees, and institutions can incur significant costs in supporting them. This group is self-identified by students on enrolment, through responses to the question 'Do you have a disability that may affect your studies?' Data on students with disabilities were not collected before 1996. While access for students with disabilities has increased in recent years, they remain under-represented. Students with disabilities comprised 4% of all higher education students in 2005, up from 2% in 1996.

Students from a non-English speaking background

216. Students from non-English speaking backgrounds (NESB) are defined as students born overseas who arrived in Australia less than 10 years ago and who live in a home where a language other than English is spoken. The classification is based on information provided on enrolment. The participation rate for people from non-English speaking backgrounds (NESB) increased until 1995, reaching 6%, compared with the population reference value of 5% (derived from the 1991 Census). In 2005, the group comprised just under 4% of the domestic student population.

217. The NESB category is problematic in that it covers a wide variety of people from many different cultures and language backgrounds and with varying educational qualifications. Since the higher education definition of NESB includes only those who have arrived in Australia within the past 10 years, it is likely that movements in immigration patterns over the years have played a part in changing access rates. For instance, an increased emphasis on skilled migration could be expected to result in more highly educated recent arrivals, while people admitted to Australia on permanent humanitarian visas may be educationally disadvantaged. There is also considerable variation between States and regions in terms of the size and composition of local NESB communities. Changes in the age distribution for the NESB group can occur quickly, which is not the case for the other defined equity groups.

Males and females in non-traditional areas of study

218. Women's access and participation have increased generally in higher education, as well as in non-traditional areas of study. Around 55% of commencing undergraduates are now female, slightly above their population share of 52%. Women are the only group for which targets by field of study were set. At the time of *A Fair Chance for All*, this was seen as a way to minimise inequality in the labour market – for the benefit of women and for the economy as a whole. Female participation has reached the targets set in 1991 for specified 'non-traditional' fields of study, where their participation at the time was less than 40%. To date, targets have been met in all broad fields of study except in architecture, though current enrolments are close to the target. While the target for engineering has been met, the participation rate of women is still relatively low (15% of enrolments). In recent years, the low participation of women in the information technology field has also been monitored (currently around 24%).

219. With respect to higher degrees, in 1996 women comprised 40% of domestic students undertaking higher degrees by research and 44% by coursework. This rose to 51% and 54% respectively in 2004. Following the review of the Higher Education Equity Program in 2003, women in non-traditional courses of study ceased to comprise an equity group for funding or reporting purposes. The successor programme, the Higher Education Equity Support Program, includes provision that funds may be used to assist in overcoming educational disadvantage associated with gender.

220. The Government's review of equity groups in higher education in 2003-2004 decided against monitoring and setting targets for participation of males in non-traditional areas of study, specifically, nursing and teaching, because low participation rates for men in non-traditional areas of study relate to labour market choices rather than issues of educational disadvantage.

Students from rural and isolated areas

221. Students in this equity group are those whose home address is identified as rural or isolated according to the Rural, Remote and Metropolitan Areas Classification derived from population density data and proximity to large cities based on census and other data. In 1991, rural students made

up 18.4% of the domestic student numbers. This declined to 16.9% in 2005. Over the same period, isolated students declined as a proportion from 1.9% to 1.2%. For every 10 urban people who attend university, six rural/isolated Australians on a per capita basis can be expected to do so. The isolated group is one of the most under-represented groups in Australian higher education and also experiences poor retention rates. For many, the educational disadvantage of distance and isolation is compounded by also being from a low SES background (See also Chapter 4).

Indigenous Students

222. Indigenous students represented 1.2% of domestic students in 2005. Figure 6.1 in the annex shows commencing and total Indigenous students for 1994 to 2005 and award course completions by Indigenous students for 1994 to 2004.

223. Examination of the changes underlying the reduced number of Indigenous students in higher education shows that the largest decreases occurred for students undertaking courses below the bachelor degree level, with 390 fewer students at these levels (Associate Degree, Advanced Diploma, Diploma, Enabling courses and Other sub-degree award courses)

6.4 Higher Education Equity Programmes

Higher Education Equity Program

224. The Higher Education Equity Program (HEEP) was reviewed in 2004 as part of the *Our Universities: Backing Australia's Future* initiative to ensure that equity funding remained focused on groups experiencing significant educational disadvantage. A research report *Analysis of Equity Groups in Higher Education 1991-2002* was commissioned and informed a discussion paper which was circulated for public comment (CSHE, 2002; DEST, 2002a; DEST, 2004g). Essentially, HEEP was refocused to a programme that aims to improve outcomes by linking funding more clearly to performance. This is in line with a more general trend towards performance-based funding in other aspects of higher education. The issues of how performance outcomes are defined and measured, given the policy focus on barriers to access, and how equity groups or target groups are identified for reporting and funding purposes, given the policy focus on significant educational disadvantage, were raised in the discussion paper.

225. The 2004 review resulted in the development of two new programmes – the Higher Education Equity Support Program (ESP) and the Higher Education Disability Support Program (DSP).

Higher Education Equity Support Program

226. From 2005, allocations under the Higher Education Equity Support Program (ESP) are not comparable to those under HEEP in 2004. In 2005, performance-based funding for students with disabilities became a component of the Disability Support Program (DSP). Allocations are now driven entirely by enrolments, retention and success of students from low SES backgrounds, with a weighting to low SES students from rural and isolated backgrounds, rather than being based on the performance of all designated equity groups that applied under HEEP. In addition, funds available under ESP are significantly higher than those that were allocated under HEEP in 2004.

227. In 2006, A$11 million has been allocated under the Higher Education Equity Support Program to Table A higher education providers. Providers manage the funds in accordance with guidelines issued under the *Higher Education Support Act 2003*. Allocations are based on the performance of students from low SES backgrounds, with a weighting to those from rural and isolated areas. Providers have flexibility to target assistance where most needed to enhance access and participation of students from low socio-economic backgrounds, students from rural and isolated areas, and students from non-

English speaking backgrounds. In addition, providers may implement measures that assist in overcoming educational disadvantage associated with gender. To receive ESP funding, institutions must meet minimum eligibility criteria, including:

- running outreach programmes to attract equity group students;
- offering specialised support services for enrolled equity group students;
- offering Commonwealth Learning Scholarships; and
- offering a complementary institutional equity scholarships programme.

Higher Education Disability Support Program

228. Since 2005, disability funding has been consolidated into the Higher Education Disability Support Program (DSP). In 2006, A$7 million has been allocated under the programme which comprises three components:

- Additional Support for Students with Disabilities program;
- Regional Disability Liaison Officers (RDLO) initiative; and
- performance-based disability support funding.

229. The programme recognises that, while universities are responsible for meeting the needs of students with disabilities, the provision of support for some students with high cost support needs is a significant and growing cost to universities. Higher education providers may apply for funding support to assist with high costs incurred in providing educational support and/or equipment to students with disabilities with high cost needs. This may include providing transcriptions or audiotapes of lectures, preparing resources in different formats, the use of interpreters or the provision of special equipment.

230. The network of Regional Disability Liaison Officers is hosted by universities in 10 regions of Australia. This initiative aims to improve access to post-compulsory education for students with disabilities by assisting in their transition from school to study, whether higher education or vocational education and training, and from study to work. Funding of over A$800,000 per annum is allocated to this initiative. Together with the Disability Coordination Officer (DCO) program which commenced in late 2002, a national network has been created. The DCO program is funded through the Industry Skills Development Group of DEST and officers are based in a range of host institutions, including universities, TAFE institutes and community-based organisations. The DCO program does not form part of the Higher Education Disability Support Program.

231. One difficulty with the current framework for disability support is that data on disability is based on self-identification. Students who have identified as having a disability at enrolment may or may not experience a significant disadvantage or require special assistance or experience a significant disadvantage. It is also true that not all students with disabilities who approach the institution for special assistance have identified themselves at the time of enrolment as having a disability, so they are not counted as such in the statistical collection for DSP allocation purposes.

232. Institutions are bound by the provisions of the *Disability Discrimination Act 1992* to ensure students with disabilities are not discriminated against in accessing and participating in higher education.

Indigenous Support Programme

233. Aboriginal and Torres Strait Islander people are an important focus of national higher education equity policy. Institutions receive equity funds for Indigenous students who also possess characteristics of one or more of the equity groups. For example, Indigenous students with a disability are assisted in the same way as other higher education students under the Disability Support Programme. In addition, institutions receive Equity Support Program funding in respect of Indigenous students who are from a low socio-economic status (SES) background, including additional weighting if they are from a rural or isolated background.

234. Commonwealth grants to higher education providers include allocations from the Indigenous Support Programme to meet the special needs of Indigenous Australian students and to advance the goals of the National Aboriginal and Torres Strait Islander Education Policy. Activities supported through this programme include the establishment of Indigenous Support Centres, assistance with study skills, personal counselling and cultural awareness activities. To be eligible to receive Indigenous Support Programme grants in any one year, providers must demonstrate that they have:

- implemented strategies for improving access, participation, retention and success of Indigenous Australian students;
- participation of Indigenous people in decision-making processes; and,
- an Indigenous employment strategy.

235. Funds are distributed based on a formula of student participation, student progress and the number of award courses completed. Higher education providers are required to provide an annual Indigenous Education Statement. This takes the form of a report on their annual expenditure of Indigenous Support Programme funds, including the amount provided to an Indigenous Support Centre, and progress in achieving the goals of the National Aboriginal and Torres Strait Islander Education Policy.

236. In 2004, a new initiative was established to offer five national Indigenous Staff Scholarships each year to enable Indigenous academic and general staff to take one year of leave from their university employment to undertake full-time higher education study in their chosen academic or professional area.

237. An Indigenous Higher Education Advisory Council (IHEAC) was established in 2004 to provide policy advice to the Minister for Education on Indigenous higher education issues. The IHEAC focuses on:

- improving Indigenous student higher education outcomes through all levels of university study from enabling courses through to undergraduate and postgraduate levels;
- developing an Indigenous research culture for Indigenous academic staff and postgraduates;
- the role of the Indigenous support units, including funding, student support, teaching, research and academic roles and community partnerships in university decision-making mechanisms;
- making recommendations to the Minister for Education regarding awards under the Indigenous Staff Scholarships Programme; and
- strategies for increasing the number of Indigenous staff employed by universities.

6.5 Financing students

Student financial support system

238. Targeted income support payments are made to students or their families for those assessed as in need of financial assistance. Eligible full-time students aged 16 to 24 may receive Youth Allowance and students aged 25 or more receive Austudy. The assessment under Youth Allowance of a family's ability to support itself ensures that payments are kept at a level appropriate to a family's need for income support. The Youth Allowance eligibility criteria recognise that some young people can establish financial independence from their parents and these students are exempted from the application of the Parental Income and Assets tests. Students on Austudy are treated as independent. To receive either payment, students apply directly to the Government's administering agency, Centrelink. At 30 June 2006, 121,600 students in higher education were receiving Youth Allowance and 18,000 were receiving Austudy (this does not include other tertiary level students undertaking vocational training and education).

239. Australian Aboriginal and Torres Strait Islander students undertaking secondary or tertiary studies may be eligible for ABSTUDY assistance. Tertiary students are eligible for targeted income support and a range of supplementary benefits, some of which are not subject to means-testing but are targeted to a particular need. The assessment under ABSTUDY of a family's ability to support their young people is the same assessment that applies to the Youth Allowance for those under 21 years of age and equates with Newstart (unemployment benefits) for those aged over 21 years. Those able to establish independence from their parents before they attain 25 years of age are exempt from the parental means tests but are subject to personal or partner income tests. Students undertaking higher degrees at the Masters or Doctorate levels are eligible for a higher rate of assistance than those undertaking undergraduate level studies. Payments are administered by Centrelink. At 30 June 2006, 3,900 Indigenous students in higher education were receiving an ABSTUDY payment. Families of dependent full-time students may otherwise be eligible for Family Tax Benefits. These payments are also administered by Centrelink.

Commonwealth Learning Scholarships Programme

240. The Commonwealth Learning Scholarships (CLS) Programme was introduced in 2004 to assist eligible students from disadvantaged backgrounds with both the general and accommodation costs incurred when participating in higher education. In the first year, 2,500 Commonwealth Education Costs Scholarships (to assist with the general costs of education) and 3,000 Commonwealth Accommodation Scholarships (to assist students who have to move away from home to study) were awarded. The programme will provide A$406 million from 2005 to 2009 for approximately 43,000 students from low socio-economic backgrounds, Indigenous students and students from rural and regional areas.

Student deferred tuition payment system

241. The expansion of higher education access during the 1990s was encouraged by innovative student fee arrangements. Undergraduate students contribute to the cost of their education through a deferred payment scheme, the Higher Education Contribution Scheme (HECS), managed by the Australian Government (see Section 7.3). HECS was conceived as a way of funding the expansion of the system without introducing income barriers to enrolment or increasing the pressure on students to undertake paid employment while studying. HECS has generally been perceived to be a fair system (DEST, 2002a). The income contingent loan facility that was available under HECS has been retained under the *Our Universities: Backing Australia's Future* reforms and is now called HECS-HELP.

242. Since the introduction of HECS in 1989, several studies have investigated its impact on the participation of disadvantaged groups. The issue of access revolves around the possibility that HECS might deter students from higher education. The research so far shows that the number of low SES (socio-economic status) Australians participating in higher education has increased, along with the general expansion of the higher education sector. However, it has proved more difficult to increase participation rates for low SES students. Generally, research has found that HECS is not a major factor in whether low SES students attend higher education. Rasmussen (2002) found that the prospect of a HECS debt was generally not significant in students' decision-making about higher education nor did differential HECS scales influence their choice of course. More recently, Cardak and Ryan (2006) have found students from low SES or high SES backgrounds were equally likely to attend university once tertiary entrance scores are controlled.

243. The HECS system means that most undergraduate students are not burdened by fees while doing their degree. The impact of paid part-time work has been the subject of considerable discussion, especially as the proportion of students with paid work is increasing. Research findings are generally that reasonable hours of paid work do not impact negatively on study and can even reinforce study. However long hours of paid work or inability to access leave for study or exams can make it difficult for students to manage work and study. In general, higher tuition fees are not linked to the increase in part-time work, although managing debt levels is a motivating factor (Foskett et al (2006)). Other important factors include the desire to maintain social lifestyle, gain labour market experience, financial independence, and to supplement income support (McInnis and Hartley (2002)).

6.6 Ongoing issues

244. The vigorous pursuit of increased access and participation rates over the last decade has generated intense interest and activity aimed at improving retention rates of undergraduate students generally, as well as for equity groups. However, the diversity of student motives and shifting policy perspectives present definitional issues for retention studies. The term 'dropout' is still used occasionally, but terms that are more neutral such as 'attrition', 'discontinuance', 'withdrawal' and 'non-completion' are interchangeable. The pattern of shifting enrolments within and across universities is difficult to monitor (McInnis, Hartley, Polesel and Teese, 2000).

245. Gaining access to university quite obviously does not guarantee the successful completion of a degree programme. While the success and retention rates for Indigenous people have been consistently and unacceptably low, and while rural and isolated students enrolled externally continue to withdraw from courses despite their success in individual subjects, the success and retention rates for other equity groups are on a par with students overall (DETYA, 1999). Nevertheless, many of the obstacles that students from disadvantaged backgrounds encounter prior to higher education continue to challenge their capacity to succeed from the time they are enrolled. Indeed, in some extreme instances, students are so lacking in confidence that they depart between enrolment and the commencement of classes. On the positive side, most universities in Australia now provide substantial transition and support programmes in the first year of undergraduate study to minimise the level of withdrawal and non-completion. A wide range of innovative programmes have been developed at the institutional level over the last decade aimed at attracting, preparing and retaining students from equity groups. Most universities include flexible admission criteria for certain disadvantaged students, for example, students who complete Year 12 at a country high school may be awarded bonus tertiary admission points. These initiatives reflect a long-term and ongoing commitment of the Government and universities to address access and equity issues, particularly those that continue to be problematic.

7 RESOURCING THE HIGHER EDUCATION SYSTEM

7.1 Introduction

246. This Chapter provides details of the human and financial resources of the Australian higher education system. There have been significant changes in the ways in which higher education is funded and some of the implications of those changes are yet to be realised. Changes in public funding have been introduced to provide more flexibility and increased resources, while at the same time other sources of funding have become more prominent.

7.2 Staff

Staffing profile

247. There was a very rapid increase in the number of staff in Australian higher education institutions in the late 1960s, 1970s and early 1980s. Australian university teaching staff increased from 13,935 in 1976 to 22,707 a decade later, reflecting the rapid increase in student numbers as the 'baby boom' generations entered university (Hugo, 2004). The strong growth in academic staff numbers continued until the early 1990s when the rate of growth in teaching staff numbers slowed, then stalled, despite continuing increases in student numbers. Between 1993 and 1999, staff numbers rose by only 1% while student numbers rose by 19% (see Figure 7.1). Consequently, student/teacher ratios rose substantially, from 14.2:1 in 1993 to 18.3:1 in 1999.

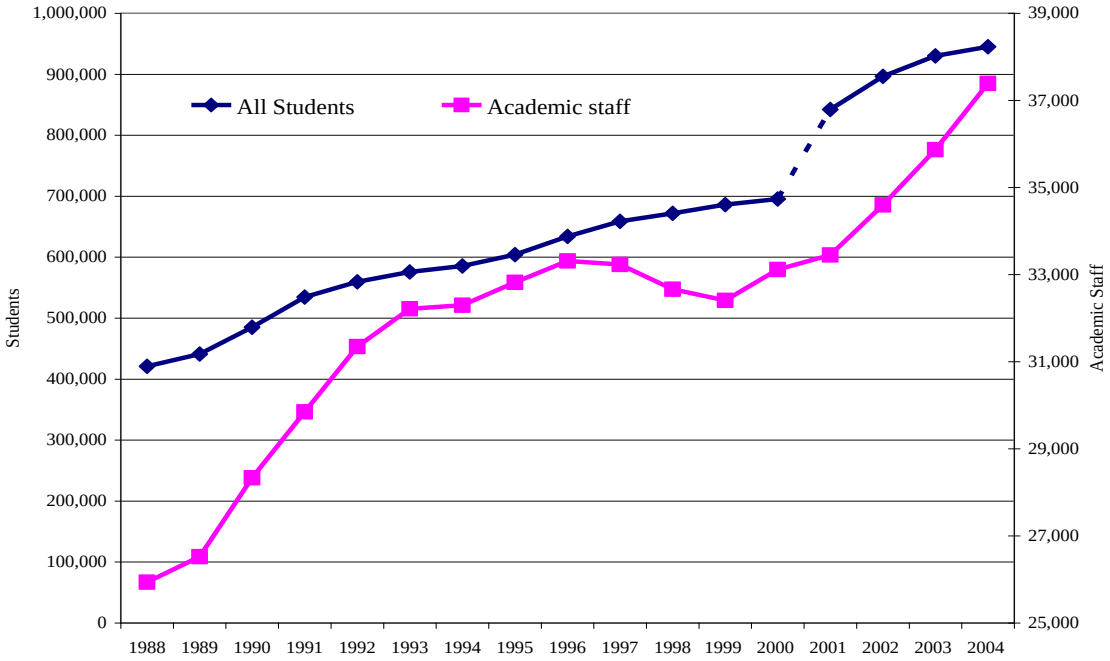
248. Academic staff numbers began to rise again in 2000, but student/teacher ratios continued to increase until 2003, reaching 20.1:1 in 2003 before falling to 19.8:1 in both 2004 and 2005.

249. The pattern of rapid growth in staff numbers followed by a period of little or no net increase through most of the 1990s has produced a 'bulge' in the age profile of the Australian academic workforce. The academic workforce is ageing, and the large number of staff recruited between the late sixties and early eighties have begun to reach retirement age. The Australian university teaching workforce is more concentrated in the older age groups than both the total workforce and the professional workforce in Australia.

250. A study of 11 large Australian universities (Hugo, 2004) found that the median age of the academic workforce in 2000 ranged between 44 and 49 years. More detailed analysis of the University of Adelaide (median age 47 years in 2000) concluded that, between 2003 and 2008, the university would be likely to lose 27% of its academic staff in humanities and social sciences, 46% of its staff in health sciences, and 51% of its staff in science. It is reasonable to project that Australian universities generally will lose between a fifth and a third of their staff over the course of the current decade.

251. The need to replace staff as they retire is increasing the competitiveness of the Australian academic labour market. At the same time, Australia is part of the increasingly competitive international labour market for highly skilled university staff, researchers, scientists and professionals. Australian higher education qualifications are widely recognised internationally and Australian graduates and academic staff are highly mobile internationally.

Figure 7.1: Student and academic staff numbers – to 2005 [(a)]



Source: DEST Selected Higher Education Student and Staff Statistics
(a) *Note that there was a break in the student number series in 2001(figures from 1988 to 2001 show student numbers as at 31 March in the given year, while later years reflect full year enrolments). Care should be taken when comparing data across this time period.*

252. The international labour market for academic staff allows Australian universities to recruit from other countries. Between 1993 and 2003, there were 14,703 in-movements of academic staff to Australia, offset by 9,696 out-movements, a net gain of 5,007 persons, and the majority of whom came from Asian countries. However, there are questions about whether there is a net loss of skills and experience to Australia as a result of academic migration. It is also notable that in 2002-03 more academics left Australia permanently than moved here permanently for the first time in several decades (Hugo, 2004). There may be some specific areas, such as mathematics, where Australia has experienced net losses of skilled personnel (Thomas, 2002).

Staff recruitment

253. Recruitment of staff is a matter for each individual higher education institution. Australian universities have a range of strategies in place to recruit new staff and to attract and retain experienced staff. Universities are able to offer financial and other benefits to reflect market demand, subject to considerations of cost and equitable treatment of all employees. A potential issue is whether increased competition for academic staff will lead to inflation in wages and conditions, especially for high performing teaching and research staff and, if so, whether there will be increased differentiation between universities in their budgetary capacity to attract and retain such staff. The competition between universities for high performing research staff within Australia may also increase, as it did in the United Kingdom, if a proposed new approach to the distribution of block funds for university research is implemented to increase the focus on the quality and impact of research (see Section 5.6).

254. The Australian Government has implemented a number of programmes to attract and retain outstanding individuals at various points in the academic staff career path. These programmes include scholarships for Australian and international postgraduate research students, postdoctoral fellowships

for early career researchers, and a number of prestigious fellowship schemes for outstanding research staff. One of these programmes, the Federation Fellowships, is intended to assist Australian universities to compete with universities in other countries for the world's best researchers, particularly Australians who may currently be working overseas.

255. Base salaries and conditions are set through negotiations between each institution and the relevant staff union and/or staff, and may also be set on the basis of individual contracts. There is a high level of consistency across universities in the core terms of employment, reflecting both the nature of the academic labour market and the influence of the national academic staff union. The Australian Government has encouraged increased flexibility in academic staffing with a view to ensuring that staffing conditions are tailored to the circumstances of each individual university (see Section 8.3). Additional funding has been provided to public universities subject to a number of requirements, including making individual contracts available to all staff. Indexation of core grants for teaching is linked primarily to minimum wage movements, requiring each university to find productivity gains or additional sources of income to meet the cost of salary increases above this level.

256. Academic staff are typically appointed on the basis of their qualifications, usually at doctoral level, and their achievements in research, teaching and engagement with industry, government or the community. Promotion is typically on similar criteria. The emphasis given to each criterion depends on the specific position and the university. Some positions are designated as research only or teaching only, although combined teaching and research positions are most common. In some disciplines, professional engagement is more important than in others. Some universities emphasise research performance for all academic staff while other universities have a stronger emphasis on teaching and engagement.

257. In general, across all universities it remains the case that research performance, measured particularly through publications and external funding, is given the greatest weight in academic appointment and promotion. However there has been a strong push in recent years to give greater recognition to teaching performance and in many institutions it is possible to be promoted to the most senior levels as an outstanding teacher. Community and professional engagement is generally considered as an additional criterion alongside performance in research and/or teaching.

258. The Australian Government has encouraged the recognition of performance in both research and teaching. Funding to higher education providers for research and research training is driven by formulae and informed by each provider's relative success in generating research income and publications and by their higher degree by research (HDR) student completions and the Commonwealth funded HDR student load (see Section 5.4). A targeted programme provides funding to universities based on student experience and graduate outcomes, which are linked to the quality of teaching (see Section 9.8). Special national awards are provided annually to Australia's most outstanding university teachers (see Section 9.8).

259. These programmes are intended to improve the quality of higher education staff. More direct professional development programmes to enhance staff skills are the responsibility of each university as the employer. All universities provide a wide range of such professional development opportunities as part of their overall human resources management. In addition, the AVCC operates a professional development programme for staff of member institutions.

7.3 Institutional revenue

260. Higher education providers are funded through a wide range of sources. The range of sources depends in part on the nature of the provider. There are a growing number of relatively small private

higher education providers (more than 150), financed predominantly through domestic and international student fees. Detailed financial information is routinely collected from those private higher education providers approved under HESA and whose students are eligible for Government loans, but detailed financial information is not collected from the other providers. There is a smaller group of private providers which, for historical and particular policy reasons, receive certain forms of direct public funding in addition to their private revenue streams and financial information is collected from these providers.

261. The majority of higher education students are enrolled in the publicly established and funded institutions. While these institutions are publicly funded, they all generate a significant proportion of their revenue from student fees and other 'private' sources in addition to their public funding streams. Table 7.1 and Figure 7.2 summarise the major sources of revenue for the publicly funded higher education providers in Australia in 2004. These totals exclude funding received by some providers for vocational education and training purposes. The categories of revenue shown in Table 7.1 can be broken down further to give a more detailed picture (see Table 7.5).

Table 7.1: Revenue by source for publicly funded higher education providers, 2005

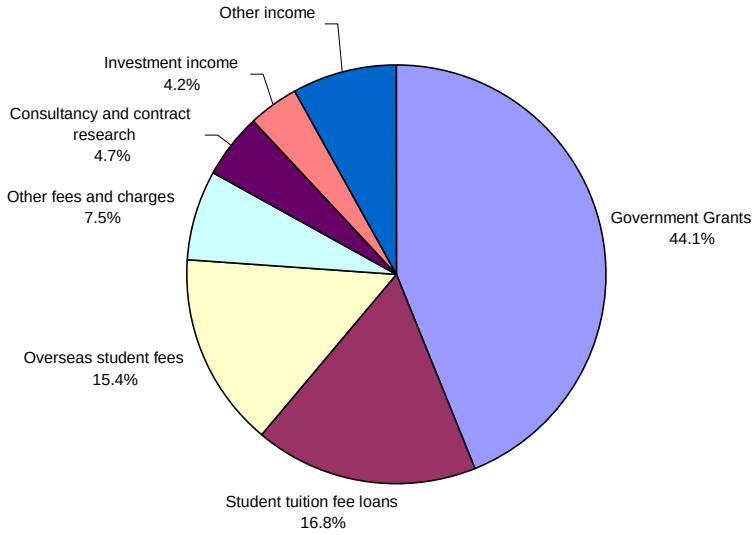
Source of Revenue	A$'000s	% of total
Australian government financial assistance	5,898,566	42.4
State and local government financial assistance	230,484	1.7
Student tuition fee loans*	2,332,351	16.8
Overseas student fees	2,140,327	15.4
Other fees and charges	1,036,644	7.5
Consultancy and contract research	649,419	4.7
Investment income	577,323	4.2
Other income	1,038,885	7.5
Total Revenue	13,903,999	100.0

Source: DEST Selected Higher Education Finance Statistics, 2005

**This figure includes the amount paid to higher education providers on behalf of students who deferred payment of their contributions/fees through HECS-HELP and FEE-HELP, the value of the 20% discount paid to providers for students who paid up-front student contributions and the up-front payments of student contributions that providers received direct from students.*

It does not, however, reflect the total amount of Australian Government financial support for higher education as it does not take account of costs inherent in the loans schemes, including the provision for the amount not expected to be repaid due to the income-contingent repayment arrangements, debt write-off, the bonus for voluntary repayment of a loan, the implicit subsidy involved in debts being indexed to inflation but otherwise interest free or the repayments of loans by students to the Australian Government.

Figure 7.2: Sources of revenue for publicly funded higher education providers, 2005



262. Government grants are primarily sourced from the Australian (Commonwealth) Government. Only 1.7% of revenue for publicly funded higher education providers in 2005 came from State and local governments (although this does not capture the value of land grants and some research contracts and other payments from State agencies). The Australian Government grants fall into six categories as shown in Table 7.2. Further details on the mechanisms for the allocation of Government funding are provided later in this Chapter. Details of the mechanisms for allocating research funding are provided in Section 5.4.

Student tuition fee loans

263. Since 1989, Australian higher education students, unless exempt for a specific reason, have been required to contribute to the cost of their education through the Higher Education Contribution Scheme (HECS). A key reason for this requirement is the substantially greater lifetime earnings enjoyed by graduates relative to non-graduates, even when the cost of foregone income while studying is taken into account.

264. From 2005, HECS places are called Commonwealth supported places. Students may pay their student contribution up front directly to their institution or they may defer their contribution by taking out a HECS-HELP loan. Where a student takes out a HECS-HELP loan, the Government pays the student contribution amount on the student's behalf and the student becomes liable to repay a loan to the Government. Repayments are made through the tax system when the student's income reaches a certain level. Some contributions are made on behalf of students by their families or employers. No comprehensive information is available on the proportions paid from these sources.

Table 7.2: Australian Government grants for publicly funded higher education providers, 2005

Purpose of funds	A$'000s	% of total
Commonwealth Grant Scheme	3,102,080	52.6
Other DEST Grants	318,450	5.4
Scholarships	150,995	2.6
Australian Research Council	455,384	7.7
Superannuation	104,627	1.8
DEST Research Financial Assistance	1,075,493	18.2
Other Australian Government Financial Assistance	691,536	11.7
Total Australian Government Financial Assistance	**5,898,566**	**100.0**

265. In total in 2005, students made payments of student contributions to institutions of A$396 million and the Government made HECS payments for HECS-HELP assistance on behalf of students of A$1.6 billion. Before 2005, the Government determined the HECS amount students were required to pay. From 2005, institutions have determined the student contribution amounts that students must pay, up to a ceiling determined by the Government (see Table 7.3).

266. A key equity feature of the Higher Education Loan Programme (HELP) is that payment arrangements are based on an individual's capacity to pay. The arrangements mean that students are not prevented from participating in higher education by an inability to pay their tuition costs up-front. Students who access a HELP loan are not required to make repayments until their repayment income in a financial year reaches the minimum threshold, which is A$38,149 for the 2006-07 financial year. The level of repayment required above this threshold depends on the person's income. Table 7.4 shows the income thresholds and repayment rates for the 2006-07 income year.

267. The arrangements for HELP provide eligible students with subsidies that are additional to the support received through Commonwealth contributions paid directly to providers through the Commonwealth Grant Scheme. Subsidies are created by factors such as there being no real interest rate on students' debts, debts are written off on death, and there are discounts and other incentives for up-front payment and early repayment.

Table 7.3: Student contribution bands and ranges for 2007

Student contribution	Student contribution range A$ (students commencing on or after 1 January 2005)
Band 3 (law, dentistry, medicine, veterinary science)	A$0 – A$8,333
Band 2 (accounting, administration, economics, commerce, mathematics, statistics, computing, built environment, health, engineering, science, surveying, agriculture)	A$0 – A$7,118
Band 1 (humanities, behavioural science, social studies, foreign languages, visual and performing arts)	A$0 – A$4,996
National priorities (education, nursing)	A$0 – A$3,998

Source: Higher Education Support Act 2003

Table 7.4: Income thresholds and repayment rates, 2006-07

For repayment income in the range (A$)	Rate (%) to be applied to repayment income
Less than 38,149	Nil
38,149 – 42,494	4.0
42,495 – 46,838	4.5
46,839 – 49,300	5.0
49,301 – 52,994	5.5
52,995 – 57,394	6.0
57,395 – 60,414	6.5
60,415 – 66,485	7.0
66,486 – 70,846	7.5
70,847 and above	8.0

Source: Higher Education Support Act 2003

268. Loan arrangements similar to those of HECS-HELP are also available to Australian undergraduate and postgraduate students in fee-paying courses through FEE-HELP. In this case, the Government does not contribute to the cost of the place, but provides a loan to the student to cover the tuition fee up to a lifetime limit of A$50,950 (2006-indexed figure). From 1 January 2007, the limit will be increased to A$80,000 for all courses except medicine, veterinary science and dentistry, which will be A$100,000. These limits will be indexed from 2008. In 2005, the Australian Government made FEE-HELP payments for tuitions fees on behalf of full fee-paying students of $A349 million. Before 2005, loans were available to postgraduate fee-paying students through the Postgraduate Education Loan Scheme (PELS), to overseas-trained professionals through the Bridging for Overseas Trained Professionals Loan Scheme (BOTPLS) and for Open Universities Australia students through the Open Learning Deferred Payment Scheme (OLDPS). In total in 2004, the amount paid to institutions through these arrangements was A$241 million, of which A$237 million was paid on behalf of Australian postgraduate students through PELS.

269. Because of the existence of the Government loans, private capital markets play very little role in financing tuition costs in Australia.

Overseas student fees

270. Australian higher education providers are able to charge tuition fees to overseas students in accredited courses, without any Government-determined limits on enrolments or maximum fee levels (see Chapter 10). Providers charging such fees are subject to specific quality assurance procedures (see Section 10.4). Overseas student fees have been a growing source of revenue to both private and public higher education providers. In 2005, the publicly funded higher education institutions collected A$2.1 billion in fees from overseas students in higher education courses – 15% of higher education revenue. The majority of the fee income is from international students studying in Australia, but an increasing number of courses are being offered by Australian universities operating in other countries through their own facilities, or with partner organisations (see Section 10.2).

Other fees and charges

271. Tuition fees may be charged to Australian undergraduate and postgraduate students by publicly funded providers as well as private providers. Where a publicly funded provider is receiving Australian Government funding for an undergraduate course, there is a limit on the proportion of additional students that may be admitted on a full-fee basis in each course. This restricts the number of full-fee undergraduate places offered to Australian students, but in most fields the demand is limited because there is an adequate supply of Commonwealth supported places. At the postgraduate level, most non-research courses are offered only on a full-fee basis.

272. In 2005, tuition fees from Australian undergraduate students amounted to A$102 million. Tuition fees from Australian postgraduate students totalled A$192 million. Providers also charge tuition fees for short courses and individual units of study, and levy fees and charges for a range of services. In 2005, income from these fees and charges totalled A$743 million. Fees and charges are paid by individual students, their families and their employers. No comprehensive information is available on the proportions paid from these sources.

Consultancy and contract research

273. Universities undertake a substantial amount of applied research and development in addition to their Government funded research. In 2005 contract research and consultancy generated A$649 million or around 5% of total revenue for the publicly funded institutions.

Investment income

274. Most Australian universities, by world standards, are relatively young and have limited accumulated reserves available for investment. A small number of universities, typically those established with substantial land grants, have significant investment portfolios. In total, investment income across all the publicly funded institutions in 2005 amounted to A$577 million or 4% of revenue.

Other income

275. Higher education institutions generate substantial income from a wide range of other commercial and philanthropic sources, in total about 9% of all funding. This includes A$36 million received from royalties, trademarks and licences. A notable feature of Australian institutional revenue compared with some other countries is the relatively low level of income from donations and bequests – only A$161 million or 1% of total funding in 2005.

Summary

276. Table 7.5 provides a more detailed summary of revenue sources for the publicly funded higher education institutions in 2004.

Table 7.5: Higher education revenue by source for publicly funded higher education providers, 2005

Source of Revenue	A$'000s	% of total
Australian Government Grants	**5,898,566**	**42.4**
Commonwealth Grant Scheme	3,102,080	22.3
Other DEST Grants	318,450	2.3
Scholarships	150,995	1.1
Australian Research Council	455,384	3.3
Superannuation	104,627	0.8
DEST Research Financial Assistance	1,075,493	7.7
Other Australian Government Financial Assistance	691,536	5.0
Loan Programmes	**2,332,351**	**16.8**
Australian Government Payments	1,936,272	13.9
Student Contributions	396,079	2.8
State and Local Government Financial Assistance	**230,484**	**1.7**
Fees and Charges	**3,176,971**	**22.8**
Continuing Education	74,948	0.5
Fee Paying Overseas Students	2,140,327	15.4
Fee Paying Non-overseas Postgraduate Students	191,877	1.4
Fee Paying Non-overseas Undergraduate Students	101,504	0.7
Fee Paying Non-overseas Non-award Students	39,113	0.3
Other Domestic Course Fees and Charges	76,330	0.5
Other Fees and Charges	552,872	4.0
Investment Income	**577,323**	**4.2**
Royalties, Trademarks and Licences	**35,788**	**0.3**
Consultancy and contract Research	**649,419**	**4.7**
Other Income	**1,002,571**	**7.2**
Donations and Bequests	160,624	1.2
Scholarships and Prizes	35,740	0.3
Non-Government Grants	170,226	1.2
Other Revenue	635,981	4.6
Share of net result of associates and joint ventures	**526**	**0.0**
Total Revenue	**13,903,999**	**100.0**

**Higher Education only*
Source: DEST University Financial Information

7.4 Capital costs

277. Institutional capital costs are financed from a wide range of sources, including direct Government grants, a component of fee income, donations and bequests, investment income, and external borrowings. The strong and reliable cash flows of many institutions provide a capacity to plan and self-finance a majority of capital developments.

278. In 1994, the Australian Government implemented reforms to its financial support for capital development in universities: to enhance institutional autonomy, place responsibility for institutional resource management decisions more fully in the hands of institutions, and enable institutions to plan

securely how best to meet the need to expand, maintain, refurbish and replace their capital stock. As a result, the bulk of Commonwealth support for capital projects (around A$270 million per annum) was provided to institutions as part of the operating grant (the capital roll-in).

279. The Australian Government recognised that there would still be a need for special assistance for some institutions, especially those developing new campuses and those undergoing substantial expansion. The Capital Development Pool (CDP) programme was established to assist higher education institutions with special capital projects (see Section 8.3). In 2005, A$45 million was allocated in this way. (These funds are included in the Commonwealth Government grants for teaching and learning in Table 7.5.)

280. In 2005, the operating grant was replaced with the Commonwealth Grant Scheme (CGS) as part of the *Our Universities – Backing Australia's Future* package of reforms. Under the CGS, higher education providers are funded based on the places they agree to deliver in particular discipline clusters. This funding constitutes the Australian Government's main contribution to the cost of delivering Commonwealth supported places, including general capital costs.

281. The Australian Government announced in 2006 that an additional A$95.5 million would be provided over four years from 2007 to universities through the Capital Development Pool programme. This represents a 50% increase in base funding currently available to the higher education sector through the programme.

282. The Australian Government and some State Governments also provide targeted funding for research infrastructure and facilities. For example, more than A$246 million is being provided over 2002 to 2006 for infrastructure to support world-class research and research training at Australian universities across a diverse range of areas, including bandwidth, data and information repositories, and interoperability.

283. External borrowing by Australian universities is growing but remains relatively small at A$950 million in 2005, a debt to equity ratio of only 0.3%.

7.5 Student living costs and incidental expenses

284. Student living costs and incidental expenses are met by students themselves, their families and, in some instances, by their employers. The Australian Government also makes a contribution for students in need through programmes of scholarships and means-tested financial assistance grants (see Section 6.4).

285. The proportion of full-time higher education students who are in paid employment during semester has increased significantly. In 1984 about 50% of full-time undergraduates were employed during semester, working an average of five hours a week. By 2000, more than 70% were employed during semester, working an average of 14 hours a week. Across all Australian students, both full- and part-time, 80% were employed as well as studying in 2000. Some students also borrow to finance their studies. In 2000, 12% of students obtained a repayable loan to continue studies, with the average loan being A$4,000 (Long and Hayden, 2001).

286. Government financial assistance principally takes two forms. Scholarships are available to postgraduate research students on merit and to full-time undergraduate students from low SES backgrounds (see section 6.4). Student income support is available to full-time students based on a personal income test and, for dependent students, a parental means test.

7.6 Treatment of expenditure on higher education for taxation purposes

287. There are no direct incentives or disincentives in the Australian taxation system for expenditure on higher education. Individuals may claim a tax deduction for the costs associated with educating themselves if, and only if, there is a direct connection between their course of study and their current employment. Course fees may be claimed, but not student contribution amounts, if the student is in a Commonwealth supported place. Education expenses to prepare for a new job or business opportunity cannot be claimed.

288. Businesses may claim a deduction for the costs of education, technical or professional qualification expenses directly related to earning assessable income. There is an additional taxation incentive for businesses to invest in R&D. A deduction of up to 125% of expenditure is allowed.

7.7 Mechanisms used to allocate Government funds

289. The largest single programme of Government funding to higher education providers is the Commonwealth Grant Scheme (CGS) (A$3.067 billion in 2005). Under the CGS, the Australian Government provides a contribution towards the cost of teaching units of study in a broad range of discipline areas. The discipline areas are grouped into 12 funding clusters (see Section 8.3). The CGS does not fund postgraduate research. All public higher education institutions and a small number of identified private providers are eligible for CGS funding.

290. Each higher education provider receiving funds under the CGS enters into an annual funding agreement with the Australian Government (see Section 8.3). The funding agreements specify the number of places and the discipline mix that the Australian Government will support. The amount that the government provides for each place varies according to the discipline cluster. Funding is based on student load in each of the 12 distinct 'funding clusters.' Each cluster has its own funding rate. Total funding is determined by multiplying the cluster-funding rate by the corresponding student load and summing over the 12 clusters. This amount may be supplemented by one or more of the described loadings and/or National Institute funding. This Commonwealth contribution amount is based on relativities derived from studies in the early 1990s. This approach implicitly assumes that the relativities between unit costs in different disciplines have remained reasonably constant over the last 10 years.

291. Some Commonwealth supported places attract a loading payable to the higher education provider by the Australian Government. These include the following:

- a regional loading from 2004, payable for some Commonwealth supported student places at eligible regional campuses;
- an enabling loading from 2005, payable for a specified number of Commonwealth supported student places in preparatory (enabling) courses; and
- a medical student loading from 2005 payable for a specified number of Commonwealth supported medical student places.

292. The cluster rates for teaching and nursing include funding to assist with the costs of clinical placement for nursing students and the teaching practicum for teacher education. In 2006, the funding for clinical training was A$688 per equivalent full time nursing unit of study and the funding for teaching practicum was A$686 per equivalent full time education unit of study. As part of the 2006-07 Budget, the Government announced an increase in the funding for nursing clinical training to A$1,000 per equivalent full time nursing unit of study in 2006 prices from 1 January 2007.

293. The regional loading is intended to recognise the higher costs of operating campuses in regional areas (see Section 4.3). While operating costs are clearly higher than average in the more remote parts of Australia, it is arguable whether the regional loading fairly recognises the variations in cost across metropolitan, regional and remote areas.

294. Higher education providers are eligible for additional Commonwealth Grant Scheme (CGS) funding (5% in 2006 and 7.5% in later years) if they meet the National Governance Protocols and the Higher Education Workplace Relations Requirements (see Section 8.3).

295. In order to receive CGS funding, higher education providers must satisfy a range of criteria, including "operating, and continuing to operate at an appropriate level of quality for an Australian higher education provider" (*Higher Education Support Act, 2003*). For this purpose, all CGS funded providers are subject to quality audits by the Australian Universities Quality Agency (see Section 9.5).

296. Australian Government funds for research in universities by individuals or teams of researchers flow via two main channels: competitive research grants, which provide funding for research projects on an application basis, and performance-based block grants for higher education providers. The largest competitive grants programmes are operated by the NHMRC (A$217 million to universities in 2003) and the ARC, which covers all fields other than clinical medicine and dentistry (A$481 million in 2004). The block grant programmes in support of university research and research training, the Research Training Scheme (RTS) (A$552 million in 2005), the Institutional Grants Scheme (IGS) (A$291 million in 2005) and the Research Infrastructure Block Grants (RIBG) (A$183 million in 2005) are allocated by formula. The RTS provides block grants, on a calendar year basis, to eligible higher education providers to support research training for students undertaking doctorates and masters degrees by research. Completions, research income and publications data make up the RTS performance index where HDR student completions are weighted at 50%, research income is weighted at 40% and research publications are weighted at 10%. The IGS allocation mechanism reflects providers' relative success in a performance index comprising research income (60%), Commonwealth funding research student load (30%) and research publications (10%). RIBG funds are allocated to eligible higher education providers based on their relative share of Australian competitive grant income.

297. In addition to the core funding programmes for teaching and research there is a range of more targeted institutional funding schemes allocated for particular purposes, including:

- National institutes (A$170 million in 2006)
- Collaboration and structural reform (A$19 million in 2006) (see Section 8.3)
- Governance and workplace relations reform (A$151 million in 2006)[6] (see Section 8.3)
- Learning and teaching and quality (A$83 million in 2006)[7] (see Section 9.8)
- Indigenous support (A$29 million in 2006) (see Section 6.4)
- Equity and Disability support (A$18 million in 2006) (see Section 6.4)

[6] For meeting the National Governance Protocols and the Higher Education Workplace Relations Requirements

[7] Includes the quality fund, teaching awards, Carrick, Learned Academies, Grants to ANZAAS, Chair in Child Protection and an Open Learning Initiative

7.8 Changes in the method and balance of financing for higher education over the last 10 years

298. There have been several major changes to the methods of financing higher education over the last 10 years. The most notable changes have been:

- the introduction of different levels of student charges for different fields of education, with substantial increases in the charges;
- partial de-regulation to allow publicly funded providers to charge fees to Australian undergraduate students as well as postgraduates;
- separation of block funding for research and research training from block funding for other operating purposes and the introduction of performance-based mechanisms for all research and research training funds;
- introduction of an income-contingent loan scheme for full fee-paying Australian students;
- implementation of the CGS which links core funding explicitly to the number of students enrolled in each discipline cluster; and
- development of new and enhanced funding streams for research and research infrastructure.

299. Further significant changes are foreshadowed in two areas:

- the new Learning and Teaching Performance Fund provides additional funding to universities on the basis of relative performance in providing quality learning and teaching for undergraduates. Performance is assessed using a range of measures relating to student experience and graduate outcomes. Funding is awarded in four broad discipline areas (see Section 9.8); and
- the Research Quality Framework initiative is aimed at developing the basis for an improved assessment of the quality and impact of publicly funded research conducted in Australian universities and an effective process to achieve this (see Section 5.6).

300. Equally as important as any of these changes has been the continuing strong growth in international student enrolments in Australian universities and in the revenue derived from other non-Government sources.

301. Correspondingly, the most notable change in the balance of financing has been the increasing share of institutional revenue derived from sources other than direct grants from the Australian Government. Figure 7.3 shows the composition and level of revenue from 1994 to 2004 in actual dollars, not adjusted for inflation. It shows that revenue growth has come mainly from sources other than Australian Government grants. The principal source of growth has been payments either directly or indirectly from students, through fees for overseas and domestic students and through HECS and the other student tuition loans. As noted above, a component of Government funding in the loans schemes is not captured in these figures.

302. Consequently, the share of revenue from Australian Government grants has fallen, from 60% in 1994 to 41% in 2004. The share from students through fees and loans has risen from 24% to 39%. The share of other income has risen from 16% to 20%. See Figure 7.4.

303. Given the increased rate of employment amongst students, it would appear that over the last 10 years students have also taken on an increasing share of their living and associated expenses.

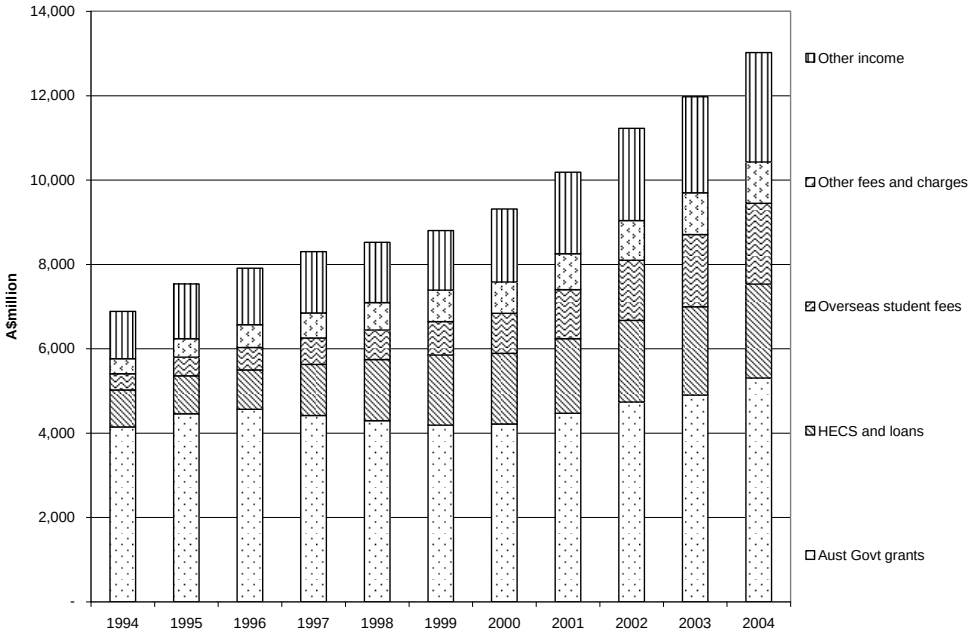
304. The declining share of institutional revenue sourced from Government grants reflects the explicit decisions of the Government over the last two decades to permit institutions to enrol fee-paying overseas students, to require a contribution from Australian students through HECS, and to allow publicly funded providers to charge fees to Australian postgraduate and undergraduate students. These changes, among others, have enabled rapid expansion of the higher education system without a commensurate increase in the call on public funding.

7.9 Problems and pressures in funding higher education

Changes in Australian demography and demand

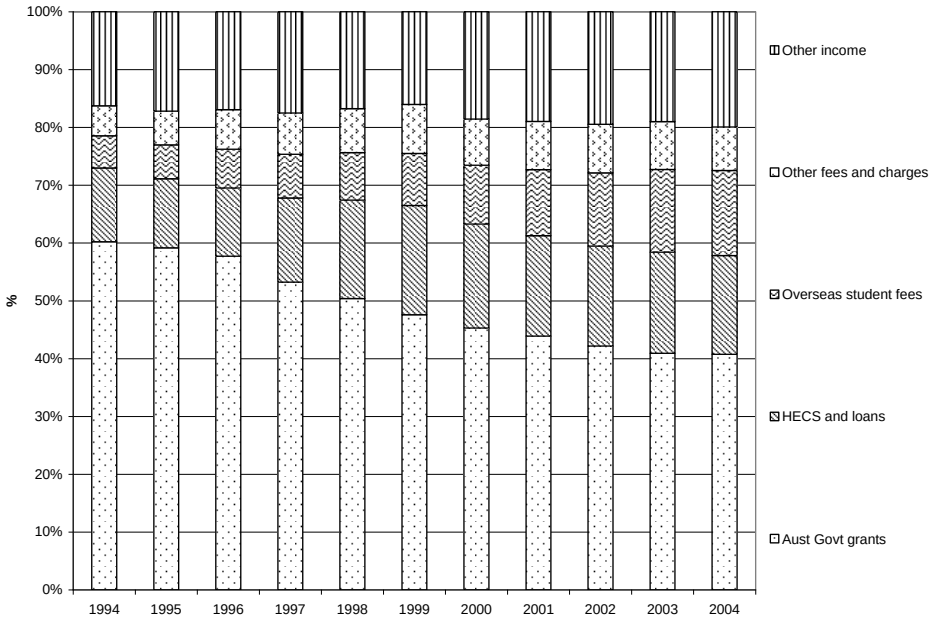
305. Over the next decade there will be major changes in the patterns of workforce participation and educational demand arising from the ageing of the Australian population. Nationally, the number of 15 to 19 year olds is projected by the Australian Bureau of Statistics to decline from around 2010 and the number of 20 to 24 year olds is projected to fall from 2015. This suggests that domestic student demand for traditional undergraduate programmes may cease to be a driver of growth in higher education. These demographic patterns will not be distributed evenly in all States and regions, raising issues of the equitable distribution of funding and access to higher education across the country.

Figure 7.3: Higher education revenue by source for publicly funded providers, 1994 to 2004



Source: DEST Selected Higher Education Finance Statistics, 1994 to 2004

Figure 7.4: Share of higher education revenue by source, 1994 to 2004



Source: DEST Selected Higher Education Finance Statistics, 1994 to 2004

Changes in the international student market

306. The success of Australian higher education institutions in attracting international students means that institutional budgets are exposed to fluctuations in demand in the international education market (see Chapter 10). After an initial period of rapid growth in student numbers, Australia's higher education export sector appears to be entering a new phase, with student numbers static or declining from many established source countries, new but more complex opportunities arising in China and India, and different, more sophisticated strategies required to sustain and build on the initial success.

Sustaining international standards in teaching and research

307. The costs of sustaining international standards in teaching and research continue to rise rapidly. Australia seeks to be globally competitive in higher education and to be at the leading edge in key areas of research, but this presents continual challenges for a country with a small population and limited resources. The policy challenge is to find the best possible return for investment in higher education and research, balancing the need for concentration of scarce resources with the needs of a geographically dispersed population. A continuing priority in this context is to build effective linkages between higher education and industry and to boost industry investment in R&D (which is low by OECD standards).

Development of higher education outside of the established universities

308. Higher education in Australia is still dominated by the established universities, but there is a growing private sector, interest from international providers and increasing involvement in higher education by vocational education and training providers and private enterprises. The policy challenge here is to find fair and balanced means of facilitating a more open higher education industry while preserving quality and ensuring maximum value for public investment. Recent policy changes have sought to achieve this by, for example, extending access to Government supported loans to students

enrolled with quality assured private providers. Policy settings and protocols for the overall regulation of the higher education industry are also subject to review (see Chapter 8).

8 PLANNING, GOVERNING AND REGULATING THE SYSTEM

8.1 Introduction

309. This Chapter will elaborate on some of the information in Chapter 2 and deal with planning and governance of higher education as well as linkages among the education sectors within Australia. As discussed earlier, responsibilities for higher education are shared among the Australian, State and Territory Governments and the institutions themselves. In some aspects, professional associations, businesses and industries play an important role. The Australian Government, in its role as the largest source of government funding for higher education, is able to exert significant influence on the operations of providers and is the major source of higher education policy. Given the shared responsibilities for planning, governance and regulation, it is not surprising to find a level of debate about rationalising or re-distributing these responsibilities. The different governance and regulation arrangements for each educational sector also lead to calls for more linkages among the sectors.

8.2 Decision-making responsibilities

310. In terms of the specifics of the aims and objectives of institutions, curriculum content, profile of courses, research priorities, staff recruitment and working conditions, internal allocation of resources, degree granting and major capital programmes, all universities have a high level of autonomy. In many respects, non-self-accrediting providers have a similar level of autonomy in terms of day-to-day operations once approval to offer particular courses is attained, although all of these aspects are scrutinised in the approval process. Non-self-accrediting institutions must also seek re-approval of their courses on a regular basis, usually every five years, so there is regular monitoring of operations.

311. The States ceded responsibility to the Commonwealth for funding universities in 1974, however State and Territory Governments retain responsibility for the legislative acts under which universities are established with the exception of a small number of institutions that are established under Commonwealth legislation (mainly for historical reasons). This gives the States and Territories responsibility for determining the legal and governance frameworks for universities and, in so doing, the broad activities they may undertake. New universities planning to be established within Australia or overseas universities moving to Australia must seek State and Territory approval under common criteria agreed by the Australian and State and Territory Governments and set out in the *National Protocols for Higher Education Approval Processes.* This ensures some consistency across the country but the criteria must be interpreted by expert panels established for each case.

312. Each public university has its own enabling legislation that establishes it as a statutory body in its home State or Territory. This legislation specifies the university's objects – the essential statement of what the university is set up to achieve. As statutory bodies, public universities are subject to a wide range of State and Territory legislation in addition to their enabling legislation. All States and Territories have financial administration and audit Acts that apply to their statutory bodies, including universities. They require universities to provide the relevant State or Territory Minister with audited financial statements and performance information and to report on specified financial and business dealings. Universities also report to State or Territory Governments and Parliaments on broader aspects of their operations usually by submitting Annual Reports for tabling in Parliament. The State or Territory legislative framework may regulate the powers of universities in terms of the commercial activities they undertake and may place restrictions on their borrowing and investment powers.

313. The States and Territories also have regulatory responsibility for non-self-accrediting providers under the *National Protocols for Higher Education Approval Processes*. The specific guidelines and processes vary among States and Territories but the overall framework is common, with expert panels, which include relevant subject matter experts established to undertake this accreditation role. The State and Territory Accreditation Agencies are audited on a five-year cycle by the Australian Universities Quality Agency (see Section 9.5).

314. The Australian Government, through the provision of funding under the *Higher Education Support Act 2003* and other supporting legislation, has established eligibility requirements for funding, and the policy and allocation arrangements for the provision of higher education places and research. Through these funding mechanisms, the Australian Government has exercised its influence over various aspects of the operations of higher education providers, including governance structures, accountability arrangements and broad industrial relations in the sector. These initiatives are described below in Section 8.3.

315. The sharing of legislative responsibility for higher education between the Australian and State and Territory Governments has led to debate during 2005 about the most desirable and effective balance of responsibilities. The issue of the balance of responsibilities between States and Territories and the Commonwealth was raised in the *Crossroads Review* (DEST, 2002c) and an initial issues paper was released late in 2004 which canvassed the implications of moving all legislative responsibility for universities to the Commonwealth (DEST, 2004a). Another paper was released in 2005 that explored the issues raised in the previous paper in more detail, taking into account the findings of reports expressly commissioned by the Australian Government (DEST, 2005a). It suggested there could be benefits in the Commonwealth taking a greater role in three key regulatory areas currently the responsibility of State and Territory Governments:

- universities' capacity to undertake commercial activities;
- governance and management in public universities; and
- recognition of universities and accreditation of courses and providers.

In November 2005, MCEETYA Ministers agreed on further work to promote national consistency and effectiveness in each of these areas.

316. The AVCC has claimed in recent years that the autonomy of universities is under threat (AVCC, 2005). Indeed, the *Crossroads Review* highlighted the complexity and scope of the reporting requirements. *Our Universities: Backing Australia's Future* indicated that the Commonwealth is "determined to ensure that institutions are required to provide the minimum of reporting whilst maintaining the highest levels of accountability" (Nelson, 2003a, p.21). The AVCC claims that the reforms associated with *Our Universities: Backing Australia's Future* have increased the reporting burden on universities and has commissioned independent research to investigate that claim.

317. However, the significant level of taxpayer investment in universities and the large number of students in receipt of Commonwealth support (through loans and scholarships) necessitate a robust accountability and reporting regime. The Australian Government's data and information collection is thus driven by its accountability responsibilities for implementing and managing Government policies and programmes. In addition the Government seeks, through its accountability regime, to protect the interests of students in the new environment of partial deregulation and greater diversity which has developed since 2003.

318. Professor Ewan (DEST, 2005a) found that Vice-Chancellors were not concerned about the duplication between Commonwealth and State and Territory requirements. They did emphasise however the need for reduced Commonwealth reporting. The Commonwealth has taken steps to ensure that university reporting requirements are kept to a minimum and it will continue to do so where possible. In 2002-2003 DEST and the AVCC reviewed reporting and as a result many requirements were dropped: descriptions of Strategic Planning; Quality Assurance and Improvement Plans; some elements in the Student Collection; and expense by function and segment information in Financial Reports. Others were reduced in scope: Capital Asset Management Plans; Equity Reports; and Indigenous Education Reports.

319. In addition, the Commonwealth's accountability mechanism, the Institution Assessment Framework (IAF) derives most of its information from routine collections or publicly available information (see below). While it requires universities to provide some additional data, universities derive the benefit of having the Department's analysis presented in time series and with comparisons to like institutions and the sector as a whole. Many universities have indicated that the assessments are very useful for their own performance measurement and planning. A number of data sets collected by DEST are also used by the AVCC, State and Territory Governments and universities (DEST, 2005a, pp.12-14).

8.3 Government funded initiatives to influence planning

Institution Assessment Framework

320. Discussions between each university and DEST have taken place each year in the form of the Educational Profiles process whereby a number of areas of university planning and operations were reported upon and discussed. In 2004, this process was replaced by the IAF, which arose from the *Our Universities: Backing Australia's Future* reforms and was a major platform for the changed accountability environment associated with the reforms. The introduction of the IAF was flagged by DEST as a specific strategy to ensure institutions are "sustainable and deliver the output for which they are funded, that their outcomes are of a high quality and that they comply with their legal obligations". Its intention is to underpin a more "strategic bilateral engagement with each higher education provider".

321. The IAF focuses on four elements:

- Organisational Sustainability – through considering strategic direction, risk management and financial accountability, this provides assurance that higher education providers are able to continue delivering the services for which they are funded.

- Achievements in higher education provision – this highlights the extent to which institutions have met the Government's higher education objectives in the areas of provision of student places, distribution of places between courses and disciplines, adequacy of student access and support, and research activity.

- Quality of Outcomes – this draws on a range of quality indicators such as graduate destinations, student satisfaction, student entrance scores, student attrition rates and progress rates.

- Compliance – this focus is on ensuring institutions have acquitted their funds appropriately and complied with legislative and administrative requirements.

322. The IAF process involves bilateral discussions between DEST and institutions based on a combination of information provided by the institutions and on data analyses undertaken by DEST.

Not all institutions are formally visited by DEST each year, but all receive the IAF analysis and associated commentary from DEST. Documents prepared by universities for the process focus on institutional strategic planning, capital asset management planning and expenditure (including maintenance), equity planning and outcomes, planning and outcomes for Indigenous students, student enrolment data (planned and actual) by discipline cluster, and planning and outcomes for research and research training.

323. Through the IAF process, DEST is able to monitor the performance of each university in terms of student outcomes, financial performance and research performance. Universities are also required to provide detailed financial reports to DEST. Data from these financial reports are analysed as part of the IAF process.

Funding agreements

324. Prior to 2005, funds for operating purposes were provided to universities and other higher education providers as a single block operating grant for a specified number of student places within the context of an educational profile that covered the institution's teaching and research activities. Resources were allocated on a rolling triennium basis, which provided higher education institutions with a level of funding on which to plan for at least three years.

325. From 2005, funds have being granted to higher education providers through annually negotiated funding agreements. The funding agreement sets out the number of Commonwealth supported places the Australian Government will fund, broken down into 10 broad discipline clusters and the two national priority areas of nursing and education (see Section 7.7). Each discipline cluster is funded at a different rate. The rates are specified in legislation. The agreement also specifies the number of places for which the higher education provider will receive regional, enabling and medical loading. Legislation requires all funding agreements to be tabled in Parliament.

326. Through these agreements, the Government is able to set a range of conditions and requirements for funding and set targets for student enrolments at the national, state, institutional, campus and discipline cluster levels. Once the target enrolments are set out in a funding agreement, institutions endeavour to meet those targets although shifts in actual demand can result in re-negotiation. The *Higher Education Support Act 2003* allows for financial penalties if the targets have not been met. The funding agreements are also used to set out other Government expectations and requirements. In particular, from 2006 they include the condition that institutions must seek approval to close courses that meet criteria for national significance. This step has been introduced to prevent course closures in areas of skill shortage either nationally or within the region of the institution, and in courses that are very specialist or cover specialist languages of national significance.

National priority areas

327. The new funding arrangements introduced under the *Higher Education Support Act 2003* provide the opportunity for the Australian Government to nominate disciplines of national priority and differentially fund student places in these nominated areas. The Commonwealth will review the national priorities periodically and this will allow it to respond to current and emerging national needs such as shortages in particular areas of the labour market. During the higher education reform process that led to the new Act, national reviews of nursing and teacher education highlighted skills shortages in these professions and issues associated with the funding of clinical and practicum placements in these courses in universities. These issues are now being addressed in part through their nomination as priority areas. As priority areas, teaching and nursing are allocated additional places, including through approved private higher education providers, institutions receive additional funding for each

student place and the costs to students are capped as an incentive to raise student demand for the courses.

Allocation of new funded places

328. Several recent initiatives have resulted in new Commonwealth supported students places both to meet demand in geographic areas of growth and to address identified skills shortages. The *Backing Australia's Ability* initiative was introduced by the Government in 2001, with a second stage in 2004, to promote science and innovation (DEST, 2001 and 2004b) (see Section 5.7). To support skills development in science and innovation, 2,000 additional higher education places were targeted at ICT, mathematics and science and allocated to institutions on a competitive basis.

329. The allocation of new Commonwealth supported places associated with *Our Universities: Backing Australia's Future* in 2003 took place after consultation with State/Territory Governments to identify regions across Australia in which the demographics had changed and demand for higher education was at its highest. Shortages in specific areas within the health sector have resulted in new Commonwealth supported places such as in aged care nursing and in medicine.

Capital Development Pool programme

330. Although higher education institutions are expected to fund new capital projects and maintain existing capital assets from normal operating grant funds, the Australian Government has had the Capital Development Pool programme in place since 1994 to support capital projects that meet special criteria. These funds are available on a competitive basis and institutions are required to use their own funding and seek other funding where possible, such as that from local or State Governments, to supplement Commonwealth funding. The particular priorities for the Capital Development Pool programme include new campus developments in suburban growth corridors and regional centres; capital developments to establish or expand courses identified by the Government as discipline areas of national importance; communication and IT infrastructure projects which improve educational delivery; projects to restore or rebuild campus facilities as a result of extraordinary circumstances such as natural disasters, or other priorities determined by the Minister for Education. In December 2005, the Minister announced A$45 million of capital funding through this programme, much of which was targeted at new or continuing campus developments in regional centres and suburban areas experiencing growth. Some of the funded projects also involved collaboration with TAFE in the provision of shared facilities.

National research priorities

331. The four National Research Priorities announced by the Australian Prime Minister in 2002 are:

- an Environmentally Sustainable Australia;
- Promoting and Maintaining Good Health;
- Frontier Technologies for Building and Transforming Australian Industries; and
- Safeguarding Australia.

Each of these priorities is accompanied by a set of goals (see Section 5.5).

332. During 2003, the priority goals were enhanced to strengthen the contribution of social sciences and humanities research. All Australian Government research and research funding bodies have

established plans showing how the priorities are to be implemented in their activities and agencies have commenced reporting on their progress with the implementation of the priorities.

333. The framework for choosing national research priorities was informed by an extensive consultation process, involving the research and scientific community, business and the wider community. It also reflects an analysis of experiences both within Australia and overseas.

334. Setting priorities provides a vision of where research can contribute to Australia's future prosperity and well-being, and will help to align Australia's research effort in these key areas. National research priorities will enhance the quality and impact of the research effort by building critical mass in these areas and by promoting collaboration between research organisations and with industry.

335. A National Research Priority (NRP) Standing Committee was established in February 2005. Amongst other things, this Committee will assess agency progress in implementation of the National Research Priorities and report to the Government on that progress.

National Governance Protocols

336. In accordance with their enabling legislation, responsibility for managing and controlling the affairs of universities is vested in their governing bodies. Typically, a governing body is chaired by the university's Chancellor, and includes:

- the Vice-Chancellor and Chair of the Academic Board, as official members;
- members with business skills or other relevant backgrounds appointed by the responsible State Government, or by the governing body itself, from outside the university;
- some graduate members, either appointed by the governing body, or elected by the university's graduates; and
- some elected staff and student members.

337. Each governing body meets approximately six times a year, to consider matters of strategic importance and to monitor the university's management and performance. The governing body is usually supported by a number of committees with defined roles, for example, a nominations committee which considers future membership, and an audit committee, which oversees the university's finances. Responsibility for operational matters and the day-to-day running of the university is vested in the Vice-Chancellor.

338. During the *Higher Education at the Crossroads* Review in 2002 and 2003, the need to improve university governance was highlighted. In 1995, there had been a national review of university management which recommended clarification of the role of governing bodies, changes to their size and composition and changes to the appointment procedures to ensure that governing body members have the necessary skills (Higher Education Management Review, 1995). Although some changes had been made as a result of this review, submissions to the *Crossroads Review* in 2002 argued that there remained substantial scope for improvement. In 2002, the Victorian State Government also conducted its own review of university governance in that State (Victorian Department of Education and Training, 2002).

339. Building on recommendations from the national and the Victorian reviews, *Our Universities: Backing Australia's Future* was accompanied by a set of National Governance Protocols aimed at

further reform. As an incentive to comply with the Protocols, the Government has made incremental funding increases in the Commonwealth Grant Scheme conditional on universities providing evidence of such compliance. For some universities, the required changes have been significant in terms of reducing the size of governing bodies, clarifying duties of members, strengthening understanding of the legal responsibilities of members, ensuring there is an appropriate skill mix among members including strong financial expertise, setting conditions on the appointment of parliamentary members, discouraging the tendency for members to represent groups or constituents and ensuring adequate and continuing professional development for members. Most university governing bodies still include elected staff and student members, but the Protocols require that members must not place the interests of a particular constituency above those of the institution as a whole. Also under the new Protocols, the majority of members must be external and independent. In November 2005, MCEETYA Ministers agreed that the impact of the Protocols be reviewed and a report produced in 2007.

Workplace reform

340. Until 1993, national awards for salaries and conditions were made for academic and general staff in universities. In 1993, these arrangements were fundamentally changed when the Commonwealth strengthened bargaining for workplace conditions at the enterprise level. The first enterprise bargaining agreements were negotiated in 1994 and these were required to be related to productivity. In 1999, the Government announced the Workplace Reform Programme, which provided the rough equivalent of a 2% salary increase for university staff if certain criteria were met within the enterprise agreement and workplace practices. These criteria included aspects of the bargaining process, performance management, cost savings, discretionary revenue generation, productivity measures, flexible working arrangements and management/administration issues.

341. During the *Crossroads Review*, the Government and some submissions argued that the sector had continued to settle individual university enterprise agreements within 'national' rounds that were dominated by pattern bargaining by unions and this practice reduced flexibility for individual institutions (DEST, 2002c). As a result, *Our Universities: Backing Australia's Future* announced the introduction of workplace reforms. The Higher Education Workplace Relations Requirements (HEWRRs) commenced in 2005. To be eligible for an increase in funding through the Commonwealth Grant Scheme (5% in 2006 and 7.5% in later years), institutions must implement workplace arrangements, including collective and individual workplace agreements and workplace policies and practices, in compliance with the HEWRRs. The HEWRRs relate to the following areas:

- choice in agreement making – all employees, including casuals employed for more than a month until 30 June 2006 and subsequently all casuals, must be offered individual Australian Workplace Agreements that prevail over the terms of a certified enterprise agreement;

- direct relationships with employees – workplace agreements, policies and practices must provide for direct consultation between employees and the university on workplace relations and human resources matters. Third parties can only represent employees at their request;

- workplace flexibility – workplace agreements, policies and practices are to facilitate and promote fair and flexible arrangements;

- productivity and performance – workplace agreements, policies and practices must support organisational productivity and performance, including a fair and transparent performance management scheme which rewards high performing individual staff and efficient processes for managing poor performing staff; and

- freedom of association – institutions must neither encourage nor discourage union membership and must not use Government funds to pay union staff salaries, or fund union facilities and activities.

342. Also announced as part of *Our Universities: Backing Australia's Future* was the Workplace Productivity Programme which began in 2006 to encourage institutions to further progress workplace reform. The programme has funding of A$83 million from 2006 to 2008. The programme recognises that the key to Australia's economic prosperity lies in creating efficient, flexible and innovative enterprises which are able to compete effectively. It encourages universities to adopt flexible working arrangements, encourage direct relationships with staff and improve productivity and performance. Funding is available for institutions to undertake a range of activities, including review or reform of financial and operational arrangements, human resource practices, professional development in leadership, governance and management, and other human resource activities.

Collaboration and Structural Reform Fund

343. A major theme identified in the *Crossroads Review* was the need for more collaboration between universities and other education providers, industry, business, regions and communities. *Our Universities: Backing Australia's Future* identified the benefits of such collaboration as promoting survival of low-demand but nationally or regionally important courses, enhancing efficiency of operations of the institutions involved, responding to labour market demand for new and flexible skills sets, enhancing efficiency of delivery of education, ensuring graduates are prepared for the labour market and maximising the commercial potential of research and innovation. The Collaboration and Structural Reform Fund (CASR) was introduced in 2005 to foster such collaboration with competitive funding of A$47 million between 2005 and 2009.

344. CASR has assisted institutions in establishing linkages with one another, including linkages across the higher education and vocational education and training sectors. For example, in 2005 CASR funded the University of Canberra and the Canberra Institute of Technology to establish an Office for Cross-sectoral Collaboration devoted to facilitating reforms in the culture, structures and systems of both institutions with respect to resource sharing and pathways facilitation.

8.4 Role of professional and industry associations

345. Although higher education providers largely determine their own curriculum content, professional and industry bodies play a significant role in the case of courses in which some form of professional recognition, registration or accreditation is required. These include courses in such professional areas as accounting, teaching, medicine, pharmacy, physiotherapy, biomedical science, nursing, psychology, architecture, social work, computing, and engineering, all of which are subject to regular accreditation processes by their professional bodies or industry groups. If courses are not accredited, graduates of those courses will not be eligible for registration or recognition within the profession. In many cases, these accreditation processes are very prescriptive in terms of curriculum content, teaching approaches, numbers and qualifications of teaching staff, and facilities. Some of these accreditation processes operate at the level of States and Territories while others apply nationally.

8.5 Role of business/industry

346. The Business and Higher Education Round Table (B-HERT) is an important forum that brings together leaders of business, research, professional and academic communities to pursue initiatives to improve the performance of both business and higher education for the benefit of Australian society. The group's activities are focused on addressing important issues of common concern such as

improving the interaction between Australian business and higher education institutions and helping to guide the future directions of higher education. In pursuing this mission, B-HERT aims to influence public opinion and Government policy on selected issues of importance. Membership of B-HERT comprises Australian universities, corporations, professional associations, and the major public research organisations. B-HERT has an active programme of meetings, forums, workshops, national awards and courses, as well as publishing reports and a newsletter. In its submission to the *Crossroads Review*, B-HERT highlighted the contributions made to the Australian economy by higher education and analysed the funding invested in Australian higher education compared with other countries (B-HERT, 2002).

347. The Business, Industry and Higher Education Collaboration Council (BIHECC) was established by the Minister for Education in 2004 to improve communication and collaboration between the business, industry and higher education sectors. The council draws on high-level representation from business, industry and employer groups and universities and includes at least one representative from a regional area. Initial priorities of the council include coordinating the selection of business, industry, university collaboration projects for funding from the Collaboration and Structural Reform Fund, development of strategies to encourage greater industry and business involvement in the higher education sector, facilitation of involvement of small and medium enterprises in collaborative arrangements, the establishment of new awards for business/university collaborations and exploring ways of measuring employment skills of graduates.

8.6 System linkages

348. While public funding for higher education is an Australian Government responsibility, State and Territory Governments have the major responsibility for schools and for the vocational education and training sector. Given the different governance and funding arrangements for the three main education systems within Australia, it is not surprising that there is potential for greater collaboration and linkages among the sectors than currently exist. However, at the level of individual institutions and within particular regions, there are many examples of good practice and many innovative initiatives in place. In part, the Collaboration and Structural Reform Fund is designed to foster greater collaboration between the sectors.

349. Some State governments, such as Tasmania, are bringing their higher education, school education and vocational education and training policy and administrative groups closer together structurally to encourage linkages. Some States have also supported the development of dual sector universities – which include both VET and higher education components. At the Commonwealth level, responsibility for all three sectors rests with the one Minister. MCEETYA brings together State, Territory and Commonwealth Ministers with responsibility for education and is a major forum for attempting to resolve educational policy issues that cross State and Territory and Commonwealth boundaries.

350. Australian higher education institutions have strong links to other types of education. Many universities offer continuing education courses. A number of institutions are dual-sector, offering both VET and higher education qualifications. Some institutions, especially dual-sector institutions and private institutions, provide short professional courses and employer-based training.

351. There is limited data on the movement of students between higher education institutions, as a unique identifier for each higher education student was only introduced in 2004. Students can move both within and between institutions during a programme of study, and between qualifications. This can involve credit transfer as described above. The movement of students between higher education institutions is somewhat hindered by different measures of credit used in different institutions.

Credit transfer and articulation between vocational education and training (VET) and higher education

352. Credit transfer and articulation arrangements between VET and higher education are covered by a complex mix of responsibilities spread among the Australian and State and Territory governments and individual providers. Because each higher education provider is responsible for its own admission policies, there is wide variation in practice among institutions. The Australian Government has worked with State and Territory governments on a range of initiatives to improve credit transfer.

353. The Australian Qualifications Framework (AQF) was introduced by MCEETYA in 1995 and fully implemented in 2002. One of its aims is to improve pathways between education sectors (see Section 2.2). The AQF is a national system of titles and descriptors for qualifications in the higher education, VET and school sectors. It describes qualifications and demonstrates the relationships among qualifications, so facilitating and guiding pathways and credit transfer. The AQF includes *National Guidelines on Cross-Sector Qualification Linkages* that outline general principles, as well as operational advice to facilitate arrangements for cross-sector pathways.

354. Although Australian universities are self-accrediting and so have a large amount of autonomy in terms of admitting students and granting credit, the AVCC, acting on behalf of universities, has taken an active role in supporting and promoting credit transfer. At the end of 1998, the AVCC and the Australian National Training Authority (ANTA) commissioned a joint study on credit transfer and articulation between the sectors – the *Pathways to Partnerships* report (Carnegie, 2000). One of the outcomes of this study was the adoption of *Policy Guidelines on Cross-Sector Qualification Linkages* (AVCC, 2002). The AVCC also operates a credit transfer scheme on its website that attempts to provide relatively simple information to prospective students on the credit they will be granted at any one of the participating universities.

355. More recently, MCEETYA has taken a keen interest in improving credit transfer and articulation specifically in relation to students moving from VET to higher education. To provide Ministerial support for further improvements in institutional practice, MCEETYA adopted in May 2005 a set of *Good Practice Principles for Credit Transfer and Articulation from VET to Higher Education* (MCEETYA, 2005). MCEETYA has also asked the Australian Universities Quality Agency and the new VET National Quality Council to take a more active role in auditing credit transfer and articulation practices within institutions against the *Good Practice Principles*. In November 2005, MCEETYA commissioned a national study to improve outcomes in credit transfer and articulation between VET and higher education, and this report will be available in early 2007.

356. There is a general acknowledgement of the inadequacy of the data available to analyse State and Territory and institutional trends and differences in credit transfer and articulation (Moodie, 2005). For this reason MCEETYA established a working group of data experts to explore ways of capturing more accurately the numbers and trends of students moving from VET to higher education as well the various levels of credit they are given. No current data set adequately provides information that allows a reliable level of comparison and analysis.

357. Two relevant data sets are published by DEST in the annual student statistics collection. These provide institutional and State data on the numbers of students entering university to a bachelor degree or below whose highest prior qualification is a Technical and Further Education (TAFE) award and the numbers of students whose basis for gaining entry to university is a complete or incomplete TAFE award. However, neither of these data sets captures information about credit transfer and articulation. The former includes students who have entered higher education by a variety of pathways not necessarily related to their TAFE studies. The latter provides some indication of trends in numbers of applicants to university who use TAFE study to gain admission whether or not they are granted credit.

358. Table 8.1 shows that there is significant variation among the States and Territories in the numbers of students gaining entry to universities on the basis of TAFE study. Further breakdown of the figures by institution also shows significant variations among individual institutions. Some institutions stand out as admitting relatively large proportions of their commencing students on the basis of TAFE studies, whereas the Group of Eight universities admit relatively fewer students on the basis of previous TAFE studies.

359. The Higher Education Statistics Collection of DEST also seeks information about the numbers of students commencing bachelor degrees who receive exemptions for prior TAFE studies. In the 2003 collection, students (3% of commencing undergraduate students received such exemptions). This figure increased in 2003 after a period of relative stability from 1994 (it was 2% in 1993). It appears that the majority (over three-quarters) of students applying for exemptions gained them for a third of their course or less. There are concerns regarding the reliability of this data given its collection through different processes at the institutional level and this is one of the areas for discussion within the data experts group.

360. The Higher Education Statistics Collection of DEST can also be analysed to ascertain the success of students granted exemptions for prior TAFE studies. Students who are granted exemptions do well in terms of progress rates and attrition rates, particularly when compared with other students of similar age and study patterns.

361. Significant work has been undertaken by the Australian Government and States to improve credit transfer. All of the developments to increase credit transfer and articulation are based on an assumption that students are seeking the expansion of such arrangements. However, this assumption has not necessarily been tested. Studies to ascertain the experiences and subsequent success of VET students applying for credit in their entry to higher education are also warranted, as are studies that determine the level of student demand for, and interest in, credit transfer and articulation.

Table 8.1: Domestic students commencing a course at bachelor level or below by State with TAFE as basis for admission to current course 2005 [(a)]

State of Institution	All commencing students	Students admitted on basis of TAFE	Percentage admitted on basis of TAFE
New South Wales	60,156	7,103	11.8
Victoria	40,736	4,737	11.6
Queensland	40,115	2,884	7.2
Western Australia	19,379	1,709	8.8
South Australia	12,913	981	7.6
Tasmania	4,755	602	12.7
Northern Territory	2,597	405	15.6
Australian Capital Territory	4,624	278	6.0
Multi-State	3,533	121	3.4
Total 2005	**188,808**	**18,820**	**10.0**

[(a)] Includes students with complete or incomplete TAFE as basis of admission (other than a secondary education course)
Source: DEST HE Student Statistics Collection

Dual sector institutions

362. The establishment of dual sector institutions which include both VET and higher education components should provide a good basis for credit transfer and for seamless pathways for students moving from one sector to the other. There are five such institutions in Victoria, one in the Northern

Territory and one in Tasmania. In her 2002 Ministerial Statement on Higher Education in Victoria, the Victorian Minister for Education expressed disappointment at the outcomes in terms of credit transfer and pathways of the dual sector institutions in that State and the expectation that in the future these institutions would take a leadership role in this respect (Kosky, 2002). The dual sector universities have also been very critical of the administrative burden created by their dual sector status, which means that they are funded by two different levels of government and have to fulfil reporting requirements for each. DEST and the Victorian Government jointly commissioned a study to investigate this problem (PhillipsKPA, 2005).

Shared educational precincts

363. Across Australia there are several innovative examples of sharing educational facilities and/or developing educational precincts that capitalise on opportunities to create cross-sector pathways for students and share facilities and expertise. These are particularly successful in regional areas where they create a higher education presence that might not be sustainable as a stand-alone facility. Shoemaker et al. (2002) assessed such multi-partner campuses and suggested factors that lead to their success. Success factors include the involvement of all three educational sectors, local government support and high level IT access.

Links between schools and higher education

364. Given that the school system is very much State-based, most of the formal links between higher education and the school sector take place either at the State-level or at the level of individual institutions. The State-based Tertiary Admissions Centres act on behalf of universities to administer admission processes for domestic students applying to universities. University academics are involved in various ways across the States in advising on school-level curriculum and assessment processes. In a more formal linkage, several universities conduct extension programmes for school students identified as gifted and these sometimes provide credit for future university study. Figgis and Parker (2002) undertook a national study of arrangements in which more able school students were given credit towards their university studies and concluded that the universities offering these programmes saw them as a mechanism to recruit very able students and to create better relationships with schools.

365. Many universities also have developed specific links with schools in their region to encourage students from equity groups to continue to higher education. These initiatives often involve programmes that bring school students onto university campuses, highlight the value of higher education, link school students with university student role models, and support the students during their transition to university study once they are admitted. These schemes may also be linked with special admissions processes that take into account disadvantage suffered by these students in terms of meeting normal entry criteria. King and Kyle (1993) reported on the establishment and progress of five such equity programmes promoting links between schools and higher education. Ramsay et al. (1998) evaluated the special access scheme at the University of South Australia and compared this with schemes at other universities.

Recognition of prior learning

366. The Australian Qualifications Framework Advisory Board has published *National Principles and Operational Guidelines for Recognition of Prior Learning*. The Principles provide advice for institutions in all post-compulsory education sectors on implementing recognition of prior learning (RPL). It is mainly used in the vocational education and training (VET) sector and also by some higher education institutions.

367. Assessment of competency is an important aspect of admission for some fields of study. Visual and performing arts programmes usually require assessment of a portfolio or an audition as part of the admissions process. Some postgraduate professional programmes, for example management, may require relevant work experience for admission. More generally, institutions may offer alternative entry options for those without formal qualifications, and a small number of students are recorded as being admitted to higher education courses based on employment experience, professional qualifications or completion of Open Learning Studies. This was around 2.5% of commencing students in 2004.

Information to prospective students

368. Higher education institutions rely increasingly on their websites to provide information about courses and enrolment processes to prospective students and online enrolment and admissions processes are now commonplace. The *Higher Education Support Act 2003* specifies the nature of information about costs that must be made available to prospective students. School leavers generally apply through the Tertiary Admissions Centres which operate in each State (except in Tasmania where students apply directly to the university). Each of these centres provides a single source of comprehensive information about courses available in that State as well as courses from some universities in other States. In 2004, DEST developed and will maintain the *GoingToUni* website to provide a single national database of information about higher education courses as well as information about course costs and support arrangements for students.[8] Using this website, students can search for courses in their field of study interest at any university or approved higher education provider across Australia. The website is still being developed and refined to improve its search capacity.

[8] See www.goingtouni.gov.au

9 ASSURING AND IMPROVING THE QUALITY OF HIGHER EDUCATION

9.1 Background

369. This Chapter describes national arrangements within Australia to assure and improve the quality of higher education. There have been significant developments in quality assurance of Australian higher education over the past decade. The focus has moved beyond self-monitoring of quality by institutions to include the improvement of efficiency and effectiveness, and there is now a heightened awareness of public accountability and benchmarking.

370. The Australian Government funded major discipline reviews during the mid-1980s to determine standards and to improve quality and efficiency in universities. While the reviews revealed the importance of quality assurance within institutions and across the sector, there was no way to ensure that institutions acted upon review recommendations. In 1991 the Commonwealth moved from the discipline review approach to a whole of institution approach to quality assurance. It announced a set of measures to enhance the quality of higher education teaching and research. Those universities able to demonstrate a high level of quality assurance in the context of their missions and goals received additional funding. The Commonwealth established the Committee for Quality Assurance in Higher Education in 1992 to:

- provide advice on quality assurance issues;
- conduct independent audits of institutional quality assurance policies and procedures; and
- make recommendations about the allocation of annual quality-related funds.

The Committee conducted three rounds of independent whole of institution audits from 1993 to 1995. The voluntary self-assessments undertaken by institutions under this programme triggered considerable change at the institutional level as gaps were identified and outcomes measured.

371. Between 1998 and 2003, all triennially funded institutions were required to submit an Institutional Quality Assurance and Improvement Plan to the Commonwealth as part of the Educational Profiles process. The plans outlined the university's goals and aims in the key areas of teaching and learning, research, management and community service. Each institution was required to provide detail of the strategies that had been adopted to achieve its goals and the performance indicators used to assess its success. The Educational Profiles process has now been replaced by the Institution Assessment Framework (see Section 8.3).

9.2 The National Protocols for Higher Education Approval Processes

372. In March 2000, MCEETYA endorsed the *National Protocols for Higher Education Approval Processes* to enhance the rigour and consistency of approval processes and standards across Australia. The five Protocols set out processes and responsibilities covering:

- criteria and processes for recognition of universities;
- overseas higher education institutions seeking to operate in Australia;

- accreditation of higher education courses to be offered by non-self-accrediting providers;
- delivery arrangements involving other organisations; and
- endorsement of courses for overseas students.

373. Each State and Territory agreed to the adoption of the Protocols, a process that involved significant legislative changes for each jurisdiction. A review conducted in 2004 (Guthrie, Johnston and King, 2004) concluded that there had been substantial achievements and ongoing co-operation among the States and Territories although the Protocols were not consistently implemented in all cases mainly due to the different legislative frameworks and structures to which they are applied in each State and Territory. MCEETYA agreed to new National protocols in July 2006, which eill come into effect from the beginning of 2008.

374. Registration of non self-accrediting institutions and accreditation of their courses are managed by State and Territory authorities, with the Australian Government responsible for approvals in the external territories. The Protocols provide nationally consistent rules for the registration of non self-accrediting higher education institutions in Australia and the accreditation of their courses. An institution needs both registration and course accreditation to deliver higher education courses in Australia. For a course to be accredited it must be comparable in requirements and learning outcomes to a course at the same level in a similar field at Australian universities. Registration and accreditation last for a maximum of five years. There are mutual recognition arrangements for registration and course accreditation across jurisdictions.

9.3 The current system - partners in quality assurance

375. The current quality assurance system in Australian higher education is based on a partnership between the Australian Government and the State and Territory Governments and the higher education sector.

9.4 The Australian Qualifications Framework

376. The Australian Qualifications Framework (AQF) was established by MCEETYA in 1995 and sets outs nationally recognised pathways between awards offered in Australia's vocational education and training and higher education sectors. It brings together the qualifications issued by different sectors into a single comprehensive system of titles and standards. The AQF also maintains a public register of higher education providers and accreditation authorities.

9.5 The Australian Universities Quality Agency

377. Established early in 2000 following agreement by MCEETYA, the Australian Universities Quality Agency (AUQA) is responsible for auditing the quality of Australian universities. It also audits those Commonwealth, State and Territory authorities responsible for approving new and overseas universities and all higher education courses offered by other providers. From 2006, approved non-self accrediting higher education providers whose students are eligible for FEE-HELP may be included in an AUQA audit schedule. These providers will be able to choose between an audit conducted by AUQA or an audit conducted by their State and Territory accrediting agency (where that agency has been added to the Higher Education Provider Guidelines). AUQA conducts audits of the activities within Australia and offshore of all Australian universities, on a five-year rolling cycle. The audits scrutinise the claims of institutions against their own missions and objectives. The process includes a critical self-review and a site visit, with recently increased scrutiny of offshore programmes offered by Australian providers, assisted by additional Australian Government funding. Audit reports are publicly available on the AUQA website and thus represent a form of accountability to a range of stakeholders.

378. AUQA is an independent not-for-profit company limited by guarantee, the company structure of which provides for each of the MCEETYA Ministers responsible for higher education to be a member of the company, and for the members to appoint a Board, which is responsible for carrying out the activities of the organisation, and for its financial performance and reporting. AUQA is jointly funded by contributions from all jurisdictions, with the Australian Government currently funding 50% of AUQA's operating overheads. It has a small professional staff and does its work through expert accreditation and review panels. All review panels include at least one international auditor.

9.6 The role of universities and higher education providers

379. Australia's universities, as self-accrediting bodies, are responsible for maintaining the quality of their own academic standards and the processes for doing this are then audited on a five-year cycle by AUQA. Unlike in some countries, Australia does not have national entrance or exit examinations, national standards for university courses or a formal system of external examiners. However, the *National Protocols for Higher Education Approval Processes* (the National Protocols), agreed and given effect to by the Commonwealth, State and Territory Governments, are designed to ensure consistent criteria and standards across Australia in matters such as the recognition of new universities, the operation of overseas higher education institutions in Australia and the accreditation of higher education courses offered by non-self-accrediting providers.

380. The processes each university uses to assure quality and maintain standards are scrutinised in the AUQA audits. Universities assure the quality of their offerings in a number of ways including external academic and industry input into courses and peer review of new and ongoing courses. Many professional courses are formally accredited by professional or industry groups. Universities formally review their courses on a cyclical basis and regularly seek and monitor student feedback on teaching. Universities voluntarily comply with various codes of practice and guidelines set by the AVCC to ensure the quality of their offerings.

381. Non-self-accrediting higher education providers must apply to the relevant State or Territory Minister for Education for permission to offer higher education awards as defined in the AQF, and must have their courses accredited by the appropriate State or Territory Government. In accrediting courses of higher education providers, State or Territory authorities take account of the standards of the courses compared with those in Australian universities. They also seek evidence of ongoing quality assurance measures. In some States, TAFE institutes may offer higher education awards which are subjected to this same higher education approval process.

9.7 State and Territory Governments

382. Australia's State and mainland Territory Governments are responsible for the legislation which protects the integrity of Australian universities and higher education awards in their jurisdiction. Their responsibilities include:

- specifying arrangements to establish and recognise universities, as well as protecting the use of the term 'university';
- protecting higher education award titles and accrediting higher education courses to be offered by non-self-accrediting higher education providers;
- approving the operation of overseas providers of higher education; and
- endorsing courses of study as suitable for overseas students.

9.8 Commonwealth responsibility for quality assurance

Legislation

383. While States and Territories carry primary legislative responsibility for the higher education sector, the Commonwealth exercises its role in a number of ways. The Australian Government's role includes protection of the term 'university' under the *Corporations Act 2001* and through the establishment, in all Australian jurisdictions, of a legislative framework specifying consistent criteria and procedures by which an institution may use the title 'university'.

384. The *Higher Education Support Act 2003* also includes a number of quality and accountability provisions particularly for those non-self-accrediting institutions formally approved as higher education providers under the Act and whose students are eligible for Commonwealth loans through FEE-HELP. The provisions in the Act relate to financial reporting, compliance with the AQF and the *National Protocols for Higher Education Approval Processes*, quality auditing requirements and the provision of student grievance and review procedures.

385. In 2000, the Commonwealth Parliament passed new legislation for the regulation of the education and training export industry to provide quality assurance, and to protect overseas students' investment in studying in Australia. It does this through financial assurance to students and a nationally consistent approach in the registration of providers. The *Education Services for Overseas Students Act 2000* and the associated National Code are the two key elements of this legislative protection (see Section 10.4).

Performance management tools

Graduate Destination Survey

386. A system-wide survey of the employment success of students after graduation, known as the Graduate Destination Survey, has been conducted since the 1970s by the Graduate Careers Council of Australia (GCCA) now known as Graduate Careers Australia (GCA). The Australian Government funds the survey with significant in-kind contributions by institutions. The survey is completed by graduates four months after completion of their courses. It provides information on the proportion of graduates in full-time employment (including industry, occupation and salary level) and full-time study (including level and field) from each institution. The survey provides valuable comparative information to the public and useful benchmarking information to universities to help assess the success of their graduates in the competitive labour market.

Course Experience Questionnaire and Postgraduate Research Experience Questionnaire

387. The Commonwealth also funds the annual undergraduate Course Experience Questionnaire (CEQ) as well as the newer Postgraduate Research Experience Questionnaire (PREQ). Both of these student surveys are disseminated by Graduate Careers Australia and are a valuable source of information on student perceptions of their experiences at university. The CEQ currently covers facets of the undergraduate experience that include teaching, goals and standards, workload, assessment, generic skills and overall satisfaction. Additional scales for the CEQ also measure the broader aspects of student experience in the areas of student support, learning resources, learning community, graduate qualities and intellectual motivation. The CEQ results are widely used within universities to monitor and benchmark student satisfaction.

388. The PREQ was developed by the Australian Council for Educational Research in conjunction with Graduate Careers Australia and was administered nationally for the first time in 1999. It measures research graduates' satisfaction with regard to supervision, skills development, intellectual climate, infrastructure, thesis examination and goals.

Publications and online resources

389. The Australian Government publishes a number of resources to encourage the improvement of outcomes within Australian universities and to provide information to the public to improve user choice. In 2000 a benchmarking manual for higher education institutions was developed. The manual provides 67 benchmarks that universities may use to assess themselves against like institutions. The benchmarks cover the spectrum of university activities from teaching and learning to research, finances, internal management and internationalisation.[9] A later study and report in 2004, called *Benchmarking the university: learning about improvement*, examined the use of benchmarking in universities and reported on how benchmarking might be made a more effective tool in the light of the pressures and changes impacting the higher education sector.[10]

390. The Higher Education Outcome Indicators provide information on students' progress rates, attrition rates, full-time employment, full-time study, graduate starting salaries and course experience (generic skills, good teaching and overall satisfaction). These indicators provide a measure of

[9] *Benchmarking: A Manual for Australian Universities* can be found at: http://www.dest.gov.au/archive/highered/otherpub/bench.pdf

[10] *Benchmarking the university: learning about improvement* can be found at: http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/benchmarking_the_university.htm

educational achievement and the effectiveness of educational delivery. The student progress rate measures the proportion of subject load passed by a student. Some of the outcome indicators have been published on the DEST website for use by higher education providers, researchers and the public.

Learning and Teaching Performance Fund

391. A major finding of the review of higher education in 2002, which culminated in *Our Universities: Backing Australia's Future*, was that although teaching is recognised as a core activity of all higher education institutions, existing Commonwealth funding, internal staff promotion practices and institutional prestige tended to reinforce the importance of research performance rather than teaching performance. The Government moved to enhance the rewards and incentives for excellence in learning and teaching with the aim of promoting the overall quality of the sector and enabling excellence in learning and teaching to be placed alongside delivery of research excellence in terms of its contribution to Australia's knowledge systems.

392. A Learning and Teaching Performance Fund has been established as part of this renewed focus on teaching quality in Australian universities. The fund will provide around A$250 million from 2006 to 2008 to reward those institutions that best demonstrate excellence in learning and teaching. The first round of the programme was conducted in 2005 for funding in 2006. The allocation of funding was determined in two stages. In the first stage, institutions were invited to provide evidence of a general commitment to, and support for, teaching quality. The second stage, on which the funding was allocated, assessed universities on a performance indicator model in conjunction with a qualitative assessment. Three groups of performance indicators were included in the model – student satisfaction (as measured on the CEQ scales of overall satisfaction, generic skills and good teaching), graduate outcomes (proportions of graduates moving to employment or full-time study) and student success (student progress rates and attrition rates). The recommendations on funding allocations were made by an expert panel with an international chair. 14 universities shared approximately A$54 million for 2006.

393. The Australian Government made some changes to the fund following the first funding round, including that learning and teaching performance would be measured in four broad discipline areas rather than as an aggregated measure of performance across the whole institution. The discipline areas are:

- Science, Computing, Engineering, Architecture and Agriculture
- Business, Law and Economics
- Humanities, Arts and Education
- Health

This change has provided opportunities for a greater number of universities to receive funding. It recognises that there are 'pockets of excellence' within universities. 30 universities will share in the $83 million to be allocated from the fund in 2007

The Carrick Institute for Learning and Teaching

394. The establishment of the Carrick Institute for Learning and Teaching in Higher Education was announced as part of the *Our Universities: Backing Australia's Future* reform package for higher education to replace the Australian Universities Teaching Committee. The Institute, whose first full

year of operation is in 2006, provides a national focus for the enhancement of learning and teaching in Australian higher education institutions. Its programmes are supported by significant funding for teaching grants, awards, fellowships and networks. The new Carrick Awards for Australian University Teaching, which replaced the Australian Awards for University Teaching from 2006, will be administered by the Carrick Institute. There will be a substantial increase in the number of awards and the funding associated with them.

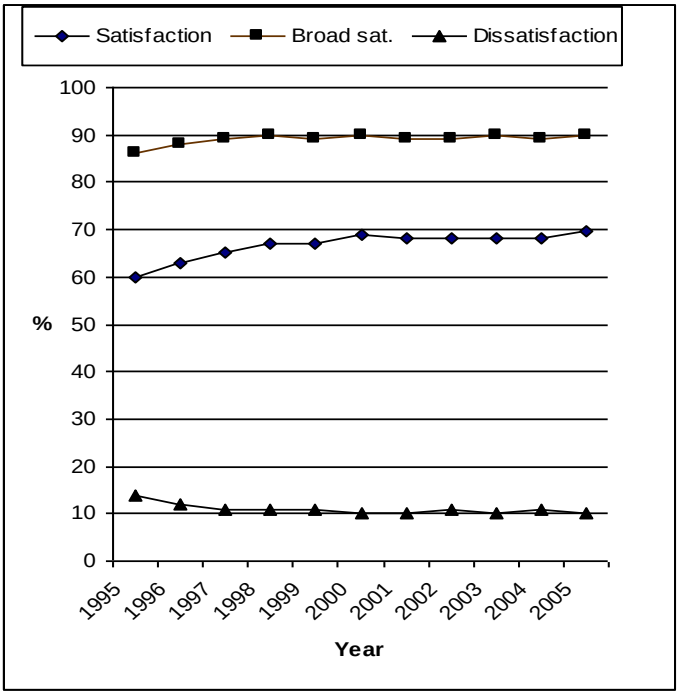
Research quality

395. As outlined in Chapter 5, Australian Government support for research and research training in universities is related to performance. Research grants are awarded by the ARC and the NHMRC after proposals have been subject to peer review. Higher education providers receive block funds informed by their relative success in attracting research income, number of publications, number of higher degree by research (HDR) student completions and quantum of HDR student load (see Sections 5.3 and 5.6). During 2004 and 2005, there has been extensive consultation and discussions about the Research Quality Framework initiative. The aim of the initiative is to develop the basis for an improved assessment of quality and an assessment of the impact of publicly funded research with an effective process to achieve this.

Institution Assessment Framework

396. The Institution Assessment Framework (see Section 8.3), as well as providing the basis of bilateral discussions between DEST and higher education providers, produces an across-the-board assessment of institutional achievements based on quantitative and qualitative data from universities and external sources. The data for the assessment are in large part drawn from information that is publicly available, or already produced by or collected routinely from universities.

Figure 9.1: Level of satisfaction with course, bachelor degrees, 1995 to 2005



Source: Graduate Careers Australia: Gradstats 2005

9.9 Quality trends

397. In spite of the expanded size and diversity of the higher education system within Australia, there is evidence that quality has been maintained and, in many cases, enhanced over the past decade. The First Year Experience Study has been conducted at five yearly intervals since 1994 and, in 2005, provided an overview of the attitudes and experiences of first year students in Australian universities over a 10-year period (Krause et al., 2005). Trends over this period highlight that many aspects of the experience of first year students have been enhanced. There has been a significant decline in the proportion of students feeling that university has not met their expectations. In 2004, first year students were significantly more satisfied with their course of study and with the quality of their teaching.

398. Student progress rates, student attrition rates and student satisfaction expressed through the Course Experience Questionnaire are all stable or trending positively. Figure 9.1 shows trends in student responses on overall satisfaction in the Course Experience Questionnaire.

10 INTERNATIONALISATION AND GLOBALISATION OF HIGHER EDUCATION

10.1 Introduction

399. In this Chapter, the critical significance of the internationalisation of higher education to the Australian higher education system is described. Internationalisation is seen to bring many benefits to the Australian higher education system and to the Australian community more generally. These include the intellectual, cultural and social benefits that arise from international collaboration between students, researchers, institutions and governments. The large numbers of overseas students being taught within the Australian higher education system contribute to multiculturalism in the Australian community and forge strong links between Australia and the countries from which they come. The alumni of Australian universities are located throughout the world and form a powerful global network of professionals who ensure Australia is well represented in international developments. All stakeholders in the Australian higher education sector acknowledge the importance of international links and international benchmarking for maintaining quality.

400. Over the last decade, Australian universities have built a successful higher education export industry and overseas students now represent a substantial percentage of the student body in many institutions. As overseas governments reform their own education policies and educational delivery becomes more flexible, Australian universities are increasingly looking to deliver their programmes offshore.

401. The Australian Government, together with State and Territory Governments, has promoted Australia's education and training capabilities, assisting universities in gaining access to a wider range of overseas markets and assuring the quality of education and training provision to overseas students in both onshore and offshore settings. It has accordingly introduced a range of public policy initiatives which are described in this Chapter.

10.2 Internationalisation of higher education in Australia – an overview

402. The Australian Government and Australian universities point to a range of benefits arising from the internationalisation of higher education, including:

- growth and fulfilment of Australian and overseas students;
- enhancement of Australian democracy and multiculturalism;
- increased cross-cultural awareness with flow on benefits in Australian competitiveness and security; and
- economic, trade and diplomatic benefits.

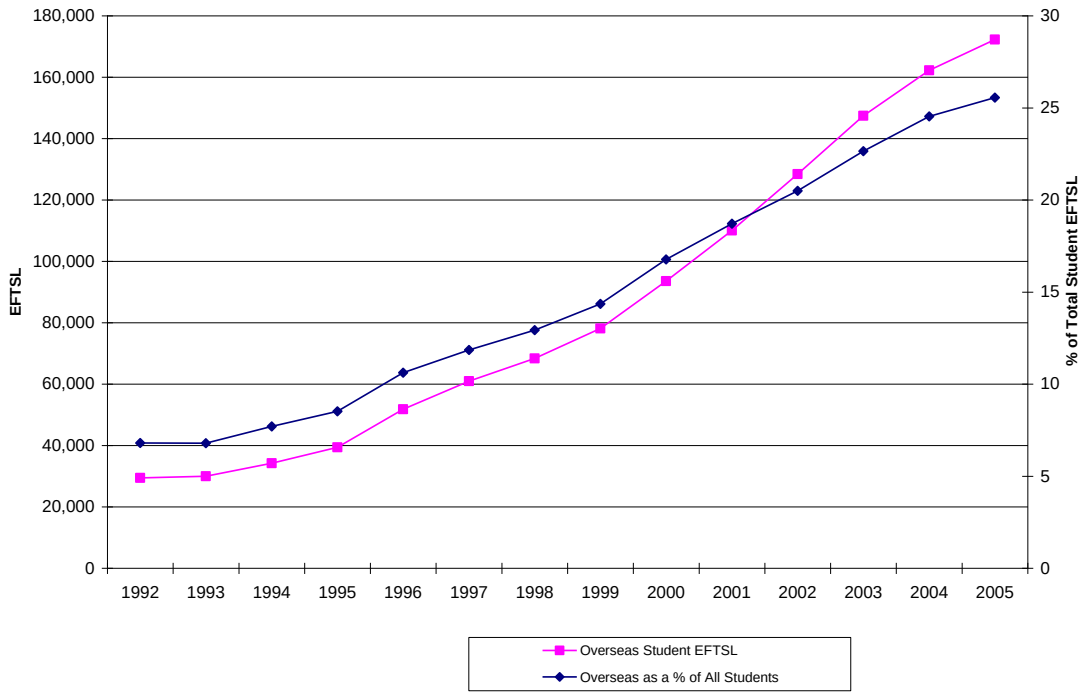
403. These benefits are derived through the full range of collaborative links between Australian higher education and overseas countries. These include: international alumni activities; student and staff exchanges and study tours; research collaboration; academic study leave to overseas countries; programmes of international visitors and fellowships; international conference attendance; partnerships with international education institutions; international consultancies and overseas

development projects undertaken by Australian academics; and overseas students enrolled in Australian institutions.

404. The numbers of overseas students enrolling in Australian universities has increased sharply from around 30,000 equivalent full-time student units (EFTSU) in 1992 to over 172,000 Equivalent Fulltime Student Load (EFTSL) in 2005 (see Figure 10.1). This 2005 figure relates to 239,495 overseas student enrolments. Over the same period, overseas student load as a percentage of total student load increased from 7% to 26%. In 2002, Australia had the highest such percentage of all OECD countries. Overseas students as a percentage of total student load varies greatly across Australian universities: from 60% in one university to only 5% in another.

405. Emerging evidence indicates that overseas student demand may be flattening after a considerable period of double-digit growth. While overseas enrolments in total continue to increase as existing intakes move through the system, commencing higher education numbers have reached a plateau, with 2005 numbers decreasing slightly by 0.2% on the previous year. In contrast, the vocational education and training sector is experiencing strong growth in overseas enrolments. More research is needed to understand the flattening of demand in higher education. However, Australian analysts point to factors such as global security fears, Australian exchange rates, fee increases and changes in government education policies in traditional market countries.

Figure 10.1: Overseas students equivalent full-time student units (EFTSU) and overseas student EFTSU as a percentage of total student EFTSL, 1992 to 2005



Source: DEST Higher Education Statistics Collection

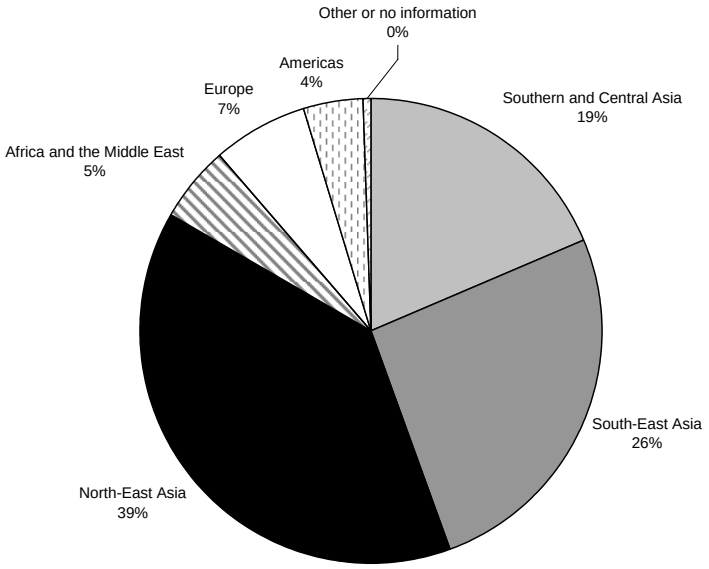
406. The majority of overseas students enrolling in Australian universities are studying business, information technology or engineering and related technologies. These fields of education accounted for 69% of all enrolments in 2005.

407. Australia attracts most (over 80%) of its overseas students from Asian countries (see Figure 10.2). Australian Education International data shows that the countries from which most higher education students were attracted in 2005 were China (24%); India (14%); Malaysia (9%); Hong Kong (7%); Indonesia (6%) and Singapore (5%).

408. Australian universities are increasingly enrolling students offshore. In 2005, 64,000 overseas students enrolled in Australian universities were studying offshore, representing 27% of total overseas students. This is more than double the 24,000 overseas students enrolled offshore in 2000. Once again, there is considerable diversity within the Australian higher education system, with some institutions enrolling up to 72% of their overseas student body in offshore study and others only enrolling students for onshore study.

409. The majority of universities delivering education services to offshore students do so through formal agreements with overseas institutions and organisations, where the Australian university develops the programme and has responsibility for overseeing academic standards. In 2003, a survey conducted by the AVCC indicated that Australian universities were offering 1,569 offshore programmes with overseas institutions (AVCC, 2003b). More than 70% of all offshore programmes were in Singapore, Malaysia and China (including Hong Kong). Many offshore programmes take the form of 'twinning' arrangements where students undertake some of their study offshore and then complete their studies in Australia, though there is a growing trend for programmes to be fully delivered offshore.

Figure 10.2: Overseas student enrolments by country of permanent home residence, 2005



Source: Australian Education International data

410. A small number of universities have also established branch campuses in overseas countries. Monash University, for example, has established campuses in Malaysia and South Africa and centres in London and Italy, as part of its focused strategy to establish itself as a world-renowned 'international' university. Other universities establishing branch campuses overseas include RMIT University in Vietnam, and Curtin University of Technology and Swinburne University in Malaysia.

411. The Singapore Government announced in 2004 that it had chosen the University of New South Wales (UNSW) to establish its first foreign university. UNSW Asia will be the University's first offshore campus and the first wholly owned research and teaching institution to be established overseas by an Australian university.

412. In addition to agreements targeted at the recruitment of students, Australian universities have also actively sought to enter into institution-to-institution agreements with overseas universities and education providers to facilitate student exchanges, study abroad arrangements, staff exchanges and academic/research collaboration. An AVCC survey found that, in 2003, universities had over 4,000 agreements in place (AVCC, 2003a). The largest number of agreements was with institutions in the USA, China (including Hong Kong), Japan, Germany, United Kingdom, Thailand, Korea and France.

413. Higher education delivery to students outside of Australia is expected to grow more rapidly in the future than delivery to international students onshore. This means that countries and institutions will continue to benefit through: better meeting global demand for higher education; increased staff and student mobility; more science, technology and research collaboration; capacity building through increased knowledge and technology transfer; and improved cultural and social understanding.

414. Revenue from fee-paying overseas students has become an important component of university budgets, with fee income accounting for 15% of total revenue for the sector as a whole in 2004. For some institutions, however, the reliance on the overseas student market is far greater. For six universities, fee income represents over 20% of revenue. Over recent years, revenue from overseas student fees has buffered many Australian universities from the full impact of funding pressures arising from a number of factors, including public policy decisions and increasing salaries. This raises concerns about the consequences of a downturn in overseas student demand on institutional liquidity.

415. Education-related travel accounts for about 95% of all education service exports (DFAT, 2005b). In 2004-05, the export of education-related travel services was valued at A$6.9 billion in Australia, with the higher education sector accounting for a large percentage of this revenue (ABS, 2005b). There are views in the higher education sector that the export industry was built through the initiative of the universities themselves, with little Government encouragement or support.

416. In 2003, however, the Australian Government released a Ministerial Statement *Engaging the World through Education*, which committed it to working in partnership with education and training providers and State and Territory governments to support their efforts to provide quality international education services and to enhance Australia's reputation as an education leader (Nelson, 2003b). The Australian Government's policy objectives are aimed at:

- promoting Australia's diverse education and research capabilities internationally and facilitating the access of Australian providers of education services to overseas markets; and

- safeguarding educational quality and the reputation of Australian qualifications.

417. To ensure a whole-of-government approach, it has established an inter-departmental committee on the internationalisation of education and training, with representatives from the portfolios of Foreign Affairs and Trade; Treasury, Finance and Administration; Prime Minister and Cabinet; Immigration; Industry, Tourism and Resources; and Education, Science and Training.

10.3 Promoting Australia's diverse education and research capabilities and facilitating access to overseas markets

418. The Australian Government has recognised the need for the Australian higher education sector to diversify its educational services by widening the range of countries with which it engages,

broadening the fields and levels of study in which overseas students participate, and strengthening its capacity to deliver overseas. The figures presented earlier demonstrate the relative concentration of the overseas students market in the Asian region. Many Asian countries are undertaking dramatic reforms of their education and training systems, and patterns of demand are changing rapidly as a consequence. There is a concern that this will weaken overall demand from overseas students, unless institutions broaden their market reach.

419. The Government sees its role as profiling the range of Australia's higher education capabilities, extending its international networks, building partnerships to expand access to overseas education and innovation systems, and encouraging trade liberalisation.

420. Australian Education International (AEI) within DEST works through its International Network to represent Australia's education, science and training interests overseas. The International Network comprises a combination of Australian Government accredited personnel and locally engaged staff in 24 locations across 16 economies. The Network advances Australia's interests in international education through the generic promotion of Australian education and training; government-to-government representation; provision of strategic policy advice to Australian education providers on in-country education and training developments; and assistance to Australian education providers in their overseas networking and operations.

421. Under an AEI/Australian Trade Commission (Austrade) Partnership Agreement, Austrade also undertakes promotion and marketing activities in Europe on behalf of AEI. Austrade is the Australian Government's export arm.

422. The Government also works in collaboration with IDP Education Australia. Owned by 38 Australian universities and representing all education sectors, IDP is an independent not-for-profit organisation which markets Australian education and training on behalf of institutions. IDP was originally established and funded by the Australian Government in 1969 as an international aid body aimed at strengthening teaching and research in a number of Asian institutions. For two decades, IDP focused primarily on educational aid and worked closely with Government and institutions. Because of changes in Government aid policy, IDP undertook initiatives in the mid-1980s to build a new business in student recruitment through such activities as education counselling, publications, exhibitions and English language testing.

423. AEI develops and maintains Australia's bilateral education, science and training relationships within Europe, the Americas, Africa, the Middle East and Asia. This includes monitoring policy developments and social and economic trends, and building bilateral collaborative relationships. Formal agreements such as Memoranda of Understanding are an important part of these relationships and AEI conducts ongoing monitoring and review of such agreements. AUQA is also allocated funding by the Australian Government for the purposes of developing formal bilateral relationships with overseas audit and accreditation agencies.

424. All international education scholarships funded by DEST come under the umbrella of the Endeavour Programme. The Endeavour Programme was established as part of the 2003 International Education package *Engaging the World Through Education*. This is an academically elite programme, bringing high achieving students, researchers and professionals from the region to Australia each year to undertake study, research and professional development in a broad range of disciplines. It also encourages Australian students, researchers and professionals to undertake an international learning experience.

425. The Endeavour Programme was significantly expanded as part of the *Australian Scholarships* initiative announced jointly by the Australian Minister for Foreign Affairs and Trade and the Minister for Education, Science and Training in April 2006. *Australian Scholarships* will provide a further

A$185.5m of additional funding, bringing the total value of the programme to A$276m, and will offer approximately 9,700 awards between the 2007 and 2011 funding rounds. *Australian Scholarships* provides for a mix of postgraduate and postdoctoral research fellowships, postgraduate coursework scholarships, vocational education and training awards, professional development awards and student exchange opportunities. A proportion of scholarships under the Endeavour Programme will be awarded to Australian students to study abroad.

426. In the 2007 round, DEST will provide funding for four student exchange programmes under which subsidies will be provided for approximately 535 out-going Australian undergraduate students and 340 in-coming undergraduate students from eligible countries to participate in eligible institution-to-institution student exchanges.[11]

427. A further Government initiative aimed at the international collaboration and the promotion of Australia's capabilities has seen the seed funding of five International Centres of Excellence, valued at A$36 million over four years. The centres are intended to build international links, develop an international profile for Australia's expertise and education excellence, and internationally showcase Australia's scientific, educational and administrative capabilities in their respective areas. The International Centres of Excellence are in Asia Pacific Studies; Education in Mathematics; Tourism and Hospitality Education; Sports Science and Management; and Water Resources Management.

10.4 Safeguarding educational quality and the reputation of Australian qualifications

Onshore quality assurance

428. The provision of education and training services to overseas students in Australia is regulated by DEST through the *Education Services for Overseas Students Act 2000 (ESOS)* and associated Regulations. The purpose of the legislation is to protect the interests of people coming to Australia on student visas, by providing tuition and financial assurance and by ensuring a nationally consistent approach to provider registration. The legislation also seeks to ensure the integrity of the industry and Australia's migration system through visa-related reporting requirements. The Act applies to all education and training sectors.

429. All education providers wishing to teach overseas students on a student visa must be assessed to be compliant with the ESOS Act and its complementary legislation and registered on the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS) (DEST, 2006b).

430. The ESOS Act required the Minister for Education to establish a National Code to provide nationally consistent standards for the registration and conduct of registered providers and the conduct of persons who deliver educational services on behalf of registered providers. The Code is legally enforceable and the ESOS Act allows for sanctions for breaches of the Code. The Code specifies obligations in a range of areas, including: educational resources and facilities; marketing and student information; student recruitment; student records; written agreements for refunds; student support services; the conduct of agents; and use of personal information.

431. In 2003-04, the Australian Government commissioned an independent evaluation of the ESOS Act (DEST, 2006c). The Evaluation concluded that the Act provided a sound foundation for

[11] Further information on the Endeavour Programme is available on the DEST Endeavour web site at http://www.endeavour.dest.gov.au

regulating the provision of education to overseas students and emphasised that there is broad support for the Act from the education and training industry. It made a number of recommendations to strengthen the Act and its implementation and to clarify the respective roles and responsibilities of the Australian and State and Territory Governments.

432. In particular, it suggested a re-writing of the National Code into a set of overarching standards that will provide a more robust framework for assuring the quality of service provision to students. It also recommended that a nationally consistent approach for assessing the compliance of self-accrediting universities against the National Code be developed and implemented. The Australian Government is currently working with the higher education sector and State and Territory Governments to examine this recommendation.

433. The National Code has been revised to take into account the recommendations of the evaluation. This process was undertaken by the Australian Government in consultation with the education and training industry and state and territory governments. The revised National Code provides greater clarity and flexibility for education providers and enhanced consumer protection for students. It will take effect on 1 July 2007. Under the revised National Code self-accrediting universities are required to submit an annual statement of conformity with the National Code and undertake an independent external audit once every five years which must assess its compliance with the National Code.

Transnational education quality assurance

434. The Australian Universities Quality Agency's (AUQA) responsibilities for conducting quality audits of Australian universities and other approved higher education providers include responsibility for the quality audit of offshore programmes (see Section 9.5). In April 2005, the Australian Government announced it would be providing AUQA an additional A$450,000 per annum to enable the subsidisation of the costs of offshore audits, facilitate increased sampling of offshore operations, provide additional training for AUQA auditors and develop an annual aggregate report on the key themes emerging from offshore institutional audits.

435. AUQA audits have identified scope for improvements in the management of offshore partnerships and delivery arrangements and have strengthened the resolve of universities and governments to enhance contractual arrangements and the quality of their transnational activities. In 2005 the AVCC updated its Code of Practice and Guidelines for the provision of education to international students providing tangible evidence of all AVCC member universities' ongoing commitment to their international students and to ensuring the continued high standing of Australia's reputation as an education provider.

436. Recognising the rapid growth in transnational delivery by Australian education and training providers, including universities, MCEETYA agreed a Transnational Quality Strategy in November 2005 to ensure that the quality of education and training delivered in other countries continues to be of a high standard. The Strategy will ensure that the quality of Australian education and training delivered overseas is comparable to that delivered in Australia and that Australia's transnational quality assurance arrangements are easily accessible and understood. The Strategy focuses action in three areas: better communication and promotion of Australia's quality arrangements; increased access to data and information about Australia's transnational education and training; and a strengthened national quality framework. The recently finalised OECD/UNESCO *Guidelines for Quality Provision in Cross-Border Higher Education* has informed the development of the Strategy's quality assurance arrangements.

437. In 2005 the Australian Government also provided support for 15 projects by universities to assess their transnational education activities and identify opportunities for improved performance.

The results from these projects are helping all higher education providers to examine their provision of education to international students offshore.

10.5 Study Abroad and other efforts to internationalise the student learning experience

438. OECD figures indicate that Australian students are less likely to study abroad than their counterparts from other OECD countries (OECD, 2004). In 2002, 1% of Australian students were enrolled abroad compared with an OECD average of 4%. Recent research conducted by the International Education Association of Australia (IEAA) indicates a higher rate of participation. The 2006 study of the *International Mobility of Australian University Students in 2005* reports that the number of international study experiences undertaken by Australian undergraduates in 2005 was equivalent to 4.8% of completing undergraduates in 2003, and the number of students on international exchanges or other semester or year long programmes in 2005 was equivalent to 3.2% of completing undergraduates in 2003.

439. The Australian higher education system is increasingly conscious of the benefits associated with encouraging Australian students to study abroad, and many universities have introduced strategies to encourage greater student mobility, including subsidising the cost of travel in some cases. The Australian Government funds a number of scholarships, at both undergraduate and postgraduate level, under the Endeavour Programme, to help Australians study overseas. In recognition of Australia's relatively low participation in study abroad, the Australian Government announced in April 2006 that it would develop national policy to promote Australian student mobility, and initiated a review to identify barriers to participation, and to recommend strategies to boost numbers.

440. The Australian Government has also introduced a programme to encourage Australian students to gain an international study experience. Overseas Study HELP (OS-HELP) offers loans of up to A$10,000 to full-time undergraduate students in Government supported places at public higher education institutions, to assist in financing their overseas study. The loans are income-contingent, with students commencing repayments once their annual income has reached a specified level.

441. In addition, Australian universities have focused in recent years on internationalising the curriculum of their academic programmes for the benefit of both Australian and overseas students. They have endeavoured to incorporate international and intercultural perspectives and inclusive pedagogy into programmes in order to prepare students to perform capably, ethically and sensitively in international and multicultural professional and social contexts. This is recognition of the value of cross-cultural awareness and understandings within the Australian community and the role that graduates can play in global developments.

11 CONCLUSIONS

11.1 Introduction

442. This Chapter provides an overview of the strengths and weaknesses of the Australian higher education system and presents issues that are likely to emerge in the future. The higher education system within Australia has been through a process of significant reform in the past few years, following other periods of reform over the past decade and a half.

11.2 Strengths

443. Particular strengths of the Australian higher education system include:

- coordinated policy leadership;
- a rigorous policy and accountability framework, strengthened by the introduction of the Institution Assessment Framework;
- system-level data collection, evaluation and research on which to plan and review policy decisions;
- a major review of the system that involved extensive consultation during the review, development and implementation phases;
- increased funding for higher education focused on achieving targeted outcomes;
- overall growth in the system facilitated by additional Government funding at the same time as a more diversified funding base;
- a loan system that has allowed students to participate in higher education and defer payment until their earning capacity is such that they can start to repay their debts;
- significant numbers of international students, including growth in student numbers taught offshore;
- a sustained focus on equity that has involved monitoring performance of defined equity groups, setting targets for participation and providing targeted funds to support equity initiatives and scholarships;
- increased support for R&D in universities through performance-based funding and targeted initiatives;
- benefits to R&D in higher education through broad Government programmes targeted at developing Australia's capacity in science, technology and innovation;
- strong research outcomes that produce wide-scale benefits for the Australian economy and society;

- a coherent quality assurance system with shared responsibility between the Australian Government, State and Territory Governments and the institutions themselves; and

- maintenance of quality and standards in spite of significant growth in the system.

11.3 Challenges

444. Challenges facing the Australian higher education sector include:

- complexity arising from the different roles of Commonwealth and State and Territory governments regarding the regulation of higher education providers;

- constraints to diversity in higher education provision;

- maintaining equitable provision to rural and isolated areas;

- difficulties in raising participation of the Indigenous community;

- the complexities of managing the variety of offshore partnerships and teaching arrangements in which institutions are involved; and

- barriers to cross-sectoral collaboration.

11.4 Emerging issues

445. The reforms associated with *Our Universities: Backing Australia's Future* as a total package comprise some significant shifts in policy direction suggesting that, if their potential impact is fully realised, the Australian higher education system at the end of this decade might look very different from the picture presented in this report.

446. Given that the reforms associated with *Our Universities: Backing Australia's Future* are not yet fully implemented, a focus of the higher education system and the Australian Government over the next year or so will be to complete the implementation phase of these reforms and assess their impact in terms of how well they achieve their policy intentions. There is a likelihood of refinement and revision as these changes are fully implemented and their impacts are better understood.

447. Funding agreements and the Institution Assessment Framework have the potential to act as powerful tools to achieve national priorities by allowing the Government to work with higher education providers to set targets and direct funding towards areas of significance. It will be important to monitor the effectiveness of these tools and to refine their implementation so that their potential is fully realised in a way that achieves a workable balance between imposition of Government demands and the maintenance of institutional autonomy.

448. The Research Quality Framework has particular significance in terms of recognising and rewarding the quality and impact of research conducted in Australian universities. The RQF will be implemented in 2008 with financial consequences to flow from 2009. The aim of the RQF is to reward areas of research excellence in Australia, wherever it is located.

449. The new learning and teaching initiatives have the potential to improve perceptions and quality of learning and teaching in Australian higher education. It will be important to see if the new Learning and Teaching Performance Fund can act as a powerful driver of institutional and individual academic behaviour in the same way as the performance-based research funding schemes.

450. As intended by *Our Universities: Backing Australia's Future,* the higher education system will continue to become more diverse, in terms of both the introduction of new categories of providers and differentiation within categories of provider. While some moves in this direction have already taken place, some of the policy development needed to effect these changes has not yet been finalised. Revision of the *National Protocols for Higher Education Approval Processes* is one element of these developments. These changes to the regulatory environment to facilitate more diversity within the Australian higher education system will need to be accompanied by changes to quality assurance processes to ensure that standards are not compromised by increased diversity. It is also likely that these changes to the broad regulatory framework ensure that measures to encourage greater national consistency in key regulatory areas will stay on the agenda.

451. There will continue to be debates about the most effective balance between public and private provision of higher education and between regulation and deregulation. It is most likely that any further moves to expand higher education provision will need to be achieved by means that do not call for large increases in public spending. The main challenge towards more deregulation of higher education is how this can be achieved while also maintaining appropriate levels of accountability and sustainability.

452. In spite of a major focus on equity over a sustained period, there remain groups whose participation in higher education is below desired targets. In particular, the participation of Indigenous students and students from rural and isolated areas has shown some decline in relative terms. These complex issues are not readily resolved. They require long-term strategies not just aimed at providing access to higher education but also working with communities to change entrenched attitudes to the value of education.

453. The introduction of data collection approaches that allow a more complete analysis of higher education, including all providers, is a significant challenge. At the same time, the introduction of such data collection needs to be taken in ways that minimise the reporting and administrative burden on institutions. The work being conducted on the Higher Education Information Management System (HEIMS) will assist in this regard. It will be necessary to exploit the benefits that this system brings, including the unique student identification number, to track student participation in higher education over time.

454. International student enrolments have played a major role in the development of the Australian higher education system over the last decade. This has impacted positively on the financial sustainability of providers, but perhaps more importantly has changed the culture of Australian institutions and the community more generally. There are concerns that the reliance on international student enrolments leaves many institutions vulnerable to any downturn in international student mobility. This has emphasised the importance of maintaining rigorous quality assurance processes. Quality assurance of Australia's diverse offshore arrangements will continue to be an important focus.

455. Linkages across and within education systems will continue to be a focus of policy development within Australia. Because the sectors are funded and regulated in different ways, barriers occur even when there are strong pressures or intentions for collaboration. In a country with a relatively small, dispersed population like Australia, collaboration is essential to ensure educational provision is as effective as possible.

456. The Bologna Declaration's impact on Australian higher education is still at an early stage. The development has been monitored at the Government level and plans are underway to commit the sector more widely. There has been a pilot project on the Diploma Supplement, and there is growing awareness in many institutions of the potential implications.

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GLOSSARY

ABSTUDY	Means-tested income support and some supplementary benefits to assist Australian Aboriginal and Torres Strait Islander students or Australian Apprentices complete secondary schooling and undertake further education.
Accreditation	A process of assessment and review which enables a higher education course or institution to be recognised or certified as meeting appropriate standards under the National Protocols.
Accredited courses	Courses that have been assessed and approved or authorised as courses of study that lead to higher education qualifications. Universities and some other institutions are known as 'self-accrediting' because they are authorised to accredit their own courses. Other 'non self-accrediting' institutions must have their higher education courses accredited by government authorities.
Accrediting body	The body responsible for accrediting a course. This may include universities, the State and Territory Authorities and any body to which the Authority may have delegated the task of accreditation.
Australian Competitive Grants Register (ACGR)	The ACGR is a list of competitively awarded Australian Government funding schemes and is an important factor in DEST's funding formula for higher education. Under the Research Infrastructure Block Grant (RIBG) scheme, Research Training Scheme (RTS) and Institutional Grant Scheme (IGS), universities are allocated funding based on an index which measures institutional research performance.
Australian Council for Private Education and Training (ACPET)	A peak body representing institutions offering post-compulsory education and training for Australian and international students including higher education, vocational education and training and English language courses.

Australian Postgraduate Awards (APAs)	These awards support postgraduate research training in the higher education sector and provide financial support to domestic postgraduate students who undertake their higher degree by research at an eligible Australian higher education provider.
Australian Qualifications Framework (AQF)	The Australian Qualifications Framework is a unified system of national qualifications in schools, vocational education and training, and the higher education sector (mainly universities).
Australian Qualifications Framework Advisory Board (AQFAB)	The Australian Qualifications Framework is a unified system of national qualifications in schools, vocational and technical education and the higher education sector.
Australian Qualifications Framework Register	The AQF Register was established to facilitate the verification of AQF qualifications. It provides a list of all institutions accredited to offer higher education awards in Australia.
Australian Research Council (ARC)	The ARC is a statutory authority within the Australian Government's Education, Science and Training portfolio. The ARC advises the Government on research matters and manages the National Competitive Grants Program, a significant component of Australia's investment in research and development
Australian Universities Quality Agency (AUQA)	An independent national agency responsible for the quality audit of self-accrediting Australian higher education institutions.
Australian Vice-Chancellors' Committee (AVCC)	A council of Australia's university vice-chancellors' and presidents, whose purpose is to advance higher education through voluntary, cooperative and coordinated action.
Austudy	Means-tested income support for full-time students aged 25 years and over undertaking an approved course at an approved institution or an Australian Apprenticeship.
Backing Australia's Ability (BAA)	An Australian Government reform package, announced by the Prime Minister on 6 May 2004, entitled *Backing Australia's Ability – Building our Future through Science and Innovation*, and which builds on the initial 2001 *Backing Australia's Ability*. The two packages represent a commitment to pursue

	excellence in research, science and technology, through the generation of new ideas (research and development); the commercial application of ideas; and developing and retaining skills.
Backing Australia's Future (BAF)	An Australian Government reform package announced as part of the May 2003 Budget entitled, *Our Universities: Backing Australia's Future*. The reforms established a partially deregulated system of higher education underpinned by key principles of sustainability, quality, equity and diversity.
Carrick Institute for Learning and Teaching in Higher Education	An Australian Government-funded national institute designed to promote and enhance learning and teaching in Australian higher education.
Collaboration and Structural Reform Fund (CASR)	An Australian Government fund to assist and encourage the process of reform within Australian universities by promoting structural reform in the higher education sector and collaboration between universities and other education providers, business and local communities.
Commercialisation Training Scheme (CTS)	The CTS is an Australian Government scheme that from 2007 will allocate funding to provide around 250 new postgraduate research scholarships per annum, so that existing higher by degree research students can develop skills in research commercialisation and intellectual property management.
Commonwealth contribution amount	The amount payable to a higher education provider for a Commonwealth supported unit of study. The amount the Commonwealth contributes is dependent on the funding cluster into which individual units are classified.
Commonwealth Grant Scheme (CGS)	The scheme through which the Commonwealth provides a contribution, set by discipline, towards the cost of an agreed number of Commonwealth supported places. Each higher education institution that receives funds under the CGS enters into a Funding Agreement with the Commonwealth with annual negotiations taking place over the number of places and the discipline mix that the Commonwealth will support.
Commonwealth Higher Education Student Support	The unique identifier provided to students by

Number (CHESSN)	DEST to track their access to learning entitlements and loans.
Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS)	A register of education institutions endorsed to offer courses to overseas students.
Commonwealth Supported Student(s)	Student(s) occupying a Commonwealth supported place.
Council of Private Higher Education (COPHE)	A peak body representing Australian private higher education institutions.
Course experience questionnaire (CEQ)	A one-page survey providing information from graduates on satisfaction with their studies.
Enabling loading	Enabling loading provides additional funding towards the costs associated with offering a course of study to prepare a person to undertake a course that leads to a higher education award. It is paid to higher education providers to supplement the funding received as part of the Commonwealth Grant Scheme to compensate providers for not being able to charge student contributions for students in Commonwealth supported enabling courses.
Equivalent Full-Time Student Units (EFTSU)	A way of quantifying numbers of student places, given that many students study part-time. One EFTSU represents a standard annual full-time workload.
Equivalent National Tertiary Entrance Rank (ENTER)	The Equivalent National Tertiary Entrance Rank is a numerical measure of a student's overall academic achievement in relation to that of other students. The ENTER is used in the state of Victoria.
FEE Paying HELP (FEE-HELP)	An Australian Government loan scheme for full fee-paying domestic students, administered under the *Higher Education Support Act 2003* (HESA).
Funding agreement	To receive a grant under the Commonwealth Grant Scheme, a higher education provider must enter into an annual funding agreement with the Commonwealth. The agreement sets out the number of Commonwealth supported places the provider is funded to offer in each of 12 funding (or discipline) clusters, as well as any conditions attached to the grant.

Funding cluster	Individual units of study are classified into funding clusters, according to the unit's field of education, to determine the Commonwealth contribution amount payable under the Commonwealth Grant Scheme. There are 12 funding clusters and each has its own funding rate.
Graduate Careers Australia (CGA)	Australia's leading authority on the supply of and demand for new graduates in Australia. GCA conducts the annual Graduate Destination Survey, Course Experience Questionnaire and the Postgraduate Course Experience Questionnaire.
Graduate destination survey (GDS)	A study of the activities of new domestic university graduates conducted around four months after the completion of their qualifications.
Graduate skills assessment	This assessment instrument is used to test generic skills of students upon commencing university study and just prior to their graduating. The four areas included in the test are critical thinking, problem solving, interpersonal understandings and written communication.
Group of Eight (Go8)	A network of the eight traditional research based "sandstone" universities: Adelaide, ANU, Melbourne, Monash, NSW, Queensland, Sydney, and Western Australia.
HECS-HELP	An assistance scheme for students enrolled in Commonwealth supported places that meet the eligibility criteria. It provides a loan and/or a 20% discount for up-front payments of student contribution amounts over A$500 to eligible Commonwealth supported students.
HELP debt	A debt that is held by the Australian Taxation Office against a person's tax file number that was incurred by taking out a HECS-HELP, FEE-HELP or OS-HELP loan for their tuition cost for their higher education course of study.
Higher education award	A qualification listed on the Australian Qualifications Framework as a higher education award.
Higher Education Contribution Scheme (HECS)	A contribution scheme for higher education students enrolled in Australian Government

	subsidised places (known as HECS-places). It was replaced by HECS-HELP in 2005.
Higher Education Support Act 2003 **(HESA)**	HESA (as amended) is the enabling legislation for the Commonwealth to give financial support to higher education providers and financial assistance to students.
Higher Education Workplace Relations Requirements (HEWRRs)	A set of workplace reform requirements that eligible higher education institutions must comply with to gain additional Commonwealth funding.
Higher Education Information Management System (HEIMS)	A web-based system designed to assist in the management of student entitlements introduced as part of the Australian Government's higher education reforms.
Higher Education Loan Programme (HELP)	A loan programme to help eligible students pay student contributions (HECS-HELP), full-tuition fees (FEE-HELP) and overseas study expenses (OS-HELP).
Higher education provider (HEP)	A higher education provider approved under the HESA. This term is commonly used to refer to non self-accrediting private higher education providers approved under the HESA.
Higher Education Provider Guidelines	These guidelines are made under Section 238 10(1) of the HESA and provide detail on some of the requirements that private higher education providers must meet in order to become eligible to offer FEE
Indigenous higher education students	The term used when referring to Aboriginal and Torres Strait Islanders studying in the Australian higher education sector
Institution Assessment Framework (IAF)	The IAF assesses higher education providers through analysis of organisational sustainability; achievements in higher education provision; quality of outcomes; and compliance.
Institutional Grants Scheme (IGS)	The IGS supports Australian higher education institutions' research and research training activities, allowing them to fund their activities. Funding is allocated on the basis of formula that takes into account each institution's success in attracting research students (30% of funding), in attracting research income (60%) and in the quality and

	output of its research publications (10%).
Learning and Teaching Performance Fund (LTPF)	An Australian Government funding initiative to reward universities that best demonstrate excellence in learning and teaching for domestic undergraduate students.
Medical Student Loading	An Australian Government payment to higher education providers for Commonwealth supported places in a medical course of study, completion of which would allow provisional registration as a medical practitioner. The student medical loading is intended to assist providers with the costs associated with their own infrastructure in teaching hospitals, but is not tied explicitly to teaching hospital infrastructure.
Ministerial Council for Education, Employment and Training (MCEETYA)	Membership of the council comprises State, Territory, Australian Government and New Zealand Ministers with responsibility for the portfolios of education, employment, training and youth affairs. The Joint Committee on Higher Education (JCHE) is a sub-committee of MCEETYA comprising Commonwealth, State and Territory education officials.
National Collaborative Research Infrastructure Strategy (NCRIS)	NCRIS, an initiative under the *Backing Australia's Ability* package, aims to provide researchers with access to the infrastructure and networks necessary to undertake world-class research.
National Institutes programme	The programme provides funding to the Australian National University, the Australian Maritime College and Batchelor Institute of Indigenous Tertiary Education in recognition of their national role in particular areas of higher education.
National priority	Subject areas identified by the Australian Government as National Priorities. These currently include teaching and nursing.
National Protocols	National Protocols for Higher Education Approval Processes. This is a national quality framework for the approval of higher education courses and providers of higher education services.
National Research Priorities	This programme focuses the Australian Government's research effort in areas that

	deliver significant social, economic or environmental benefits to Australia. The priorities are broadly based, thematic and multi-disciplinary in scope and draw on many fields of research.
National Survey of Research Commercialisation	An Australian Government survey which gathers data on the commercialisation of intellectual property in Australia's universities, medical research institutes, publicly funded research agencies, research contracts and consultancies and skills development and transfer.
Non Self-Accrediting Institutions	Higher education providers which are not able to accredit their own courses and must be accredited by a State/Territory agency under National Protocol 3 of the National Protocols.
Overall Position (OP)	Queensland Year 12 students are selected to university courses based on merit, which for most students is measured by their OP.
Overseas Study HELP (OS-HELP)	A loan available to eligible students who undertake some of their course overseas.
Postgraduate Education Loan Scheme (PELS)	A loan scheme to help postgraduate students pay part or all of their tuition fees. In 2005 it was replaced by FEE-HELP.
Postgraduate Research Experience Questionnaire (PREQ)	Australian postgraduates are surveyed to provide information with the focus on the research environment. The material is collected as part of the *Graduate Destination Survey*.
Private Providers	Private non self-accrediting higher education providers.
Quality Assurance Framework (QAF)	The Higher Education Quality Assurance Framework describes the role of the Commonwealth, Australian States and Territories, the AQF and AUQA in quality assurance in Australian higher education.
Recognition of Prior Learning (RPL)	An assessment process which focuses on judging evidence provided by a student of less formal learning to determine admission or to grant credit for a component of the course. The evidence supplied may relate to a combination of life experience, work experience and various courses of study which demonstrate that the student has already achieved the learning

	outcomes required.
Regional loading	Regional loading provides additional funding to assist providers with campuses located in regional areas in meeting the higher costs that they face due to their location, size and history.
Registered Training Organisation (RTO)	In the vocational education and training sector, any training organisation registered with the relevant State/Territory authority to provide training delivery and/or assessment services. May include TAFE colleges/institutes, private commercial providers, community providers, schools, higher education institutions, enterprises, firms and industry bodies.
Research Infrastructure Block Grants Scheme (RIBG)	A scheme to provide block grants to universities to enhance the development and maintenance of research infrastructure. The objectives of RIBG are to enhance the development and maintenance of research infrastructure, meet project-related infrastructure costs associated with Australian Competitive Grants, remedy deficiencies in current research infrastructure, and ensure that areas of recognised research potential have access to the support necessary for development.
Research Quality Framework	The aim of the RQF initiative is to develop the basis for an improved assessment of the quality and impact of publicly funded research and an effective process to achieve this.
Self-Accrediting institutions	Higher education providers (including public universities) which are able to accredit their own courses and issue higher education awards under their own authority.
State Accreditation Agencies	State and Territory government agencies responsible for accrediting the higher education courses of non self-accrediting providers under National Protocol 3.
Student Learning Entitlement (SLE)	An entitlement that, if eligible, gives students access to a Commonwealth supported place. There are three types of SLE: ordinary SLE, additional SLE and lifelong SLE.
Tertiary Entrance Ranking (TER)	The Tertiary Entrance Rank is a numerical measure of a student's overall academic achievement in relation to that of other

	students. The TER is used in South Australia, Western Australia, Tasmania and the Northern Territory.
Universities Admission Index (UAI)	The UAI is a numerical measure of a student's overall academic achievement in relation to that of other students. The UAI is used in NSW and the ACT.
Workplace Productivity Programme (WPP)	An Australian government competitive grants programme designed to encourage eligible higher education institutions to progress workplace reform which strengthens their capability to manage and implement workplace change
Youth Allowance	Means-tested income support for young people 16 to 24 years old who are studying, training or undertaking an Australian Apprenticeship.

HIGHER EDUCATION LEGISLATION

Higher Education Support Act 2003

The *Higher Education Support Act 2003* (HESA) is the main piece of legislation governing higher education in Australia. HESA received Royal Assent in December 2003 and provides the legislative framework for the *Our Universities: Backing Australia's Future* (BAF) package of higher education reforms and other areas of Australian Government involvement in higher education.

A number of Acts amending HESA have been enacted since December 2003 to ensure the smooth and effective transition to the new higher education funding arrangements under HESA.

HESA and subsequent amendment Acts are available online at:
http://www.comlaw.gov.au/comlaw/management.nsf/lookupindexpagesbyid/IP200402739?OpenDocument

Higher Education Funding Act 1988

The *Higher Education Funding Act 1988* (the HEFA) was the main piece of legislation governing higher education in Australia until the introduction of HESA in 2003. Commonwealth funding for higher education providers was administered under the HEFA until the end of 2004. Currently, only transitional financial assistance to higher education providers is still administered under the HEFA.

HEFA and subsequent amendment Acts are available online at:
http://www.comlaw.gov.au/comlaw/management.nsf/lookupindexpagesbyid/IP200401876?OpenDocument

Higher Education Support (Transitional Provisions and Consequential Amendments) Act 2003

The *Higher Education Support (Transitional Provisions and Consequential Amendments) Act 2003* is a supporting piece of legislation, which covers transitional and consequential matters arising from the enactment of the HESA (including anything not covered by the HESA).

Guidelines

The HESA provides for subordinate legislation in the form of Guidelines to contain administrative matters or details relating to particular higher education funding programmes. There are several Guidelines currently in place in Australia.

A list of current Guidelines can be found online at:
http://www.backingaustraliasfuture.gov.au/guidelines.htm