

LEARNING FOR LIFE

Final report

REVIEW OF HIGHER EDUCATION FINANCING AND POLICY

April 1998

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Department of Employment, Education, Training and Youth Affairs

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Review of Higher Education Financing and Policy

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17 April 1998

The Hon. Dr David Kemp MP
Minister for Employment, Education
Training and Youth Affairs
Parliament House
CANBERRA ACT 2600

Dear Minister

In January 1997, Senator The Hon. Amanda Vanstone appointed a Committee to review Australia's higher education system in order to develop a policy and financing framework to enable the sector to meet the nation's social and economic needs in the next two decades. We are grateful for your continuing support of this exercise.

We are pleased that this has been an independent review. We have been free spirits and have been unconstrained in examining the challenges of the future.

On behalf of the Review Committee, I am delighted to present the final report.

It is our hope that you will find the recommendations that we make appropriate and that the Government will be able to work closely with the academic and wider community to initiate reform at the earliest opportunity.

On a personal note I must pay a warm tribute to my colleagues - Gary Banks, Peter Baume, Lauchlan Chipman, Doreen Clark, Clem Doherty and Kwong Lee Dow - who deliberated endlessly on the complex issues before them, and who always gave selflessly of their time and perspicacity.

To our long suffering families we extend our grateful thanks.

The Secretariat - all of them - have been diligent and professional in their approach to their task. Ian Creagh was the Committee Secretary until the publication of the Discussion Paper, and Clare White has presided over the passage of the final report. Both have been admirable leaders, unfailingly cheerful, discreet and well organised. They have had the able and energetic support of all the Secretariat: Lee Archinal, Satis Arnold, Heather Dyne, Amanda Moss, Joanna Tomes (the longest serving members of the group), Nicholas Hartland, Janette Howe, Mala Kurup, Ian Lucas, Claire Paten and William Thorn.

Yours sincerely

Roderick West

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Introduction

In the decade that has passed since the last major review of higher education in Australia there have been sustained and far-reaching changes to higher education. These changes have included the abolition of the 'binary divide' between universities and colleges of advanced education and the transformation of the sector from an elite to a mass higher education system. Over the next two decades, the increasing globalisation of education services and advances in communications technology are likely to have a profound impact on the nature of teaching, learning and research.

Against this background, the Government announced in the 1996 budget its intention to establish a major independent review to examine the processes shaping the future of higher education and to develop a policy and financing framework to enable the higher education sector to meet the nation's economic and social needs in the long term. In January 1997, Senator the Hon. Amanda Vanstone, the then Minister for Employment, Education, Training and Youth Affairs, announced the terms of reference for the Review of Higher Education Financing and Policy and membership of the committee that would undertake that review. Since his appointment to the position of Minister, the Hon. Dr David Kemp, has endorsed the Review and stressed its independence as a key source of advice to the Government.

Terms of Reference

The central elements of the terms of reference for the review are as follows.

- The Review Committee will undertake a broad ranging review of the state of Australia's higher education sector, the effectiveness of the sector in meeting Australia's social, economic, scientific and cultural needs, and the developments which are likely to shape the provision of higher education in the next two decades.
- The Review Committee will develop a comprehensive policy framework for higher education that will allow universities to respond creatively and flexibly to change, and will ensure that the sector meets the needs of students, industry and society in general as these are likely to develop over the next two decades.
- Within this framework, the Review Committee will identify options for the financing of higher education teaching and research, and for providing Commonwealth funding to higher education institutions for these purposes.

The complete terms of reference are in Appendix 1.

Review Committee membership

The Review Committee comprised:

Gary Banks
The Hon. Professor Peter Baume AO
Professor Lauchlan Chipman
Dr Doreen Clark AM
Clem Doherty
Professor Kwong Lee Dow AM
Roderick West, Chair

How the Review Committee undertook its task

The Review Committee recognised that the terms of reference require a long-term, visionary perspective. We have therefore focused on developing broad principles, goals and strategies rather than a detailed blueprint for the sector.

As a small group, with members drawn from diverse backgrounds, the Review Committee chose to function without a sub-committee or working party structure. Committee members met formally as a group 22 times over a 16-month period and many more times on a less formal basis throughout the course of the review. The Review Committee, however, could not perform its task on its own and we recognise the tremendous body of expertise, experience and commitment of people already associated with the sector. The Review Committee took every opportunity to inform its views by meeting with people, listening, consulting and exploring ideas. Many provided us with written material which we read, considered and have drawn on in preparing this document. We are most grateful for the contributions, efforts and assistance that have been so generously provided.

At all times, the Review Committee adopted an open and transparent approach to its deliberations. To this end we:

- invited submissions on key themes and published them on the Internet;
- visited all Australian public higher education institutions and private universities and met with academic leaders, managers, staff and students;
- met with other key stakeholders, including the Australian Vice-Chancellors' Committee, representatives of staff and student unions, employer bodies such as the Australian Chamber of Commerce and Industry, employers, other education and training sectors, the Commonwealth Government and State Governments, the research community and statutory bodies such as the Australian Research and Higher Education Councils, the scholarly academies, other bodies with a professional interest in higher education and the Department of Employment, Education, Training and Youth Affairs;
- commissioned and published research into areas of specific interest;
- travelled overseas and examined developments in higher education;
- addressed conferences and public forums;
- released a Discussion Paper in November 1997 on which comment was invited;
- published the responses to the Discussion Paper on the Internet; and
- hosted Round Table forums on key issues.

Details of meetings and consultations are listed in Appendix 4. The names of those who provided submissions to the Review Committee and responses to the Discussion Paper are listed in Appendices 2 and 3 respectively.

Structure of the report

This final report to Government is the culmination of the Review Committee's deliberations and includes close to 40 recommendations which are contained primarily in chapters 4–6. It builds on the foundations established in the Discussion Paper, but we have modified our position in a number of areas to take account of public comments or concerns about issues addressed in the earlier document. This has led to a richer and more rigorous final document.

In chapter 1, the Review Committee has identified a vision for higher education and has developed broad principles which it considers should underpin a financing and policy framework. Chapter 2 examines the future operating environment over the next 20 years and assesses the implications for learning, teaching and research. In chapter 3, the current policy and funding framework and its capacity to respond to the future operating environment are examined. Against that background, the Review Committee sets out the case for a decentralised student centred policy framework for higher education including the development of the higher education industry in chapter 4. Chapters 5 and 6 contain our more detailed recommendations on approaches to student centred funding, and to research and research training. Chapter 7, the final chapter, addresses transitional issues.

Higher education in the broader education context

The terms of reference specify that the Review Committee should review Australia's higher education sector, but indicate that the Review Committee is expected to pay particular attention 'to the need to ensure that the interfaces between the higher education sector and the vocational education and schools sectors operate efficiently'.

Education in Australia is delivered through schools, Vocational Education and Training providers and higher education institutions. Figure 1 depicts the education sectors in terms of their qualifications and broad age profile of students.

Schooling is provided through government and non-government education systems. Thirty per cent of school students were enrolled in non-government schools in 1997;¹ most non-government schools receive some public funding. The largest providers of Vocational Education and Training (VET) are the Technical and Further Education systems administered by the State and Territory Governments. More than three quarters of students enrolled in VET programs are enrolled in vocational courses, while the remainder pursue personal enrichment programs.² Public universities dominate the higher education sector in Australia and are the principal providers of academic and professional education. The Commonwealth Government is the major source of funds for the public universities, although funding from non-government sources has increased substantially over the past decade.

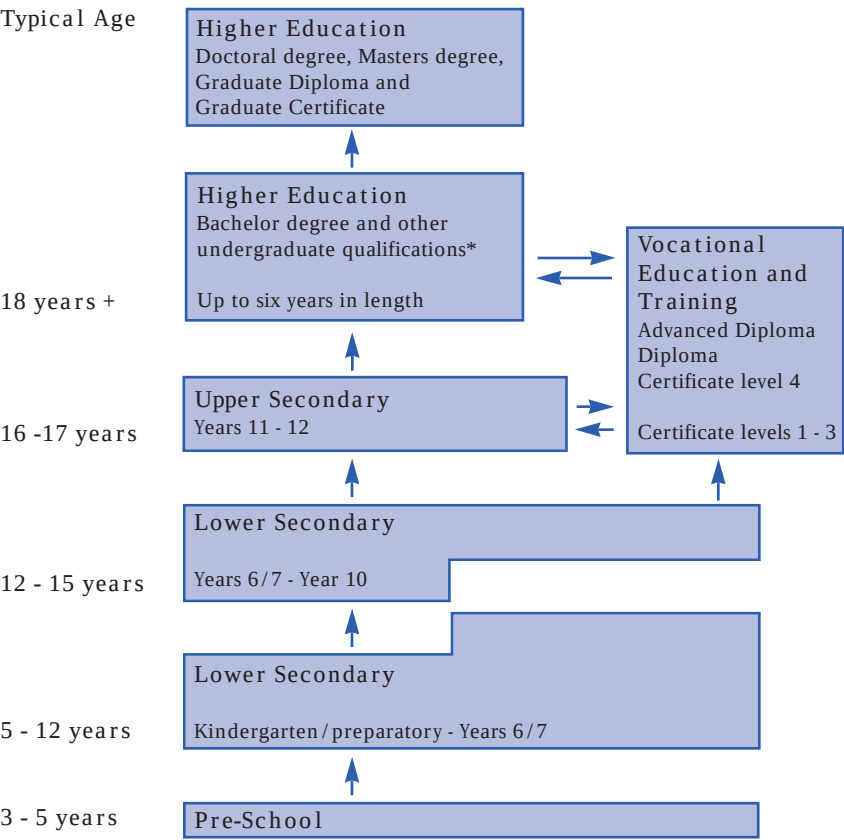
The boundary between the higher education and VET sectors is not easily defined. While there is clear differentiation between the trade and vocational programs offered by VET providers at one end of the spectrum and higher degree studies offered by universities at the other, there is some commonality at the diploma through to the degree levels (see figure 2).

Ease of movement between schooling and the postsecondary education sectors and between VET and higher education is very important. In the longer term, the Review Committee considers that higher education should be seen as part of a broader postsecondary education system, with seamless funding arrangements, while advocating that the distinctive identities and missions of the higher education and VET sectors be retained.

¹ DEETYA, *Schools Funding: Consultation Report*, 1997, p. 9.

² NCVER, *Australian Vocational Education & Training Statistics 1996*, 1997, p. 5.

Figure 1: Australian Education System



* Other undergraduate qualifications: Diploma and Advanced Diploma

Figure 2: Student enrolments by sector and qualification, 1996

Included classifications			Students	Enrolments
AQF Level	Higher education	Vocational education and training	Higher education	Vocational education and training
Diploma	AQF-Diploma	AQF-Diploma; Associate Diploma	10,130	180,740
Advanced Diploma	AQF- Advanced Diploma	AQF-Advanced Diploma; Diploma	3,726	36,085
Bachelor Degree	Bachelor entry Degree; Bachelor Honours; Bachelor Pass	Bachelor Degree	474,754	19

Chairman's Foreword

True learning at university level must be informed by scholarship and unceasing and diligent application at the frontiers of knowledge. Some academics have been disturbed by the emphasis on teaching in the Committee's Discussion Paper. Learning and teaching are the core business of universities. But teaching, learning and research go hand in hand. Effective and inspirational teaching depends upon sound scholarship, and research—groundbreaking and opening up new horizons—is essential to the good health of any university.

However, the Committee recommends a much more flexible approach than at present towards the teaching/scholarship/research nexus. No academic can teach well without being at the cutting edge of the recent literature. The academic life, however, is cultivated over half a century or more and academics need to have the security to move from a predominantly research pattern of work to a predominantly teaching pattern, or into university management, administration or community service. All excellent contributions should be recognised—whether they be in teaching research, professional and community service or management and administration—and promotion must not be based on research alone. It is only in very recent times that research has become a dominant feature of English-speaking higher education institutions, and this has been an exciting, rewarding activity which has brought enormous benefits to humanity. For centuries, however, Universities were teaching institutions and their academics were, nonetheless, profoundly scholarly.¹

No country has yet achieved universal access to postsecondary education. Australia could well be the first. To achieve it will require considerable political will. Many countries have expressed the ideal, but there has always been a gap between espousal and action. To state desired outcomes is by itself inadequate. Governments, management practices in universities and the implementation of policies must all combine to achieve positive equity outcomes. Australia is a tiny country of 18 million inhabitants and it is, compared with other countries, rich in natural resources. Yet, we seem to be intent upon preserving an underclass. Given the will, we can find solutions, and rid ourselves, once and for all, of that 20 per cent of society that, being denied the joy of contributing to their country, remain for ever on the sideline.

Is everybody educable? In 1951, there were nine universities in Australia and only 32,000 students in the nation. We talk these days about going from an 'elite' to a 'mass' higher education system. There was nothing intellectually elite about the students of 50 years ago. A pass of five Bs was enough to gain entry to the faculty of medicine at the University of Sydney—the equivalent of a tertiary entrance rank no further than midway up the scale! What was elite about that cohort was that it had the *opportunity*. Last year, there were 670,000 students involved in higher education in Australia. The individual capacity of both cohorts was basically the same. The French speak of 'massification'. My Committee supports this concept. President Clinton laid down his vision in his

¹ 'Research has ceased to be a genuine quest for knowledge and has become the sacred cow which produces little but costs what cannot be afforded. Thirty-seven institutions with academic staff allocating one quarter of their time to the production of the mandatory 5000-word conference presentation or journal article per year is and should be seen as absurd.' This is a comment to the Committee made by an academic who prefers to remain anonymous!

State of the Union address in February last year of a K-to-14 for all young people in America. Our vision is more ambitious still and we believe that, with the States and Commonwealth working together, it can be realised in the foreseeable future.²

In this regard, the Review Committee feels strongly that the first postsecondary qualification—the Bachelor degree or the TAFE diploma—gives the crucial qualification for setting a student on the road to lifelong learning. Elementary and secondary schooling lay the foundation of the scholar; the *formation* of the scholar occurs at undergraduate level; postgraduate work is the continuation of the scholar.³ It is at the undergraduate level that a mediocre student can be transformed into an independent learner and a competent scholar through excellent teaching.

The Dearing Committee recommended that there should be ‘a major campaign to change the culture of higher education by establishing the management of learning ... with teaching, as an honoured profession, as a gateway to professional renown and to promotion.’⁴ Recently, 40,000 students marched on the German Parliament to protest about the deteriorating quality of teaching. They chanted MEHR EHRE der LEHRE—More honour to teaching. In speaking of the need for the reform of teaching, M.Bayrou, the French Minister for Education, said: ‘Everyone judges reform to be indispensable, and everyone judges it to be impossible.’⁵

The concept of research has broadened considerably in the last three decades. Originally synonymous with an investigation that required among other things an empirical examination of physical evidence—for example, in the natural sciences, archaeology, history and psychology—it progressively broadened to encompass high level theory, calculation and interpretation, with little or no significant empirical investigation as either a component or a validation test of the findings—for example, in pure mathematics, logic, jurisprudence and philosophy. These areas of non-empirical investigation went well beyond scholarship, traditionally understood as the reconstruction, interpretation, translation and sourcing of textual materials.

More recently still, with the arrival of the creative and performing arts, journalism, and film and television production as legitimate university studies, the authorship, direction, and publication or exhibition of one’s own creative or inventive work has come to be more or less equated with research activity. The late eminent Australian poet Vincent Buckley, lecturer in English at the University of Melbourne, was unable to claim his internationally recognised poetry as research, but his colleagues who wrote articles debating the meaning and merits of his poetry could present them as their case for academic promotion!⁶

² For a thoughtful statement on universal access to education, see T. Coady, ‘A Defence of Liberal Knowledge’, in ‘Knowing Ourselves and Others: The Humanities in Australia- into the 21st Century, Part C, Reflective Essays’, Australian Research Council, Discipline Research Strategies, October, 1997: esp. pp.29-30.

³ See Candy et al. ‘Developing Lifelong Learners through Undergraduate Education’, Commissioned Report No. 28, National Board of Employment, Education and Training, August, 1994.

⁴ Sir Ron Dearing, speaking to a conference on higher education in Auckland, New Zealand, January 1998.

⁵ The Australian Veterinary Association Limited in its response to the Committee’s Discussion Paper (No.96) claims ‘...the clash between a good teacher with all that entails in terms of time and energy... and being a good researcher who produces lots of research papers, has not been resolved. The latter, it is said, leads to fame and fortune, the former to oblivion’.

⁶ I am grateful to Professor Chipman for some of these comments.

The scholar has ever been truly international. The Roman poet Horace ventured across the Adriatic⁷ 'to search for truth amid the groves of the Academy'.⁷ In the middle ages scholars travelled from monastery to monastery to work in the libraries and cultivate intellectual conversation with those of like mind. From Bologna to Cambridge and Oxford and back again, there has been ceaseless movement of scholars from country to country visiting libraries, laboratories, delivering papers, writing books and sharing all they know. Australia provides a rich and stimulating climate for its scholars, for our intellectual life is 'not swallowed up by parochial self-absorption: our own culture does not consume most of our energies: we are more international and cosmopolitan than Americans or British or French.'⁸ Today we enjoy the global university, that vigorously pursues the student wherever he or she is with online delivery, satellite television, e-mail and good old-fashioned print on paper. The electronic university and the switched-on student have reversed the pilgrimage. The world has come to the student.

The promise of information and communications technology in our universities is high, but its current performance is not. There is an urgent need for coordinated staff development. Demystification is essential. Many universities have invested heavily in the latest technology resources and then have found gains in productivity to have been elusive. Of course, the content of coursework is crucial—and must be subjected to constant academic review. Re-engineering programs are said to have only a 30 per cent success rate and yet they are needed to transform organisations for the information age. Re-engineering is complex and top management must commit essential resources to it and develop appropriate management plans. This is an obvious area for collaboration across universities.⁹ However, there are already some success stories. A thousand *distance* education students at the University of Southern Queensland live in Toowoomba and prefer to organise their studies through this mode of delivery. It is more convenient for them, and possibly many prefer it to face-to-face teaching.

Neil Rudenstine the President of Harvard had this to say: '...the Internet (and all virtual learning) has distinctive powers to complement, reinforce and enhance some of our most effective traditional approaches. We must not undervalue the continued need for books and other tangible documents or neglect the *irreducible* importance of sustained face-to-face contact in learning. But neither should we mistake what is happening for a mere fad or miracle and fail to realise the transformative possibilities of the new technologies.'¹⁰

The *internationalisation* of higher education recognises nations and the process of interchange of higher education between nations. However, there is anxiety in the academic community over globalisation which involves supra-nationalism that straddles national boundaries, overriding the wishes of nations in respect of higher education. Technology goes hand in hand with globalisation, magnifying the threat. The stakes are high for Australia, an increasingly significant exporter of education. Australia should prefer an unregulated international environment for the borderless delivery of higher education.¹¹

⁷ Horace, Epistles II, 2, 45: 'atque inter silvas Academi quaerere verum'.

⁸ Janet McCalman: 'The world we are losing', Australian Universities' Review 2/1997, pp. 23 ff.

⁹ The Australian Academy of Humanities has identified six areas of collaboration:

- regional rationalisation of selected subjects;
- programs of small enrolments;
- programs in languages other than English;
- libraries;
- Information Technology for universities; and
- the establishment of state and regional humanities centres.

¹⁰ See N. Rudenstine 'Harvard Conference on Internet and Society', May 29, 1996

¹¹ But our universities will need to diversify far more imaginatively. They are currently too concentrated in countries where governments have policies of slowing the flow of their nationals overseas. They offer too many undergraduate programs and too few postgraduate places; and their international courses are narrowly concentrated on accounting, economics, business studies and applied science. See Australian International Education Foundation Council (AIEF) Submission No. 266.

Things have moved on in higher education circles in recent years. Universities and dons have given place to higher education and lecturers that in turn have given place to market entrants or providers and customers or clients!¹² Many in the higher education sector are alarmed at the increasingly competitive environment in which they will have to work in the future. Does competition degrade quality? Perhaps it may, depending upon what is meant by 'quality'. But there have been adverse incentives in the past. Partridge refers to 'the almost invulnerable apathy and inertia of the majority of Australian academics ...'.¹³ The Classical languages have operated in 'a sheltered workshop' environment in the past and have steadily wasted away because the presentation has been pedantic, pleasureless and dull. Snootiness and bad teaching have killed the Classics.¹⁴

Academic tenure has been a matter of some debate for a long time. Hoare speaks of the 'symbolic' nature of tenure and some academics speak warmly in support of it.¹⁵ The purpose of tenure is to give academics security in their scholarly work and the opportunity to take risks in long term basic research. However, in the future there will be greater accountability and for universities to thrive, there must be an improved capacity to reward outstanding performance and to address incompetence. Universities are losing outstanding young academics—and many of these are women—because there is no room for them in the institution. Perhaps extended tenure will be too much of a luxury in the modern university.

What universities badly need is a vision that is shared by governments, academics, university managers, students, administrators, unions, employers and private citizens.

It is crucial for all major stakeholders to work together closely and harmoniously towards the development of a learning society. Academics should be rewarded and acclaimed for scholarly achievement and professional service. Above all, Vice-Chancellors must be energetic and brilliant leaders, possessing a profound integrity, for in the end the academic climate of the university depends upon the leadership of it. Academics around the country are asking 'Is the institution important any more?' It is up to the leaders to make it so and to ensure that all staff and students are looked after and feel that they belong.

And the needs of *all* students must be addressed. In our cosmopolitan universities we have a great opportunity for reconciliation. Students with disabilities, students whose English is poor, students from small ethnic communities, and Indigenous students all need to feel part and parcel of the institution. Time and again, in meeting with Aboriginal students, the plea was for *acceptance*. Nothing will be gained, until these students are accepted along with everybody else. Plato said that his doctrines could not be written down but resulted in sudden illumination like a flame leaping up from a spark which arose from much discussion and a common life. There is a different type of spark in our remote Aboriginal communities that leaps up from the campfire and if education is 'the getting of wisdom', much is to be found here. Students in our universities can confidently expect to live 50 or 60 years after their graduation and it is artistic, spiritual and cultural values that they will need to cultivate for a full and happy life. Perhaps

¹² 'We cannot afford a higher education system that is either excessively instrumental or excessively esoteric.' HERDSA (Higher Education Research and Development Society of Australia) in its Submission No. 198.

¹³ P H Partridge 'The Martin Report', *Vestis*, June, 1965 page 71.

¹⁴ But not everywhere. There are 75 students in Elementary Latin at the University of Sydney this year and 193 students in the first year Mythology course. Professor Kevin Lee tells me that students are 'sick of relevance'. *Business Studies*, beware! For a general discussion, see Highet, G. 'The Classical Tradition', OUP, 1949, esp pp. 490-500.

¹⁵ Higher Education Management Review, AGPS, Canberra, December 1995, p.73. For a view in support of tenure see McCalman, op. cit., p. 25.

we shall have to look to our Aboriginal Australians to take the lead. In the words of the Yolngu people of East Arnhem:

Gurtha nhara methuthu ganumbali djarrtjuntjun baykandjarri bunuwarra mayku nharana dhiyalkthiyalk yalala butthun dhurrkuma wangangura, gukula waritj nunungitj rilmitja

*The sacred fire is burning; the tongues of the fire set alight the tree of knowledge. The sparks will fly across the land in this country we call Australia.*¹⁶

Vitruvius describes well the university education of the ideal architect - an education that is at once broad and deep:

*An Architecte ought to understand language, to be skilfull of Painting, well instructed in Geometrie, not ignorant of Perspective, furnished with Arithmetike, have knowledge of many histories and diligently have heard the Philosophers, have skill of Musike, not ignorant of Physike, know the answers of Lawyers, and have Astronomie, and the courses Celestiall, in good knowledge ... all these Artes, Doctrines and Instructions, are requisite in an excellent Architecte.*¹⁷

The submission of the Royal Australian Institute of Architects says this: 'The principle of architectural education at university level is that it provides the ability and value systems to 'arrange knowledge' in the solution of architectural problems. This should not be confused with the arrangement of lines on a drawing board or a computer screen which is a vocational skill, appropriately learned at a TAFE institute.'¹⁸

The submissions that our Committee received supported the widespread view that VET should continue to teach competencies and maintain the strong focus on skills and higher education should cultivate attributes. Each sector should have clearly expressed goals. There should be articulation and credit transfer between the sectors and, where possible, facilities should be shared as well in order to effect economies. The curricula, however, should be clearly defined and discrete.¹⁹

General and vocational education should not be artificially separated. However, vocational diplomas should not be awarded by universities nor should degrees be awarded by TAFE institutions.

There is a widespread belief within the sector that universities cannot maintain their vigorous contribution to Australian life in the face of continuing funding constraints. Virtually every submission and every response to the Discussion Paper reiterated this current dilemma in which universities feel themselves to be placed.

¹⁶ Quoted in *National Review of Education for Aboriginal and Torres Strait Islander Peoples*, Final Report, 1995, p.131.

¹⁷ Vitruvius, *de Architectura*, Book 1, translated by John Dee.

¹⁸ Submission No. 199, Royal Australian Institute of Architects, p.2.

¹⁹ Murray expressed concern 'with the present blurring of responsibilities in many places between the university and the technical college'. Murray continued 'there is a grave danger in most countries that a technical college, or other institution of similar type, which is performing excellently its proper function of producing the technicians and craftsmen for whom there is urgent national need, may be led by a false sense of values to try its hand at producing another type, the professional engineer or technologist and so lessen its effectiveness for its own particular task.' Murray pp.77-78. Kangan went further when he brought down his report in April 1974: 'Artificial barriers between general and vocational education, however, still remain. Some general education proceeds as if there were no world of work. Some vocational education is specialised training concerned more with the skill than the person. Most forms of general education are vocational for at least some students. Again, all vocational education affects the learner as a person and therefore has some general educational effect. The implication for vocational education is that training in the narrow sense can be a serious disadvantage for the student both in terms of personal development and in acquiring the basic understanding that is needed for continuing education, and for acquiring the basic understanding that is needed for continuing education, and for acquiring other vocational skills.' TAFE in Australia - Report on Needs in Technical and Further Education, April 1974. Australian Committee on TAFE - Chair M Kangan, p.3.

In its visionary statement *Higher Education: Quality, Diversity and Choice*, issued in 1996, the Coalition stated ‘Universities are not businesses-for-profit and attempts to improve efficiency and effectiveness must be consistent with their unique character.’²⁰

There was never a truer statement. Efficiency on the factory floor is different from efficiency in a community of scholars. Universities have been required to work for economies of scale and this they have done conscientiously. Scholars, particularly those involved in long term research, do have to have plenty of space—cognitive space—to contemplate their discipline. No ground-breaking research can ever take place unless it is in the context of oceans of time and reflection. In pressing for efficiency in management, the enterprise may lose sight of its ideals, of its humanity, and of its professional integrity. When this happens, there is no true efficiency.²¹ Scholars must have room to move.

It is abundantly clear that the sector is in need of adequate funding. Leaders of our universities have been encouraged by the Commonwealth Government to look for other channels for financial support and *Quality, Diversity and Choice* states categorically that ‘new funding must supplement and not replace the public contribution’.²² Industry involvement in universities has not been extensive in Australia. There is no tradition of collaboration between the two. Nor is there any real culture of philanthropy as exists, for example, in the United States. It may well take 50 or 60 years for university foundations to assemble a critical mass. It also takes time to build alumni activity and current tax arrangements do not encourage this.

Meanwhile, where will the funding come from? The public versus the private good has been endlessly debated, and it is a fruitless debate. The social and cultural health of the community are to be even more highly prized than economic prosperity. But the two go hand in hand. There is a direct link between higher education participation and expenditure and social and economic wellbeing and this is a compelling argument for continuing and substantial public support. Look at the evidence: Graduates are paid better. They live longer. They enjoy better health and manage to stay out of hospital. Fewer of them are in gaol and they are better at managing their lives than non-graduates and therefore less of a drain on the public purse than non-graduates. In the end, the proportion of public funding given to postsecondary education has to be a matter of judgment by the government of the day. It is the Government alone that must decide what the country can afford, given other important claims on public budgets, not the least being primary and secondary education.

The Government has to make an important strategic choice. *If* the economic welfare of the country depends upon a well educated, well trained and compassionate citizenry, and *if* wealth is generated thereby, and *if* the social and cultural relevance of postsecondary education is clearly to be seen in the life of Australia’s citizens, the education enterprise should be generously publicly supported.

A distinguished President of an American University recently said, at the end of a long career in higher education in the United States, that the young have no love of learning, nor have they a passion for justice—they are simply interested in being

²⁰ *Higher Education: Quality, Diversity and Choice*, February, 1996 available at <http://www.liberal.org.au/ARCHIVES/EDUCATION/highered.htm>.

²¹ ‘Already too many people in Universities spend too much time either responding to changed rules, supplying endless statistics, coping with seemingly purposeless tinkering, applying endlessly for the basic funds we need just to do our jobs, responding to frequent reviews of something or other ... the level of frustration is high.’ Ian Chubb, Vice-Chancellor of Flinders University, Submission No. 259, p. 10.

²² op.cit. p. 8.

employed.²³ In the Committee's visits to the universities across Australia, this was not our observation, although there may be more than a grain of truth in it. Herein lies a challenge for university leaders—to *change the culture*. The quality of our courses is paramount. The most common reason overseas students choose Australia lies in the quality of the education that they expect to receive.²⁴

Excellence in teaching, proper supervision of postgraduate research students and the creation of a learning climate within our universities are essential. Universities should also foster civic pride, unselfishness and an altruistic spirit. If everybody who has the inclination and the capacity, is to come to university in the future, universities must have a coherent and rigorous rationale of the nature and purposes of education and this will have profound implications for curriculum development. Ethical and spiritual values must be included along with the higher order intellectual values. Universities must be far more diverse than they are now. Their Procrustean nature militates against the capacity of students to make wide ranging choices.

The challenge for our universities is to preserve the unique nature of university life and at the same time to conduct their affairs as large, complex organisations in a diverse, competitive and uncertain world. But quality, and not profit, must be the key goal.²⁵ Universities must maintain their paradoxical role of being creatures of their culture and a locus for revolution at the same time.²⁶

Universities are both intellectual centres and agents for social and economic change. They should be part of the conscience of the nation. In universities information is transformed into knowledge which if properly explored produces understanding, and understanding wisdom. It is this that makes higher education higher. With a major effort of human ingenuity and political will we shall over the next decade usher in the learning society that will make for an informed, cohesive and happy Australia.



Roderick West

²³ See D. Bruce Johnstone 'The Future of the University: Reasonable Predictions, Hoped-for Reforms, or Technological Possibilities?', delivered in London, June, 1997. The comments above were made during the course of the address.

²⁴ That is why it is disconcerting to read 'Australia is a place to enjoy the sun, sea and surf ... the most critical finding is that Australia is considered a place of lowest academic quality, poorest teaching quality, low entry standards and Australian qualifications are least recognised in the USA.' Hattie, J., 1997, 'Factors influencing USA students' decision to study abroad in Australia', paper presented to the Post-NAFSA Workshop, Australian Education Office, Victoria, British Columbia, Canada, p.47. Mercifully, such reports are rare.

²⁵ 'More than ever before, the reservoir of talent in our people will have to eclipse our great natural resources as a determinant of our success. We will have to use our intelligence and wit to cement the processes of change and to secure and improve our place in the world. This involves working better and smarter, scuttling mediocrity for quality and distinction.' J. S. Dawkins. And again: '... philosophy, history and physics are mendicants for a respected place in some universities which honour the study of hospitality and gaming.' Raimond Gaita, 'Truth and the Idea of a University', *Australian Universities' Review*, 2/1997, p.13.ff

²⁶ 'If the purpose of universities had been to mould individuals into existing social (employment) roles, think how different our world would be. Most of our knowledge in science, medicine, and engineering would not exist. Socially, we would still believe those of other races intellectually inferior, women should be barefoot and pregnant, skull shapes reveal criminality and so on.' Michael Jackson, 'The Sydney Morning Herald', 1/12/1997.

Acronyms and abbreviations

ABS	Australian Bureau of Statistics
ACER	Australian Council of Educational Research
ADFA	Australian Defence Force Academy
AFTRS	Australian Film, Television and Radio School
AGPS	Australian Government Publishing Service
AIEF	Australian International Education Foundation
AMC	Australian Maritime College
ANTA	Australian National Training Authority
ANU	Australian National University
APA	Australian Postgraduate Award
APA(I)	Australian Postgraduate Award (Industry)
AQF	Australian Qualifications Framework
ARC	Australian Research Council
ASEAN	Association of South-East Asian Nations
ASTEC	Australian Science, Technology and Engineering Council
AVCC	Australian Vice-Chancellors' Committee
CAE	College of Advanced Education
CAPA	Council of Australian Postgraduates Association
CAUT	Committee for the Advancement of University Teaching
CBD	Central Business District
CCST	Coordination Committee on Science and Technology
CDP	Capital Development Pool
CHEMS	Commonwealth Higher Education Management Service
COAG	Council of Australian Governments
CPA	certified practising accountant
CPI	Consumer Price Index
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CUTSD	Committee for University Teaching and Staff Development
DEETYA	Department of Employment, Education, Training and Youth Affairs
DIST	Department of Industry, Science and Tourism
EFTSU	equivalent full-time student unit
GAL	Global Alliance Ltd
GCCA	Graduate Careers Council of Australia Ltd
GDP	Gross Domestic Product
HEC	Higher Education Council
HECS	Higher Education Contribution Scheme
HEFA	Higher Education Funding Act
HERDSA	Higher Education Research and Development Society of Australasia (Inc)
IAS	Institute of Advanced Studies
IT	Information Technology
JISC	Joint Information Steering Committee
MCEETYA	Ministerial Council on Employment, Education, Training and Youth Affairs
NAGCA	National Association of Graduate Careers Advisers
NBEET	National Board of Employment, Education and Training
NCG	Nationally Competitive Grants
NHMRC	National Health and Medical Research Council

Acronyms and abbreviations

NIDA	National Institute of Dramatic Art
NTEU	National Tertiary Education Union
NUS	National Union of Students
OECD	Organisation for Economic Cooperation and Development
OLA	Open Learning Australia
PAGE	Professional and Graduate Education
PDF	Pooled Development Funds
PMSEIC	Prime Minister's Science, Engineering and Innovation Council
R&D	research and development
RIBG	Research Infrastructure Block Grants
RIEF	Research Infrastructure Equipment and Facilities
RMIT	Royal Melbourne Institute of Technology
RQ	Research Quantum
RTC	Research Training Component
RTI	Research Training Index
SAT	Scholastic Aptitude Test
SES	Socio-Economic Status
SNA	Safety Net Adjustment
TAFE	Technical and Further Education
TE	Tertiary Entry
UKOU	UK Open University
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNS	Unified National System
VET	Vocational Education and Training
WISSET	Women in Science, Engineering and Technology
WWW	World Wide Web

Executive Summary

In the twenty-first century knowledge will be the most important currency of all. If Australia is to prosper in this new environment, and to continue to be a vibrant, open and inclusive society, we must also become a learning society.

Higher education has a unique and vital contribution to make to the development of a learning society. Higher education should open, nurture and refine minds, and create independent learners who are able to grow intellectually throughout their lives and contribute fully and at the highest levels to society and the workplace.

However, if our higher education system is to make the contribution to Australian society that we envisage in the next century and also operate at an internationally competitive level, we need to rethink fundamentally the way that we finance and regulate our universities.

The key changes

In essence, we need a policy framework that is driven by the needs and preferences of those who use the services of universities. This will involve three key changes.

Student centred funding

In our view the most fundamental and important change that the Government could make to higher education is to move to a form of student centred funding. Students should have a direct relationship with universities and a real say in what universities provide. The best way to achieve this is to ensure that public funding for tuition is driven by students' choices—at both the undergraduate and postgraduate levels—not negotiated between universities and the Department of Employment, Education, Training and Youth Affairs, as at present.

Priorities in research

To increase the responsiveness of higher education research to the needs of the users of that research we need to emphasise strategic planning, priority setting and greater coordination of the national research effort. Australia, together with governments around the world, is experiencing a rapidly increasing gap between the demand by universities for research funding and the public capacity to fund that research. In this context priority setting cannot be avoided.

A world-class higher education industry

These changes will come to nothing, however, unless we have a world-class higher education industry. Urgent action is needed to ensure that universities are able to make the investments in information technology and infrastructure that will be needed over the next two decades.

Australia must become a learning society.

Higher education has a vital role, but change is needed.

A vision for higher education

The Review Committee was set the daunting task of conducting the first major review of higher education in a decade, and of charting a course for higher education for the next 20 years. The terms of reference require a long-term, visionary perspective. We have therefore focused on developing broad principles, goals and strategies rather than a detailed blueprint for the sector. We hope that our report demonstrates why the changes we propose are necessary and, in some cases, urgent.

Underlying all of our recommendations to the Government and universities to achieve the changes that we think are necessary is a vision for the higher education sector for the twenty-first century.

As we observed in the Discussion Paper, many people expressed a feeling that higher education is beginning to lose its way. A new focus and new strategies are required to consolidate past gains and meet future challenges in vastly altered circumstances.

A vision for higher education for the twenty-first century must clearly articulate the role of higher education in a learning society, and the importance of higher education's contribution to lifelong learning. A key requirement is to equip our graduates to play a productive role in an outwardly oriented, knowledge-based economy.

This vision must recognise the importance of teaching as a primary objective for universities, as well as the contribution that research makes to the higher education enterprise and to Australia's economic and social and cultural development.

Central to the vision is ensuring that no Australian is denied access to a high quality education at any level merely because of his or her social background or financial circumstances. From the introduction of Commonwealth Scholarships in the 1950s to the birth of Open Learning in the 1990s, Australia has embraced affordable accessibility to higher education as fundamental to national development.

Finally, this vision must be owned by universities, governments and the community, including the students and staff of our higher education institutions.

Building a higher education sector for the future

To be successful our report must engender a sense of urgency about the need to reform the funding and regulatory framework for higher education. A new policy and financing framework is needed to achieve the Committee's vision for higher education.

The funding and regulatory framework needed to serve Australia over the next 20 years must be built on clear educational and industry related principles.

We think that all Australians should have access to some form of postsecondary education to equip them to prosper in the knowledge economy.

Providing high quality learning experiences should be at the heart of university endeavour. Students should be able to choose from a diverse range of study options. The location, content and mode of delivery of education should be built on a direct relationship between the student and the providers of postsecondary education, thus ensuring that institutions are responsive to students' preferences.

Underlying our recommendations is a new vision for higher education for the twenty-first century.

If we are to realise this vision we need a new financing and regulatory framework.

Financing arrangements should emphasise accountability to individual students and provide a framework for the management of financial risk to protect students and taxpayers. Financing arrangements should also embody fair levels of private and public contribution that reflect both the benefits to society and the significant private benefits that are generated by participation in postsecondary education.

Research funding arrangements should enhance the effectiveness of the Government's investment in research by ensuring that public funding is allocated in the context of a strategic view of Australia's total research effort, with an emphasis on transferring knowledge, technology and skills to industry and the broader community.

It is vital that adequate government funding be maintained. Given the importance of higher education to economic growth, government decisions on the level of resources to be provided for higher education should be made on the basis that the risks associated with underinvestment in higher education are greater than those of overinvestment.

Australia's universities must transcend local, sectional interests and the historical perception of their role as educators to become major partners in further promoting a world-class education industry that can play an even wider role in driving the growth of our economy.

Why is action needed now?

The sense of urgency that we are seeking to generate may surprise some. However, the Review Committee's reasoning is straightforward: the world in which universities operate is changing—and changing fast—and Australia's current policy and financing framework will not be able to deal with those changes.

Action is needed because the world is changing and our current policy framework will not cope.

Future developments

We believe that over the next two decades the operating environment of higher education institutions will be fundamentally changed by developments in four key areas.

Over the next two decades:

Community expectations

The community's expectations of higher education institutions will increase. Students, their parents, and their employers will expect better outcomes from universities and, in line with developments in other service industries, they will increasingly look for products tailored to their particular interests and needs. The growing importance of knowledge-based industries, and the increasing role of research in solving social and economic problems, will increase the importance that the community attaches to higher education.

• community expectations will increase;

Demand

The number of students, from both Australia and overseas, seeking access to Australian higher education will also increase. Demographic pressures mean that the number of Australian students seeking first time access to higher education will rise over the next two decades. We are also confident that in the long term the international market for higher education services will grow (though our place in the international market cannot be taken for granted). In addition, it is clear that significant growth in demand for continuing education among mature age students is likely, as is an increase in demand by employers for skilled workers.

• demand will increase;

The digital revolution

- the digital revolution will cut even more deeply into our lives;

Developments in information technology have the potential to revolutionise the management processes of universities and the education products that universities provide. Developments such as the Internet and the World Wide Web will create opportunities for higher education institutions to change fundamentally the way that teaching and research are conducted, and to revolutionise the way that they manage their administrative processes.

Competition

- competition will increase.

Competition will increase among Australian higher education providers and among players outside the established networks. Potential competitors for Australian students include not just Australian higher education institutions, but also providers in other education sectors, new entrants in associated industries such as publishing, media and telecommunications, and international higher education providers.

The importance of flexibility

These challenges are discussed in detail in chapter 2. We do not claim to know precisely how these developments will change the world over the next 20 years. However, we do know that changing patterns of demand, the digital revolution and increased competition will change our world, and it would be very unwise for institutions, or governments, to assume that they will not be touched by such developments.

These broad developments, and the ultimate uncertainty of the future, underline the importance of a policy framework which gives as much flexibility as possible to universities and students, and highlights the importance of building institutions that are responsive to change.

Current policy framework

- Our current policy framework is not equipped to deal with change.

The policy and funding framework that has supported the higher education system over the past decade has served Australia well. It has successfully sustained massive growth in student numbers. It has been accessible and has supported the emergence of higher education as a major export earner for Australia. It has supported a significant expansion of funding for research. It has accorded a high degree of autonomy to institutions.

However, it is evident that this will not enable universities to respond effectively and quickly enough to the challenges and opportunities that will emerge over the next 20 years.

Inconsistencies in approach

- It is inflexible and inconsistent ...

Our regulatory framework is still too dependent upon centrally determined targets, despite progressive decentralisation over the past decade. The number of fully subsidised students, the course mix, and the funding rates per student, are centrally determined. So the largest single element in the budget of institutions is determined centrally, by government. Under these arrangements institutions cannot effectively respond to students' needs and the system has little capacity to respond to demographic movements.

Incremental changes to fee paying arrangements have been made over a number of years to increase the influence of demand for places and to diversify the income sources of universities. The final result is separate arrangements for domestic postgraduate fee paying students, domestic undergraduate fee paying students and overseas fee paying students, reflecting the different policy aims at the time they were introduced.

In line with broader industrial relations changes, institutions have greater freedom in wage bargaining. However, this has not been accompanied by the flexibility or incentive to make use of that freedom in ways beneficial to both staff and students. Because greater industrial relations freedom has been granted without a commensurate increase in the capacity of institutions to earn additional revenue, institutions can fund wage increases only through cost cutting, which for many has taken the form of staff redundancies.

The current framework does not allow government to view postsecondary education and training as a whole, and weakly manages the boundaries between higher education and Vocational Education and Training. We do not take the view that the two sectors are homogeneous, or that they ought to be so. But the separate regulatory and funding arrangements for the two sectors mean that decisions cannot be made about the best use of the resources available for postsecondary education in Australia. Artificial boundaries distort students' choices between Vocational Education and Training and higher education and also affect the way institutions in both sectors respond to student and employer needs.

... and it prevents a postsecondary perspective.

Incentives

The current funding framework offers incentives to invest time and energy in research more than it encourages an enduring commitment to excellence in teaching.

The incentives generated by current arrangements are perverse:

Because most domestic students have no direct financial relationships with their institutions, universities have few direct incentives to ensure that their products and services meet the needs and preferences of Australian students.

- As long as course fees are centrally fixed there are no incentives to reduce costs to students. The only incentive to seek low cost delivery options is the need to fund salary increases.
- Controls over student numbers and funding rates mean that institutions cannot make a trade-off between cost and volume.
- Setting the volume of funded students at a particular university on the basis of negotiations between the institution and DEETYA means that student choice does not drive the allocation of funding to institutions.

• incentives to respond to the needs of students are weak;

Institutions have few incentives to be innovative or to re-engineer traditional approaches to teaching and administration. It is hard to see tangible ways in which diversity among institutions is encouraged. Funding per student is centrally determined and, so long as each university fills its quota of student places, it is guaranteed 100 per cent of the operating funding that it received in the previous year. While there is some diversity in the system, far greater differentiation is possible and desirable.

• innovation and diversity are not encouraged.

The end result is that universities have strong incentives to solve funding problems by approaching governments rather than by better using their assets, exploring alternative delivery mechanisms, or attracting new customers.

Rewards and penalties do not promote an effective management culture.

Management

Our current regulatory framework does not encourage or facilitate good management within universities. Outdated governance arrangements, which emphasise representation rather than experience and skills in the management of large enterprises, hinder many institutions in pursuing their objectives.

Centrally determined funding rates and guaranteed funding levels provide few incentives for universities to be cost aware. Consequently, Australia's universities lack information about costs and do not have a good understanding of cost structures.

Poor management can escape unnoticed because current funding arrangements lack transparency in some crucial respects:

- the opportunity cost of the resources tied up in university assets is not explicitly identified; and
- subsidies for teaching and research are not differentiated.

Equity

Equity outcomes are mixed.

Clearly some groups have benefited from the Government's equity initiatives in the past decade. Women's participation in higher education is now greater than men's. In 1997, 54 per cent of students were females, up from 50 per cent in 1987. Women's participation in non-traditional areas of study has also increased.

Initiatives to introduce Aboriginal and Torres Strait Islander students to higher education have been very successful. The number of Indigenous students has more than trebled, albeit from a low base. In 1996, the proportion of Indigenous students among commencing students was broadly comparable with the proportion of Indigenous people in the university age population.

However, Aboriginal and Torres Strait Islanders continue to be under-represented in many disciplines (particularly law and medicine) and in postgraduate study. Almost half of Indigenous students embarking on higher education courses were enrolled in sub-degree courses and their success rate was low—about 65 per cent, compared with 85 per cent for other students.

People from low socioeconomic backgrounds and from rural and isolated areas are still significantly under-represented in higher education (indeed, access and participation rates for rural and isolated students actually declined between 1991 and 1995). Students with disabilities are also still under-represented.

Competition and entry to the market

Competition is limited and significant barriers to entry to the market exist.

Many of the current practices in Australian higher education would not have survived in an open market—students would have voted with their feet long ago. However, the perverse incentive structures which apply to Australian higher education institutions are underwritten by limitations on competition and the fact that entry to the market in higher education services in Australia is heavily restricted.

'Public' universities alone have access to public funds in the form of operating grants. The highly subsidised education at these universities makes it difficult for private institutions to compete for students on price, or even to enter the market.

Publicly provided income-contingent finance is available to students only at public universities and to students studying through Open Learning Australia. This constitutes a major disincentive for students wishing to study at a private institution in that they must either pay tuition fees up front or finance tuition costs through a loan at commercial interest rates and under commercial repayment arrangements. Government funded interest free loans to students who defer payment of the Higher Education Contribution Scheme (HECS) contain a hidden subsidy.

Accreditation arrangements act as a barrier to new entrants into the higher education sector. The University of Notre Dame Australia, Bond University and institutions such as the Melbourne College of Divinity are the only private higher education providers that can accredit their own awards. Limited access to the status of a self-accrediting body gives existing universities, which are established under their own acts, a substantial competitive edge.

Established universities also have a substantial competitive edge owing to the long periods of public subsidy and endowments which they have enjoyed. Prospective competitors would need to make extremely large outlays before they could offer the same services.

Developing a globally competitive higher education industry

Australian universities will have difficulty maintaining competitiveness in world markets unless they are able to finance the investment in new technologies and other infrastructure needed over the next 20 years.

Urgent action is needed to strengthen universities' ability to mobilise resources, and in particular to increase their capacity to invest in information and communications technology. This is all the more pressing because we detect an unwillingness in the sector to do the things that are necessary for higher education to realise its potential to become a world-class industry in the next century.

Compared with the prestigious private universities in the USA, Australian universities have limited reserves and endowments. There has been no large scale private equity investment in higher education in Australia to date. Australian universities do not have the same access to cash reserves and the capital market as potential international competitors. However, under current arrangements, Australian universities are constrained in their ability to borrow funds (often approval is required from the relevant State or Territory Government and universities are generally unable to use land or buildings as security for commercial loans).

Australian universities do not have the resources to make the investments in information technology and courseware that will be necessary.

The way forward

Instead of the perverse incentive structures, inflexibility, restrictions on competition and entry to the market, and the poor access of Australian institutions to finance, we need a financing and regulatory framework that:

- responds to students' preferences about study options and the location, content and mode of delivery of education, and provides high quality learning experiences which meet the particular needs of individual learners;
- protects students and taxpayers and is accountable to students and taxpayers for the investment that they make in higher education;
- facilitates effective investment by the Government in research and research training; and

- enables Australia's universities to become major partners in a world-class education industry that can play a direct role in driving the growth of our economy.

Our conclusion is that fundamental reform is needed in the funding of teaching and research and in the way that government supports higher education as an industry.

Supporting the fabric—a world-class higher education industry

The reforms that we believe are necessary to the funding of teaching and research must be underpinned by a commitment to strengthening higher education as an industry.

The Discussion Paper observed that many people within the system are uncomfortable with viewing higher education as an 'industry'. We think that it is desirable and necessary for the Government to take an industry perspective on the higher education sector. Australia's higher education institutions are a vital part of our economy. In 1996, higher education represented about 1.3 per cent of Gross Domestic Product, employed nearly 83,000 people and enrolled 53,200 international students—in the process generating about \$1.4 billion in export revenue. Higher education institutions consume resources, provide services, manage assets and have customers. If these resources are not used effectively governments, students and the community will receive poor returns for the investments that they make in universities.

To ensure that Australia's institutions are able to develop into a world-class higher education industry in the next century, the Review Committee believes that action is needed in four key areas.

- Urgent action is needed to strengthen universities' ability to mobilise resources, and in particular to increase their capacity to invest in information technology.
- Action is needed to reduce barriers to entry to the industry and increase competition. We believe that increased competition will produce a stronger Australian higher education sector while also benefiting Australian students and the community as a whole.
- An increasingly competitive industry structure must be accompanied by better consumer protection mechanisms than exist at present.
- Universities must do more to ensure that their decision making structures are effective.

Access to resources

There is a pressing need to invest in information technology, computer assisted courseware and other infrastructure to maintain competitiveness in world markets.

The paper prepared for the Review Committee by Global Alliance Ltd (GAL) argued that Australian universities do not have the capacity to finance substantial infrastructure investments. Compared with the prestigious private universities in the USA, Australian universities have limited reserves and endowments. However, the next wave of computer assisted courseware will be expensive to produce. GAL estimates that at least US\$500 million would be required to develop computer assisted learning packages for half the first and second year subjects at a typical Australian university.

A commitment to the industry is essential.

Universities must be able to have access to greater resources ...

Institutions should be given enhanced power to use their assets to help finance the investments which will be required to take full advantage of the power of the new technologies. This could be achieved if the Commonwealth and State/Territory Governments were to develop a process for rationalising the ownership and control of assets used by universities. Furthermore, we recommend that once this is complete, the capital assets of universities should be liable to the same taxes and charges that apply to private higher education providers. This would help reduce the barriers to the higher education market that have resulted from favourable taxation and charging regimes. Because institutions would face taxes and charges on their assets they would have an incentive to sell assets that they were not using effectively.

... and must have incentives to use their assets more effectively.

However, freeing up the assets of universities and providing them with incentives to use those assets more effectively will not be sufficient to ensure that universities are able to finance the investment that is needed. We therefore recommend that the Government establish a loan fund to finance major programs of innovation and structural change. We prefer loans over grants because loans provide far greater incentives for universities to focus their efforts on projects that will genuinely increase their efficiency. However, we believe that the loan conditions should allow flexibility in cases where the investments are unlikely to yield benefits for some years.

Regulation

Current accreditation arrangements are a significant barrier to entry to the market. However, reforms in this area must be balanced by the need to ensure that all postsecondary providers meet minimum academic standards. Students need to know what they are paying for and taxpayers need to understand what they are subsidising. In the future, it is likely that a national system of qualifications will be an increasingly important source of competitive advantage in the international marketplace.

We must increase access to the market, while ensuring minimum standards.

We have made recommendations to ensure that there are nationally consistent criteria and processes for the recognition of university level qualifications and the use of the titles 'university' and 'higher education institution', and to ensure that accreditation processes allow private providers of higher education to become self-accrediting bodies with the same powers in this respect as universities which operate under their own acts of parliament.

Consumer protection

In the new, more competitive environment that we envisage for higher education enhanced consumer protection mechanisms will be required. In chapter 4 we make recommendations on the provision of information about university services, the establishment of an independent complaints procedure to support students, and the development of minimum standards of financial probity for institutions.

Governance

Sooner, rather than later, universities will need to address the essential incompatibility of a view of the world based on collegial decision making and an alternative view based on executive decision making and reflected in the size and style of operation of most business boards.

Ultimately, the internal decision making processes of universities can be reformed only by universities themselves. We note that the imperative for universities to review and modify their decision making structures will intensify as their environment changes. Failure to address the inflexibilities of their current decision making processes will mean that institutions will not be well placed to operate under any financing and regulatory framework which increases competition among institutions and gives greater influence to student choice.

Teaching and learning

Universities must be more responsive to students' choices and preferences. The only effective way to achieve this is by building a direct financial relationship between providers of higher education and students.

The Review Committee favours a model in which public funding for tuition would be driven by students' choices, institutions would be able to set fees for all students (initially subject to an upper limit for students receiving Commonwealth tuition funding), and access to public funding and income-contingent loan arrangements would be provided to all accredited higher education providers.

Student centred funding is the best way of creating a truly responsive relationship between students and institutions. When combined with a lifelong learning entitlement, a student choice based approach to funding would provide universal access to government support across the postsecondary education sector. In particular, this student centred funding would:

- allow students' choices to drive the flow of resources between providers and courses, thus giving institutions a real incentive to respond to students' needs and preferences;
- eliminate some of the current restrictions on competition and reduce barriers to entry to the market by freeing up access to government funding and income-contingent loan arrangements; and
- introduce an element of price competition, and significantly deregulate the setting of fee levels, thereby allowing institutions to make meaningful decisions about prices and volumes, and introduce real incentives for institutions to manage their assets effectively and to control costs.

Implementation—the need for a staged approach and reform to Commonwealth–State roles

In chapter 5 we outline how a student centred funding model might work. The Review Committee is mindful that some elements of its favoured approach may take time to implement. For this reason, and to allow universities time to adjust to their new environment, we advocate an incremental approach to reform based on four implementation stages.

The four stages are described below. We note that each stage can be considered as a self-contained option.

Our long term goal—the development of a lifelong learning entitlement—creates a consistent treatment of postsecondary education and training providers. This does not mean that we wish to see a convergence between the missions of the postsecondary sectors. Rather, we are advocating a 'seamless' funding system which minimises the potential for students' choices to be distorted by artificial administrative boundaries between Vocational Education and Training providers and higher education institutions. We acknowledge that this will require a rationalisation of the funding responsibilities of the Commonwealth Government and State/Territory Governments.

Building a direct financial relationship between students and providers is the best way to ensure that providers have real incentives to meet students' needs.

Student choice must drive funding and there must be price competition.

Stage 1: Continue to fund on negotiated targets, allow institutions to set fees, provide some support for private providers and strengthen consumer protection arrangements in the higher education system.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit full fee paying local students who are not allocated a subsidised place.

Higher education institutions continue to receive funding for tuition based on a number of student places agreed in negotiations with the Commonwealth. Where an institution enrolls fewer (or more) equivalent full-time students than the agreed number, the Commonwealth reduces (or increases) the amount of funding provided to the institution, but at a proportion of the equivalent full-time student rate (similar to arrangements which currently apply to undergraduate HECS liable students).

Loans, with repayment contingent on future income, are available to all higher education students, and allow:

- *students at public universities to defer payment of any tuition fees set by institutions over and above the amount of funding provided by the Commonwealth;*
- *students enrolled in approved courses at approved private universities or degree granting institutions to defer payment of all of their tuition fees; and*
- *Australian students who are admitted to public universities to places over and above the number of places for which the universities have been publicly funded to defer the payment of all of their tuition fees.*

To access public tuition funding, a student must enrol at a public university.

Equity funding, based on submissions and/or performance, is provided through targeted grants to institutions.

The higher education and Vocational Education and Training sectors remain separately funded and administered.

Credit transfer and articulation arrangements across the higher education and VET sectors are enhanced.

All universities in receipt of public funding (or whose students can claim an income-contingent loan) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Stage 2: Government funding moves when shares of enrolments change.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit full fee paying local students who are not allocated a subsidised place.

Higher education institutions continue to receive funding for tuition based on a number of student places agreed in negotiations with the Commonwealth. Within a system-wide ceiling on Commonwealth funding, where an institution enrolls fewer (or more) equivalent full-time students than the agreed number, the Commonwealth reduces (or increases) the amount of funding provided to the institution at the full equivalent full-time student rate. Movements in shares of enrolments among institutions are used to determine the base number of student places allocated to the institution. Where private institutions increase their share of total enrolments they are allocated a commensurate level of Commonwealth funding.

Loans, with repayment contingent on future income, are available to all higher education students and allow:

- students at public universities to defer payment of any tuition fees over and above the amount of funding provided by the Commonwealth;
- students enrolled in approved courses at approved private universities or degree granting institutions to defer payment of all of their tuition fees; and
- Australian students who are admitted to public universities to places over and above the number of places for which the universities have been publicly funded to defer the payment of all of their tuition fees.

To access public tuition funding, a student must enrol in an approved course at either a public or an approved private university or degree granting institution.

Equity funding, based on submissions and/or performance, is provided through targeted grants to institutions.

The higher education and Vocational Education and Training sectors remain separately funded and administered.

Credit transfer and articulation arrangements across the higher education and VET sectors are enhanced.

All universities in receipt of public funding (or whose students can claim a loan, with repayment contingent on future income) are required to make publicly available a specified minimum set of information items, in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Stage 3: Government funding is directly driven by student choice and private and public providers are treated equally.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit full fee paying local students who are not allocated a subsidised place.

The Government determines the number of student places that it will fund in total each year and allocates these on the basis of students' choices alone. Under this model, students would apply to an individual institution (as occurs currently), and the Commonwealth would determine the number of funded places the institution receives by reference to the total amount of funding available, and the order of ranking of students who accept an offer from the institution.

Loans, with repayment contingent on future income, are available to all higher education students and allow:

- students at public universities to defer payment of any tuition fees over and above the funding provided by the Commonwealth; and
- Australian students who are not allocated a funded place and who enrol in an approved course at either a public or an approved private university or degree granting institution to defer the payment of all of their tuition fees.

To access public tuition funding students must enrol in approved courses at either a public or an approved private university or degree granting institution.

The Government reserves a number of funded student places which include supplementary funding for targeted equity or other identified groups (such as Indigenous students).

The higher education and Vocational Education and Training sectors remain separately funded and administered.

Credit transfer and articulation arrangements across the higher education and VET sectors are enhanced.

All universities in receipt of public funding (or whose students can claim a loan with repayment contingent on future income) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Special-purpose support is available through competitive tendering mechanisms to support disciplines deemed to be in the national interest, and for which all provider-based options for preserving those disciplines have been exhausted.

Stage 4: A lifelong learning entitlement to postsecondary education and training.

All school leavers receive a lifelong learning entitlement. An entitlement to funding is also provided to all mature age students seeking access to postsecondary education and training for the first time.

Students are able to use their entitlement to meet the costs of approved studies or services leading to a postsecondary award at an approved private or public postsecondary education provider in either the Vocational Education and Training or higher education sectors.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit students who have expended, or do not have access to, funds from an entitlement.

All students have access to a loan with repayment contingent on future income to assist them to meet the costs of any studies or services leading to a postsecondary award from an approved private or public postsecondary education provider.

Students may also use their entitlement to purchase tuition from approved overseas providers, where equivalent reciprocal arrangements are in place to enable overseas students to use government support from their countries to purchase tuition from approved Australian providers.

Equity funding is provided through supplementary grants targeted to members of equity groups.

All providers in receipt of public funding (or whose students can claim a loan with repayment contingent on future income) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress in the event that providers do not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Special-purpose support is available through competitive tendering mechanisms to support disciplines deemed to be in the national interest, and for which all provider-based options for preserving those disciplines have been exhausted.

Designing the parameters of a student centred funding system

The stages outlined above show that several key decisions need to be made by the Government in implementing a student centred approach to funding higher education.

How to set the rate of public funding for courses—The Review Committee believes that the average level of public funding per undergraduate student should be maintained and that, in recognition of the inherently more expensive nature of some courses, public tuition funding should be provided as a flat amount within three broad categories—for example, basic, clinical and laboratory based.

What conditions should apply to the setting of fees by institutions—It no longer makes sense for the Government to set the level of fees that students must pay. Allowing institutions to set their own fees will create incentives for universities to provide lower cost study options to students, because cost savings can be passed on to students. However, the extent to which this operates in practice will depend on the extent to which reforms to funding arrangements and regulatory structures increase competition within the industry. We believe that fee deregulation should be limited in the first instance, its effects monitored closely and any further deregulation contemplated only if adverse impacts do not arise.

What conditions would apply to loans for student fees—All students, whether enrolled at public or private institutions, must have access to loans with repayment contingent on future income to finance the payment of fees. We see this as a vital tool for enabling universal access to higher education.

How to control government outlays on tuition—We consider that, *prima facie*, the budgetary impact of a lifelong learning entitlement would be manageable. However, further detailed work remains to be done. If priority setting is needed, we believe that the Government should make first time access to postsecondary education and training by school leavers and mature age people its highest priority.

Risks

The changes to the funding of teaching that we are advocating in Stages 3 and 4 go well beyond what has been done before, and therefore may have the potential to generate some unexpected outcomes. We therefore make a series of recommendations aimed at the management of these risks.

- A targeted approach to increasing access to higher education for equity groups—including for Indigenous students, whom the Review Committee regards as a special responsibility of universities—will continue to be necessary.
- Significant but low demand disciplines may require special-purpose assistance where it is clear that a critical mass will not be supported by student demand alone, and the public interest requires the preservation of scholarly activity in the discipline.
- Innovation and excellence in teaching will continue to require support.

The effect of a student centred approach to funding on regional institutions was raised with us by many who responded to the Discussion Paper. We do not believe that regional universities will be disadvantaged by student centred funding arrangements. Indeed, their close proximity to regionally based students, and their comparatively low land values—provided that these can be reflected in their fee structures—are competitive advantages.

Under all stages there are key decisions to be made by the Government.

The risks of moving to a student centred funding framework can be managed.

The needs of those who use higher education research must be emphasised.

Research

The growing importance of new knowledge to economic development is widely recognised—the growth of high technology industries and the growing demand for highly skilled people are evidence of this. Research and development (R&D), education and training, and industrial innovation are key inputs to economic growth.

The benefits of direct links between the users of university teaching and learning services also apply to the users of higher education's research effort.

Support for research training should be student centred.

Research training

Consistent with our view that funding should be provided through arrangements which increase student choice and mobility at the undergraduate level, we believe that a student centred approach should be adopted for research training.

Research training is the single largest element of the Commonwealth's support for higher education research. Research training represents a substantial investment by the Commonwealth in individual students—around \$135,000 over a three and a half year period for a full-time HECS exempt PhD student with an Australian Postgraduate Award. Research training depends on the provision of a quality training environment, and the careful matching of students and projects.

However, under current arrangements, funding is effectively locked into particular institutions.

We believe that enhancing student mobility and choice at the postgraduate level would have the following benefits.

- Institutions would compete for research students on the basis of the quality of the research environment, supervision and outcomes.
- Arrangements that increase student choice and mobility are also likely to result in research training outcomes that are closer to employer needs.
- Greater competition between institutions, resulting from enhanced student choice and mobility, would also lead to improved research training services for students.
- The mobility of research students would enhance knowledge transfer, innovation and competitiveness.

As is the case for student centred funding at the undergraduate level, we propose a staged approach to the development of student choice based funding arrangements for research training.

Stage 1: Research training places are contestable.

Allocations of research training places are consistent with priorities for the balance of disciplines based on industry and community needs.

Research training places are allocated in two funding cycles.

In the first cycle, research training places are allocated to institutions on the basis of the Research Training Index (RTI)—a measure of the research and research training performance of institutions.

Students are encouraged to apply to several institutions. Each institution makes a first round of offers to students in December/January for the following academic year, not exceeding in number its RTI based allocation, on the basis of merit criteria and in a manner that does not restrict student choice and mobility.

In order to introduce student choice, the second cycle for the allocation of research training places to institutions is based on the number of first round acceptances at each institution.

Institutions are free to fill the research training places allocated in the second cycle during the course of the academic year on the basis of further rounds of offers and acceptances as they see fit.

In the second and subsequent years of operation, an appropriate mix of weightings for the RTI and the previous year's aggregate student acceptances in first cycle allocations of research training places to institutions is chosen in consultation with stakeholders.

Research students are free to transfer between institutions with funding following them, and up to a limited period of time transferring students would be eligible for full funding.

The duration of research training places varies, depending on whether students are enrolled in masters or PhD degrees. Students moving between institutions are given limited extra time to undertake their research training, provided they are able to justify such extensions on the basis of delays attributable to moving.

The values of research training places:

- vary by broad discipline group; and
- are increased to compensate for the increased costs students incur in moving between institutions.

The Government initiates measures to ensure that comparative information on all aspects of research training, including its institutional environment, is available to prospective students.

Stage 2: Research training funding is driven directly by student choice.

A national merit list is assembled by aggregating merit lists for specific disciplines, developed using procedures for national moderation of the qualifications and experience of candidates. Allocations of numbers of research training places to broad disciplines are consistent with priorities for the balance of disciplines based on industry and community needs.

Research training places for both masters and doctoral programs are allocated to students on the basis of national merit lists. Students are encouraged to apply to several institutions.

Each institution makes first round offers of research training places on the basis of merit criteria and in a manner that does not restrict student choice and mobility. Students who fail to win first round offers or choose not to accept the conditions of offer (eg lack of stipend scholarship support) are free to make applications in additional rounds.

Students are given comparative information on all aspects of the research training environment and compensated for the costs of moving between institutions.

The effectiveness of a student choice based, contestable funding model that facilitates the mobility of research students between institutions depends on a number of factors. In chapter 6 we make a number of recommendations to support this model, covering the following issues:

- students' access to information comparing all aspects of research training including attributes of potential supervisors and host institutions;
- the elimination of financial disincentives to moving between institutions and cities;
- the development of a research training index for Stage 1 and a national merit list for Stage 2 (progression from Stage 1 to Stage 2 is dependent on the development of a methodology for determining a national merit list of candidates); and
- self-regulation of research training through a code of practice for maintaining academic standards for higher degrees.

Research priority setting and knowledge diffusion

Governments around the world are experiencing a rapidly increasing gap between the demand for research funding by university academics and the public capacity to fund that research. The gap is increasing pressure on funding agencies as well as on research performers and creating a shift away from the notion of grant giving based on excellence alone to one of investment in excellence, which also requires a consideration of outcomes and expected returns.

These developments demand strategic planning, the ordering of priorities and coordination of the national research effort, and they highlight the fact that all funding decisions involve trade-offs. Priority setting cannot be avoided: if priorities are not set explicitly, they will be implicit in the decisions of funding bodies.

Priority setting in research must be emphasised.

We therefore make a series of recommendations designed to strengthen the capacity of the Australian Research Council (ARC) to set priorities for its programs, and to improve linkages between its programs and those of other Commonwealth agencies. One explicit objective of the ARC's priority setting mechanisms should be a focus on knowledge and skills transfer and technology diffusion. We have recommended accordingly.

Research infrastructure

Adequate research infrastructure is a key requirement for a competitive national research system. However, the capacity of Australia's higher education research infrastructure to support research and research training has been diminished in the past 10 years by:

- the escalation of research activity since the end of the binary divide;
- the expansion of the research training function in response to doubling of research student load since 1991;
- increases in funding for research infrastructure that have not kept pace with those for programs supporting the direct costs of research; and
- the growing costs and decreasing obsolescence time of research equipment and facilities, including library and information systems.

Responses to the Discussion Paper consistently pointed out that research infrastructure and support are inadequate, and furthermore they are unstable because additional funding provided in recent budgets is for limited periods. We recommend that the Government should invest in research infrastructure at least to the current level for direct project costs, and look to raising the level over the next three years.

In addition, there is a pressing need to reshape the Commonwealth's higher education research infrastructure programs to address the following issues:

- the absence of a system-wide strategic approach to research infrastructure by Australian governments, funding agencies, universities and other research institutions;
- funding arrangements under which support for direct costs of research are disconnected from support for infrastructure funding; and
- the need for coherent and transparent costing of research.

To complement its role in determining priorities for the funding of university research, the ARC should develop a strategy for investing in higher education research infrastructure. Such a strategy will need coordination and collaboration with DEETYA and other departments and agencies concerned with funding and performing R&D.

We believe that it is necessary, as a correlate of this strategy, to attach project-related infrastructure to individual project grants. This would focus the relationship between infrastructure capacity and overall levels of research activity funded by granting agencies, and would improve accountability.

The integration of project-related infrastructure to individual project grants will require some discipline on the part of granting bodies and universities. The key principle involved in attaching project-related infrastructure to individual project grants is the need to fund projects adequately to cover both direct costs and project-related infrastructure costs, even if this means that the number of projects being supported is reduced. This puts a premium on sound, transparent costing practices in research.

*We must invest
in research
infrastructure ...*

*.... and we must
target research
infrastructure
funding better.*

Making the commitment

The Discussion Paper suggested that the nation should make a commitment to a 'decade of managed reform'. This process would involve extensive consultation, planning, adjustment, consolidation and the strengthening of the postsecondary education industry.

We must make a long-term commitment to reform.

In chapter 7 we discuss the task of implementing the Review Committee's recommendations. Recommendations to be implemented in the short term relate to matters that require urgent attention, are relatively straightforward or must be undertaken before a more substantial change can be implemented. Medium and long term tasks are more complex or require the completion of other steps before implementation.

The full elaboration of a student centred funding framework, and the re-engineering of the regulatory framework that we propose will require a long-term approach. The tasks involved are complex. For example, intergovernmental issues concerning the financing of postsecondary education in a fully developed student centred funding arrangement are significant and not easily resolved. Institutions will require time to prepare to manage in a more open and competitive environment. They will require access to mechanisms traditionally used in freeing up industry sectors. Staff will need to acquire new skills and develop new procedures.

Finally, we note that some respondents to the Discussion Paper expressed concern that if a student centred funding model were introduced students would make poor choices regarding courses and institutions and be guided by tradition or fashion rather than an objective understanding of the benefits of different options.

This view underestimates the capacity of students to make appropriate decisions about their education. As a community we accept that young adults should exercise choice as voters, as borrowers of finance and as participants in the labour market, and we accept that they can marry, sign contracts, join the armed forces and even die for their country.

Students are capable of assuming the responsibility for making choices about their higher education; what is needed is a commitment by governments and institutions to trust their choices.

Recommendations

CHAPTER 1

Recommendation 1

That the Government should declare its commitment to the establishment of a learning society in which all Australians, of whatever social, cultural and economic background, have access to a postsecondary education of excellent value.

CHAPTER 3

Recommendation 2

That governments should make every effort to ensure that virtually all young people proceed to the end of secondary education in order to open up possibilities in later life for participation in postsecondary education.

CHAPTER 4

Recommendation 3

That the Government should work jointly with State and Territory Governments:

- to develop a process for rationalising the ownership and control of assets used by universities, enabling universities to leverage these assets to finance structural change; and
- once this is complete, to ensure that the capital assets of universities are liable to the same taxes and charges that apply to private higher education providers.

Recommendation 4

That the Government should establish a working party to undertake a study of how a capital charge might be implemented on public assets in the higher education sector.

Recommendation 5

That the Government should establish a loan fund to finance major programs of innovation and structural change, including technological investments associated with such changes.

Recommendation 6

That the Government, working with the State and Territory Governments, should ensure that consistent criteria and processes exist for recognising university level qualifications offered by providers of higher education, such as 'bachelor degree', and for using the titles 'university' and 'higher education institution'.

Recommendation 7

That the Government, working with the State and Territory Governments, should ensure that accreditation arrangements enable private providers of higher education to become self-accrediting bodies with the same powers in this respect as universities which operate under their own acts of parliament.

Recommendation 8

That the Government, working with State and Territory Governments, should establish a process to ensure that all self-accrediting higher education institutions have robust and rigorous internal review processes.

Recommendation 9

That, as a condition of receiving government funding, institutions should be required to make publicly available information about themselves and the services that they offer, in a form that enables students to make informed choices among competing institutions and courses.

Recommendation 10

That the Government should establish an independent complaints procedure, possibly in the form of a Higher Education Ombudsman, to support students, before a student centred funding framework is implemented.

Recommendation 11

That the Government should implement a suitable mechanism to provide prudential supervision that ensures that students are protected from financial loss.

CHAPTER 5

Recommendation 12

That the Government should:

- implement either Stage 1 or Stage 2 of a student centred approach to the funding of higher education teaching and learning as soon as possible;
- commence immediately a detailed examination of the implementation issues associated with Stage 3 of a student centred approach to the funding of higher education teaching and learning;
- in consultation with the States and Territories, undertake a detailed examination of the funding and implementation issues associated with Stage 4 of a student centred approach to the funding of teaching and learning in postsecondary education and training, and report publicly on the outcome of that examination; and
- subject to the outcome of that examination, establish jointly with the States and Territories an approach to the funding of teaching and learning in postsecondary education and training embodying the principles expressed in Stage 4 of a student centred approach.

Recommendation 13

The Government should allow Australian students to use their lifelong learning entitlement to study in other countries, provided that equivalent reciprocal agreements are negotiated with those countries.

Recommendation 14

That the Government should undertake at least to maintain the current average level of public funding per equivalent full-time undergraduate higher education student in real terms for five years after the current budget forecast period.

Recommendation 15

That, under a student centred approach to funding, the Government should provide public funding as a flat amount within three broad course categories.

Recommendation 16

That the Government should undertake periodic reviews of the level of public funding per equivalent full-time undergraduate higher education student to take account of movements in costs.

Recommendation 17

That the Government should:

- allow institutions to set fees for all students, in the first instance subject to an upper limit on fee levels for students receiving Commonwealth tuition funding; and
- monitor the impact on access and equity objectives of allowing institutions to set fees for all students within an upper limit for students receiving Commonwealth tuition funding, before further relaxation is contemplated.

Recommendation 18

That the Government should make loans—with repayment contingent on future income—available to all students to cover fees up to the limit of the fees that institutions are able to charge.

Recommendation 19

That the Government should make first time access to postsecondary education and training by school leavers and mature age people its highest priority in implementing a student centred approach to funding.

Recommendation 20

That the Government should negotiate with the States and Territories that funding for Vocational Education and Training be transferred to the Commonwealth in the context of a broader realignment of funding arrangements.

Recommendation 21

That the Government should:

- continue to provide targeted equity funding to institutions under Stages 1 and 2 of a student centred approach to the funding of teaching and learning;
- reserve a set number of Commonwealth funded student places for targeted equity groups under Stage 3 of a student centred approach to the funding of teaching and learning, with supplementary grants provided as a part of the funding for these places; and
- provide supplementary grants targeted to members of equity groups under Stage 4 of a student centred approach to the funding of teaching and learning.

Recommendation 22

That the Government should examine the feasibility of designating the Australian Institute for Aboriginal and Torres Strait Islander Studies as a national base for research into bi-cultural approaches to Indigenous studies.

Recommendation 23

That the Government should provide special-purpose support for significant but low demand disciplines on a case-by-case basis, using competitive tendering as the vehicle for distributing any funding, and with funding being provided only when it is in the public interest and when all other options for preserving the discipline without special-purpose funding have been exhausted.

Recommendation 24

That the Government should entrust to the Committee for University Teaching and Staff Development (CUTSD) the task of promoting an enhanced teaching culture in higher education institutions to balance the established research culture. With the assistance of additional public funding, in particular CUTSD would:

- commission research into learning and teaching practices in higher education that promote the development of graduates who have a respect for scholarship and learning and an appetite for intellectual growth and development;
- encourage institutions to adopt a code of quality for scholarly teaching and to develop principles for the promotion of academics on the basis of scholarly teaching; and
- encourage institutions generally to appoint new academic staff on probation until they have completed a qualification in teacher training.

CHAPTER 6

Recommendation 25

That the Government should ensure that the community gets the best value from research training through student centred funding arrangements that:

- allow a significant enhancement of student choice and mobility; and
- provide incentives for institutions to compete for students on the basis of the quality of research supervision, student experience and outcomes.

Recommendation 26

That the Government should:

- implement a student centred approach to the funding of research training in two stages;
- for Stage 1, allocate research training places in two funding cycles, with allocations in the first cycle based on a Research Training Index, and allocations in the second cycle based on students' acceptances of offers made by institutions after the first funding cycle;
- for Stage 2, develop, initially on a trial basis for specific disciplines, procedures for national moderation of the qualifications and experience of candidates with a view to developing by 2003 a national merit list; and

- ensure that the discipline mix of research training places in Stages 1 and 2 is informed by national priorities based on employer needs and the Government's national innovation and industry development strategies.

Recommendation 27

That the Government should:

- establish a program to provide allowances for student mobility within Australia, and extend funding periods of research training places and stipend scholarships to eliminate the financial disincentives associated with students moving between institutions and cities; and
- consider funding this program through additional funds or a small reduction in research training places.

Recommendation 28

That the Government should ask DEETYA and the ARC, in consultation with other appropriate agencies and peak bodies, to develop a strategy to improve the quality and range of information available to students to enable them to make informed choices about research supervisors and host research training institutions.

Recommendation 29

That universities eligible to receive funding for research training adhere to an updated Australian Vice-Chancellors' Committee (AVCC) Code of Practice for Maintaining and Monitoring Academic Quality and Standards in Higher Degrees.

Recommendation 30

That the Government should establish a review of the level of funds allocated to research training within one year of implementing Stage 1 of a student centred approach to research training funding in order to determine the most appropriate balance of resources between postgraduate research training and other research programs such as postdoctoral training.

Recommendation 31

That the Government should expand the role of the Australian Research Council (ARC) to give it explicit authority to:

- determine priorities within its own programs (on the condition that these priorities are included in its triennial strategic plans, which are reviewed annually and approved by the Minister);
- advise the Government—in consultation with DEETYA and other portfolios and agencies such as DIST and the NHMRC—on priorities for research training that are consistent with the needs of employers, the Government's innovation strategy and the ARC's overall strategic plan; and
- establish linkages between priorities for its programs with those of other portfolios and agencies, such as DIST, CSIRO and the NHMRC, through bilateral negotiations as well as multilateral mechanisms such as the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) and the Coordination Committee on Science and Technology (CCST) and their subcommittees.

Recommendation 32

That the Government should require the ARC to include knowledge and skills transfer and technology diffusion as explicit objectives of its priority setting mechanisms.

Recommendation 33

That the Government should:

- provide additional funds to maintain infrastructure support at its current level and raise the level of support for infrastructure over the next three years; and
- disperse the Higher Education Research Infrastructure Block Grants program to portfolios administering Commonwealth Competitive Grants programs in proportion to the relative size of programs in each portfolio, for the purpose of including infrastructure support with project grants.

Recommendation 34

That the Government should require the ARC to develop a strategy for higher education research infrastructure, in collaboration with DEETYA, DIST, NHMRC, other agencies providing competitive funding for university research, and major research performing organisations such as the CSIRO, to address the need for major national and international facilities to be shared between universities, other public research institutions and industry.

Recommendation 35

That funding agencies and granting panels should:

- provide project-related infrastructure support for each project according to need; and
- if necessary, reduce the number of project grants in order to ensure adequate infrastructure support for all funded projects.

Recommendation 36

That the universities and university-based researchers should ensure that grant applications document all costs of research projects, including direct and project-related infrastructure costs, and adopt pricing policies consistent with the sharing of benefits of research between funders and performers.

Recommendation 37

That the Government should review the size and the basis for allocating the Research Quantum in light of the Review Committee's recommendations on the funding of undergraduate and postgraduate tuition.

Recommendation 38

That the Government should establish the ARC as an independent body and give it a wider range of functions, and require increased accountability and transparency of its processes and decisions commensurate with such independence and wider responsibilities.

Other issues

The Committee wishes to draw to the Government's attention a number of issues, about which it has not made specific recommendations. These are:

- *Governance in higher education institutions*—Universities' current internal decision making processes will limit their ability to meet the challenges that they will face over the next two decades. Universities that have not done so already need to consider the recommendations of the Hoare Report as soon as possible. We discuss this issue in chapter 4.
- *Student assistance through Austudy, Abstudy and the Youth Allowance*—It was claimed in a number of submissions to the Review that current AUSTUDY arrangements are a major barrier and disincentive to study, both in the level of support offered and in the eligibility rules which apply—particularly the recent increase in the age of independence to 25 years. We discuss this issue in chapters 3 and 5.
- *Libraries*—Libraries face particular challenges in staying abreast of technological change and the continuing increases in the volume of information. Institutions could use the loan fund identified in Recommendation 4 to underwrite major investments in library infrastructure. Libraries could also benefit from the implementation of Recommendation 33, to provide additional funds for research infrastructure. University teaching could also benefit from investments in libraries made pursuant to Recommendation 33, because library infrastructure is largely shared between teaching and research functions.
- *Taxation treatment of education expenses*—Currently, students cannot claim education expenses as deductions if they are undertaking a course of study to prepare them for work or employment different from their present work. A more liberal definition would provide greater incentives for Australians to participate in lifelong learning, particularly for those who must change their area of employment owing to economic imperatives. We discuss this issue in chapter 5.

Chapter 1

A vision for higher education

Introduction

The Review Committee's vision for Australia is for a nation which is prosperous, free, committed to social justice, and enjoys a rich and vibrant cultural life—an inclusive society with a strong sense of community, valuing the contribution of each individual and providing all Australians with access to educational opportunities that will enable them to contribute fully to the life of the community.

From 1870 to the beginning of the Great War Australia had the highest Gross Domestic Product (GDP) per capita of any country in the world. Since that time our position has declined, slowly at first—we were in fifth position by 1960—but more rapidly in recent decades. By 1980, we ranked fourteenth.¹ In 1996, Australia's GDP per capita ranked thirteenth among OECD countries only.² The causes of this relative decline are complex.

We therefore face a real question of how we can set out to improve our nation's economy for the benefit of all Australians. The Review Committee believes that higher education can play a critical role by equipping Australians with the skills and knowledge to meet the social and economic challenges of the twenty-first century and by the development of a vigorous wealth generating educational industry.

Over the next 20 years, the whirlwind of change that characterises our lives today will increase. The trend to globalisation will intensify and the world will be highly competitive. The digital revolution will cut even more deeply into our lives. The Review Committee considers that education and training will enable people to respond to these challenges and opportunities. All Australians must have access to postsecondary education and training opportunities if they are to participate fully in the life of the nation. Participation in lifelong learning is expected to play an increasingly important role in our lives. Therefore, we must develop a culture in which learning, even to the most advanced levels, is accepted as part of the social and economic fabric—an environment in which individuals are encouraged to continue to use the skills acquired at school, TAFE or university, in new and recurring formal and informal learning contexts throughout their adult lives. If we accomplish this, we shall have built a 'learning society'.

Higher education has a distinctive and important role to play in the learning society. In particular, higher education should, whatever form it takes, whether it be professional, technical or liberal, open, nurture and refine minds, and create independent learners. It should enable individuals to grow intellectually, to achieve personal fulfilment and to contribute fully and at the highest levels to society, the workplace and the nation. It is the Review Committee's task to make recommendations for a framework that will enable an Australian higher education system of international quality to flourish in a rapidly changing and highly competitive world.

¹ Kym Anderson and Ross Garnaut, *Australian Protectionism: extent, causes and effects*, Allen and Unwin, 1987, pp. 16-17. Comparisons do not include New Zealand which may have had as high GDP per capita as Australia.

² OECD, *OECD National Accounts, Main Aggregates*, Vol. 1, 1998.

Why is lifelong learning important?

In 1971, UNESCO's International Commission on the Development of Education recommended that lifelong education should become 'the master concept for educational policies in the years to come for both developed and developing countries'.³ Since then, the concept of lifelong learning has evolved from little more than an appealing slogan to a major organising principle for education and training. Governments in countries as diverse as the United States, the United Kingdom, New Zealand, Japan, Finland and South Africa have recognised the importance of lifelong learning. The message is clear: the key to social progress, prosperity and economic growth lies in a population that is adaptable, flexible, well educated and attuned to the need for lifelong learning.

Fifty years ago universities in Australia and elsewhere offered a fairly standard package of three-year to six-year predominantly full-time degrees in a limited range of subjects for 18–21 year olds—an appropriate model for a more static and less technological era. Today, developments in technology and the huge expansion of the services sector require that more people receive more education and training, and the labour market requires learning to be a lifelong experience. Education for adults, therefore, is no longer 'tacked on' to a system designed for young people. There are far reaching implications for every aspect of education—curricula, teaching methods, funding, accreditation, and the nature, organisation and location of institutions and agencies.

Learning in an institution-based setting as typified by the traditional university is, and can be expected to remain, an important element of lifelong learning. However, learning that occurs in less structured contexts may make an equally important contribution to lifelong learning. In its various forms, lifelong learning can provide individuals of all ages and backgrounds with skills and knowledge which may be of benefit for employment or personal enrichment.

In a learning society, primary responsibility for learning and choosing when to learn rests with the individual. The individual should be prepared to explore learning options and to invest time, money and effort. Governments have a responsibility to provide opportunities for learning through financial support as judged appropriate and by other means. Institutions, together with the individual, are responsible for the quality of the learning experiences. Both institutions and the community share a responsibility for providing information and encouraging the development of learning pathways through collaboration between education and training providers.

Responses to the Discussion Paper provided clear and widespread endorsement of the Review Committee's support for lifelong learning principles. However, lifelong learning cannot be adequately delivered by an educational structure that is static and operationally slow to adapt.

The purposes of higher education

The first step in assessing the contribution of higher education to fostering a learning society is to consider what it is that distinguishes higher education from other forms of education. Given the many centuries over which universities have evolved, it is not surprising that there is a venerable tradition of attempting to define their characteristics. Despite the difficulties associated with achieving a definitive statement about the purposes of higher education, it is nevertheless instructive to examine recent attempts to do so.

³ UNESCO, *Learning to Be: the World of Education Today and Tomorrow*, International Commission on the Development of Education, Paris, 1972, p. 182.

In 1992, the Australian Vice-Chancellors' Committee (AVCC) suggested:

The processes of education can be observed, intelligence and energy that goes into it can be understood, but the contributions universities make directly or through their graduates to the economic, social and cultural life from which they arise and to which they contribute are not amenable to simple analysis. Too much emphasis on immediate and measurable outcomes can only belittle and demean the worth of the university endeavour which is intended to have an abiding affect on individuals' lives and society itself over a long period of time.⁴

Five years on, the Vice-Chancellors have put out a more pragmatic statement of the purpose, distinctive nature and value of universities.

Universities:

- discover, preserve, refine, apply and disseminate knowledge;
- have a commitment to free inquiry and to being a critic and conscience of society;
- develop intellectual independence in their graduates, together with a set of cognitive and social capacities which support active participation of graduates in society;
- have staff whose active engagement in scholarship and research both enriches the nation in itself, and ensures that students at both the undergraduate and postgraduate level learn from those at the forefront of knowledge, whether rhetorical or applied;
- are committed to making the best possible use of the emerging technologies to ensure Australia provides high quality education to its domestic and international students wherever they are located; and
- meet international standards of teaching, research and scholarship.⁵

An even more pragmatic view has been put forward by Professor Richard Johnson in his response to the Discussion Paper.

It would be possible to spend many fruitless hours discussing what a university is, or should be ... I suggest to the Review Committee that a university is an association of highly qualified people who prepare others for professional careers, who assess their students and certify to their competence. Whether those things are done by one-to-one tutoring in an Oxford College, lectures to 500 in the Wallace Theatre at Sydney, by print and telephone from Toowoomba to Hong Kong or by Internet around the world does not affect that definition of a university. The variations are matters of expediency or preference, they are not central. It is easy to get bogged down in consideration of those peripheral matters.⁶

The Higher Education Council described the purposes of higher education in a 1992 report as:

- the education of appropriately qualified Australians to enable them to take a leadership role in the intellectual, cultural, economic and social development of the nation and all its regions;
- the creation and advancement of knowledge; and
- the application of knowledge and discoveries to the betterment of communities in Australia and overseas.⁷

⁴ AVCC, *Quality in the Australian University System*, 1992, p. 70.

⁵ AVCC, *Response to the Discussion Paper*, No. 93.

⁶ Richard Johnson, *Response to Discussion Paper*, No. 29.

⁷ Higher Education Council, *Achieving Quality*, 1992, p. 12.

More recently, the Dearing Review Committee stated that the purpose of higher education in the UK is to:

- inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well equipped for work, can contribute effectively to society and achieve personal fulfilment;
- increase knowledge and understanding for their own sake and to foster their application to the benefit of the economy and society;
- serve the needs of an adaptable, sustainable knowledge-based economy at local, regional and national levels; and
- play a major role in shaping a democratic, civilised and inclusive society.⁸

Our own assessment is as follows:

The threefold purpose of universities has ever been to preserve, transmit and expand the domain of human knowledge. Universities have been the living repositories of the accumulated knowledge of the ages, as well as places in which each new generation can be inducted into the process of constructive dialogue with the best that has been thought throughout history. However, the explosion of knowledge has made impossible any continuing consensus as to the task of the university in relation to some presumed canon of privileged knowledge. There is just too much to choose from. The purpose of the modern university, therefore, must be to open the mind, to strengthen and discipline the cognitive powers and sensibilities of the mind, to refine the mind, and to create efficient and effective independent learners and knowledge builders.

What should students learn?

Another way of examining the purposes of higher education is to consider what students should learn.

The debate about what teachers should teach and what students should learn is an ancient one. Aristotle declared:

At present opinion is divided about the subjects of education. All do not take the same view about what should be learned by the young ... If we look to actual practice, the result is sadly confusing; it throws no light on the problem, whether the proper studies to be followed are those which are used for life, or those which make for goodness or those which advance the bounds of knowledge.⁹

Questions of content centre on arguments about the relative merits of a generalist versus a professional or vocational education: whether universities should cater solely for the delights of the mind or the teaching of skills or for an amalgam of both; and whether they should hone the intellect or nourish the soul.

After considering a range of views, the Review Committee has concluded that the most positive approach is to identify the attributes that all graduates ought reasonably be expected to have acquired during their university studies. The Review Committee believes that there is value in identifying those attributes, although the importance attached to them will vary from stakeholder to stakeholder. It is convinced that the quality of education must be measured in terms of what students know, understand and can do at the end of their educational experience. Unquestionably, these attributes are important to the graduates themselves and they are the primary criteria used by employers and society at large.

⁸ Report of the National Review Committee of Inquiry into Higher Education, *Higher Education in the Learning Society*, UK, 1997.

⁹ Aristotle, *Politics*, Book VIII, Part 2.

The Review Committee believes that, ideally, every graduate with a first degree should have acquired the following attributes:

- the capacity for critical, conceptual and reflective thinking in all aspects of intellectual and practical activity;
- technical competence and an understanding of the broad conceptual and theoretical elements of his or her fields of specialisation;
- intellectual openness and curiosity, and an appreciation of the interconnectedness, and areas of uncertainty, in current human knowledge;
- effective communication skills in all domains (reading, writing, speaking, and listening);
- research, discovery, and information retrieval skills and a general capacity to use information;
- multifaceted problem solving skills and the capacity for team work; and
- high ethical standards in personal and professional life, underpinned by a capacity for self-directed activity.

Embedded in all this is the capacity to learn. Above all else, however, the successful graduate must be captivated by a love of learning.

How can higher education contribute to the learning society? A vision for the future

During discussions with university managers, staff and students, as well as employers, the Review Committee sensed a lack of any consistent, clear vision for the higher education sector and uncertainty about how higher education can best contribute to the wellbeing of the nation. Many academics expressed concern that they have been moving inexorably along a deregulation pathway over the past decade but there seemed to be little shared understanding of what it is they are moving towards and what of value they may be losing in the process.

The most important contribution that the higher education sector should make is to provide a learning environment that will enable its graduates to emerge with the skills and knowledge that will meet the economic, social and environmental challenges of the twenty-first century. It should enable individuals to grow intellectually, to achieve personal fulfilment and to contribute fully and at the highest levels to society, the workplace and the nation. Universities should contribute to the intellectual and cultural capital of their regions, the nation and the world. They should be truly international in their outlook, but also serve the needs of their local communities, be they metropolitan, regional or rural. As an industry, higher education should be a major wealth generator in its own right through exporting education and by facilitating the development of advanced, knowledge intensive industries.

A vision is needed that will both protect and encourage what has always been regarded as best in intellectual life while facilitating new ways of doing things, providing opportunities for dynamic leadership—a vision of higher education as part of a broader postsecondary education system in which students can move without unnecessary bureaucratic impediments, in accordance with their current needs and aspirations. In advocating this view, the Review Committee recognises the value of maintaining the distinctive identity and mission of the higher education sector and what is called, somewhat misleadingly, the ‘Vocational Education and Training sector’ (misleading in that universities have been involved

in Vocational Education and Training since time immemorial). The key issue is to find ways to enable institutions to respond creatively to students' diverse educational needs and to enhance educational outcomes.

The Review Committee, therefore, strongly affirms a vision for higher education that is committed to:

- inculcating a respect for scholarship and learning and an appetite for intellectual growth and development;
- instilling a culture of lifelong learning which emphasises the ability to acquire new skills and master new technologies and bodies of knowledge;
- ensuring that no Australians are denied access to a high quality education at any level merely because of their social background or circumstances;
- recognising and valuing the distinctive contributions of each sector within Australia's education and training system;
- developing a well-informed and socially responsible community that is civic minded and values the democratic, pluralist tradition we enjoy in this country, and which is essential for universities to flourish fully;
- equipping our graduates to play a productive role in an outwardly oriented, knowledge-based economy;
- extending human knowledge and ensuring that curricula and courseware reflect advances in knowledge;
- providing industry, governments and the wider community with access to advanced knowledge and skills; and
- developing a wealth generating, world-class higher education industry as part of a broader postsecondary education industry.

Recommendation 1

That the Government should declare its commitment to the establishment of a learning society in which all Australians, of whatever social, cultural and economic background, have access to a postsecondary education of excellent value.

Principles to underpin a higher education financing and policy framework

We think that in order to achieve this vision for higher education, we need a policy and financing framework that will prepare the way to achieving it. We firmly believe that such a framework must be built on clear educational and industry related principles. These principles, which determine our thinking and recommendations in subsequent chapters, are:

- enhancing access to postsecondary education for both school leavers and mature adults;
- providing greater study options for students and ensuring that institutions are responsive to students' preferences;
- promoting high quality learning experiences;
- enhancing effective investment in research;

- ensuring fair levels of private and public contribution that broadly reflect expected private and public benefits;
- providing accountable and cost effective financing arrangements; and
- promoting a world-class education industry.

We now address each of these principles in turn.

Enhancing access to postsecondary education for both school leavers and mature adults

The Review Committee believes that all Australians should have access to some form of postsecondary education. This would ensure the wholeness of society and remove disadvantage. Furthermore, the nature of the economy will require an increasingly well educated workforce if we are to become a wealthier society. Although there have been substantial gains in postsecondary education participation in recent decades, we are still short of universal access. Over time, near universal access can be expected to drive changes to the regulatory and financing frameworks of postsecondary education. There are also wide ranging implications for the management of learning in institutions—implications that are both pedagogical and organisational.

As participation in postsecondary education and training becomes more important, it will be necessary for the Government to ensure that students should not be *required* to pay upfront fees, and especially not for their first postsecondary qualification. Access to loans, with repayment contingent on income, will therefore need to be expanded.

Needy students should have access to assistance programs, at rates at least comparable with those for the unemployed.

Providing greater study options for students and ensuring that institutions are responsive to students' preferences

The location, content and mode of delivery of education should be built on a direct relationship between the student and the provider. Students should be able to choose from a diverse range of study options, and these options should be available within a broad postsecondary education framework.

Professor Ross Williams, in a paper prepared for the Review Committee, reinforced the need for difference and variety in the offerings provided from university to university:

The advantage of diversity is that students can find an institution which offers a form of education which suits them. Some students are particularly stimulated by being taught by theoretical researchers, some by staff who are active in public policy discussion and others by staff whose principal interest lies in teaching. The desired level of student–staff contact and its nature varies as between individual students. The preferred form of instruction will also tend to vary with the age and experience of the student. It is important that each institution develop its own distinctive mission and publicise it so that student demands can be appropriately matched to institutional profiles.¹⁰

¹⁰ Ross Williams, Appendix 14 of Discussion Paper, 1997, p. 3.

Promoting high quality learning experiences

Providing high quality learning experiences should be at the heart of university endeavour. Assessment of quality should focus on achieving educational outcomes which enhance Australia's international standing as a country that provides excellence in education.

All universities should give practical recognition to the importance of teaching and associated scholarship to the quality of their students' learning experiences. To promote the centrality of teaching and learning, universities must continue to develop strategies consistent with their own distinctive missions. In an increasingly competitive market for the provision of educational services, universities will need to seek continually to improve the quality and range of their offerings, both to Australian and international students to maintain or improve their market share.

The nexus between teaching and research

Several submissions and responses have drawn our attention to the nexus between teaching and research and suggested that good teaching cannot be sustained unless the teacher is an active researcher. The Review Committee recognises that teaching, scholarship and research are vitally important elements of a continuum in a diverse higher education system. All universities can be expected to engage in research, to a greater or lesser extent. None can refrain from research totally and still claim the name 'university'. At any given time, research activity will be more intense and more concentrated in some areas of the university compared with others. While the activities of staff will generally range across the full spectrum of activities, the balance for each individual will vary over the course of his or her professional life.

In an influential report, Ernest Boyer, President of the Carnegie Foundation, described the links between research, scholarship, and teaching by identifying four interlocking activities of scholarship: discovery (basic research in a discipline); integration (linking disciplines); application (of knowledge); and teaching.¹¹ The Committee believes that every higher education institution should seek to find its own special mission within this spectrum. For example, the Vice-Chancellor's description of the mission of the University of Southern Queensland is that its 'core business is teaching and learning offered in an environment of scholarly activity and niche research'.¹²

Enhancing effective investment in research

The Review Committee considers that the purpose of research in universities is to:

- train higher degree research students and to enable the teaching provided to other students to be informed by research;
- contribute to innovation in Australia through the production and diffusion of knowledge and skills; and
- expand the stock of world knowledge.

Research and development, education and training and industrial innovation are key drivers of economic growth. In recognition of the capacity for research to deliver significant social, cultural and economic benefits to the nation, the Government contributed close to \$1.5 billion to university research and research

¹¹ E. L. Boyer, *Scholarship Reconsidered: Priorities of the Professoriate*, 1990.

¹² Comment provided by Professor Swannell to the Review Committee during our visit to the University of Southern Queensland.

training in 1997. Public funding for university research is provided primarily for curiosity-driven and strategic research. But the frontiers of knowledge and opportunities for research are expanding rapidly. The British Chief Scientific Adviser, Sir Robert May, recently described science as a ‘fractal frontier’¹³ in which each discovery yields an expanding number of new frontiers to be explored and developed. As research opportunities expand, it becomes increasingly important to ensure that the substantial investment in research is expended in the most effective and beneficial manner. To this end, funding provided for university research and research training needs to encourage:

- more competitive research training arrangements in which the allocation of resources better reflects student demand and employer needs;
- allocative mechanisms which operate within broad national priorities for the national innovation system;
- an emphasis on the transfer of knowledge, technology and skills between higher education institutions and the end users of research, including industry and the broader community; and
- a strategic view of investment in research infrastructure.

Ensuring fair levels of private and public contribution that, at least in part, reflect expected private and public benefits

Participation in postsecondary education generates significant benefits to students as well as to society at large. It is therefore reasonable to expect individuals to contribute to the cost of their education. However, the level to which they contribute should be fair and not represent an excessive burden on them and their families.

In addition to recognising the private benefits, the Review Committee bases its support for the development of a universally accessible postsecondary education system on the premise that such a system would have major intellectual, economic, social and cultural benefits for Australia.

Rationale for government funding

Key rationales advanced to support government involvement in the provision and financing of higher education include ‘spillover’ benefits arising from teaching and research, and equity considerations.

Spillover benefits in higher education refer to benefits that flow to individuals or organisations that are not directly involved in higher education. They exclude private benefits that can be captured by graduates in the form of higher wages, career advancement or personal satisfaction. Examples of spillover benefits arising from higher education include broad improvements in the quality and character of society, greater capacity to adapt to change, and knowledge creation and transmission—which have a positive effect on economic growth. When individuals choose whether to do further study they naturally consider only the private, not the extra social, benefits. Without government action there would be too little higher education. Quantifying the value of spillover benefits is notoriously difficult, but their existence is generally accepted, and they provide the fundamental case for government subsidy for higher education.

Equity considerations to justify public support for higher education centre largely on the issue of access and participation. Students should not be denied

¹³ Sir Robert May, *The Fractal Frontiers of Science, Nurturing Creativity in Research: Ideas as the Foundations of Innovation*, P. M. Shearmur (ed.), et al., Research School of Biological Sciences, ANU, 1995

access to higher education, and the opportunities this provides, because of financial or other forms of disadvantage. This would be unfair and inefficient. The Government provides targeted support for students from financially disadvantaged backgrounds through programs such as AUSTUDY and the merit-based HECS exemption scholarships. Support is also provided to improve the educational outcomes of Indigenous students and to members of specific equity groups. HECS is a form of non-targeted government support which provides the majority of Australian higher education students with the opportunity to defer payment of their contribution.

Higher education and economic growth

Increased education levels have two effects on economic growth. Firstly, increases in the level of education will directly improve the quality of the labour force. Since economic growth is generated by increases in economic inputs, including labour, an increase in the productivity of the labour force will feed directly into the growth of the economy. Secondly, education can be an integral element of technological progress. Knowledge is valuable not only in the production of goods but also in the production of new knowledge.

This new growth theory explains ways in which higher education plays an important role in economic growth. Broadly speaking, these are:

- increased returns to human capital (the benefit of additional knowledge may depend positively on the knowledge already possessed by a person);
- increased productivity arising from individual knowledge (the knowledge of an individual may increase the productivity of fellow workers); and
- increased productivity resulting from the spillover benefits associated with research and development (R&D discoveries and other outputs can often raise the productivity of future designs in unexpected and complex ways).

The level of public funding provided for students is ultimately a matter for governments to determine. There are no magic solutions to calculate the optimal mix of public and private funding. Indeed, because of different inducement effects (responsiveness of people's decisions to public funding) and spillovers, we can expect that this will vary between individuals and across courses. Fine tuning to this level is obviously impractical and undesirable; the Government must ultimately make judgments between competing priorities and demands on the public purse.

However, given the importance of higher education to economic growth, the Review Committee believes that the risks associated with underinvestment in higher education are greater than those of overinvestment. The Government should remain the major partner in the funding of Australian higher education and view its expenditure on higher education as a vitally important investment in Australia's social, cultural and economic future.

The Review Committee also emphasises the continuing need to provide targeted support to those most in need; that is, those whose participation or success is restricted owing to their financial circumstances or social background.

Providing accountable and cost effective financing arrangements

Universities should be motivated by accountability to individual students, rather than considerations of gross financial inputs and student numbers. Accountability to students could include, for example, a framework to provide a more direct relationship between institutional choice and the flow of public and private funds, and mechanisms designed to assist prospective students to make informed choices in selecting institutions or courses. Governance arrangements should provide for the management of financial risk and incorporate mechanisms which protect the interests of students and taxpayers in the event of institutional failure.

More generally, taxpayers are entitled to expect that the significant investment of public funds in higher education, and postsecondary education more broadly, meets the community's needs in the most cost effective way. Institutions should know the true costs of their activities which will require them to restructure their balance sheets and operate on a more commercial footing.

Promoting a world-class education industry

We have said that higher education can drive economic growth and national prosperity. There are two sides to its economic role. The first of these is the contribution that higher education makes to the development of the knowledge and skills of our workforce to support advanced, innovative knowledge intensive industries. The second is a more direct role through a growth in education exports.

Over the next 20 years, most growth in employment and earnings can be expected to occur in fields requiring a high level of knowledge and skills. Universities make a significant contribution by developing the nation's human capital resources and through their contribution to the national innovation system.

Higher education exports have been a major success story of the past 10 years, and reflect the increasingly international focus of Australia's universities (see chapter 3). The market for education services can be expected to increase significantly in the future. However, Australia's universities will be challenged—and indeed are now being challenged—by competitors for the higher education market both here and overseas.

The continuing contribution of higher education to Australia's economic development will require a flexible and responsive system which is cost effective and of excellent quality.

Chapter 2

The future operating environment

Over the past 50 years, and especially since the release of the 1988 White Paper,¹ Australian higher education has grown enormously in scale, scope and significance. The underlying driver of growth has been the escalating role of knowledge—and knowing how to make good use of knowledge—in the economic, social and cultural affairs of modern societies. Our higher education system has had to make many difficult adjustments in order to accommodate the growth, intensification and diversification of the demands placed upon it.

Over the next 20 years, the ability to acquire and manipulate knowledge, and to apply it usefully and wisely, will continue to rise sharply in significance. Universities will have many opportunities to enhance still further their contributions to Australia's national life.

Over the same period, we expect technological changes, notably the growth of the Internet and the World Wide Web, to have pervasive impacts on our institutions and personal lives, flowing inevitably into changes in community expectations of higher education and the way in which the business of higher education is conducted.

In our estimation, the challenges facing higher education over the next 20 years will be at least as great as those it has faced in the past two decades. In this chapter we assess these challenges to provide a backdrop for our analysis in chapter 3 of the strengths and weaknesses of the Commonwealth's existing policy and funding framework.

The new economy is often referred to as the Information Economy, because of information's superior role (rather than material resources or capital) in creating wealth.

I prefer the term Network Economy, because information isn't enough to explain the discontinuities we see. We have been awash in a steadily increasing tide of information for the past century.

The most promising technologies making their debut now are chiefly due to communication between computers—that is, to connections rather than to computations. And since communication is the basis of culture, fiddling at this level is indeed momentous.

Kevin Kelly, 'New Rules for the New Economy: Twelve dependable principles for thriving in a turbulent world', *Wired*, Issue 5.09, September 1997.

Directions of change

We have not attempted to make precise predictions. As physicist Niels Bohr said, 'prediction is very difficult, especially about the future'—an observation illustrated in recent times by the sudden downturn in a number of Asian economies. A policy framework that is relevant to the needs of the next century must be able to function effectively in a highly unpredictable environment and to provide the maximum possible flexibility to students and universities so that they can do likewise.

Nevertheless, we can discern a number of broad directions of change. We expect that:

- community expectations of higher education will rise;
- the information and communications revolutions will provide many opportunities for higher education administration, teaching and research to be undertaken in better ways;

¹ DEET, *Higher Education: a Policy Statement*, circulated by The Hon. J. S. Dawkins MP, Minister for Employment, Education and Training, July 1988.

- competition will intensify, adding to the pressure on providers to deliver their services in the most cost effective ways possible;
- taken together, the information and communications revolutions and growing competitive pressures will generate pressures for change in the overall structure of the higher education sector;
- international demand for higher education services will grow significantly in the long term; and
- demand for learning in Australia, particularly among older age groups, is also likely to grow in the long term.

These trends are addressed in turn.

Community expectations will rise

As knowledge continues to grow in importance, the quality and relevance of the teaching and research conducted by universities will become increasingly important to our national wellbeing. We therefore expect that students, employers and governments will place increasing pressure on universities to deliver services that meet their respective needs.

In relation to learning and teaching

Employers the Committee consulted were unanimous—and indeed passionate—in their belief that an educated citizenry is the key to the country's prosperity. Most, however, were critical of the attributes of graduates, with one executive in a major firm suggesting:

Graduates are much too theoretical in their approach and lack basic management and economics knowledge or understandings. They are unprepared for life in remote settings. They don't understand company loyalty, have an elevated sense of their own importance. They tend to be unaware of issues confronting the industry and are unfamiliar with the importance of occupational health and safety.

Some employers are frustrated because they inherit the 'end product' but have little involvement in the process, and they criticise those universities that do not respond positively when they are given feedback.

Increasingly, graduates need solid grounding in the fundamentals of their disciplines to enable them to stay abreast of advances in knowledge and technological change during their professional lives. Employers are looking for teamwork and

The Round Table's first commissioned study highlighted some key attributes sought by business in university graduates. Foremost among these was thinking/decision-making skills, communication skills (oral and written), professional skills (theoretical and practical) a broadly-based academic experience, cooperation and teamwork. Standards of personal/business conduct, learning about work and career choice, practical work experience were also seen as important. Subsequent Round Table studies have confirmed and expanded on these findings, further emphasising (regardless of the course undertaken) the need for decision making and communication skills, interpersonal skills and adding emphasis to numerical and economic literacy and a grounding in Asian culture and values. The Round Table's research was recognised and reinforced by the recent OECD Review of tertiary education in Australia:

'The changing employment market is not leading to a greater demand for narrowly-trained specialists but for graduates who can think for themselves, communicate, empathise and work with others, invent solutions and create new possibilities. Although the university staffs we met showed awareness of such expectations, we were less certain that they were doing enough in translating them into new curriculum designs.'

Business-Higher Education Round Table, Submission No. 271.

communication skills, personal discipline, leadership potential and a collegial

spirit of sharing information and knowledge. They are also looking for graduates who understand the culture of the workplace and are ready for the job—industry experience during university studies is highly valued. Many international firms require employees who are conversant in several languages and have had overseas experience while completing their degrees. One employer representative pointed out that technological changes in areas such as genetic engineering and in-vitro fertilisation now require an understanding of law and ethics.

Student feedback from the 1996 Course Experience Questionnaire suggests room for improvement in the quality of university teaching.² While around two-thirds of bachelor degree graduates were generally satisfied with the quality of their course (with most of the remainder being neutral and 12 per cent dissatisfied), and broadly similar proportions agreed that their course had helped them to develop generic skills (in analysis, problem solving, communication and work planning), less than half agreed that their course had helped them develop the ability to work as a team member. Only about one-quarter were satisfied with the efforts of teachers to comment on their work (39 per cent were dissatisfied), and one-third were satisfied with the clarity of their lecturers (22 per cent were dissatisfied).

Sensitive and dynamic teachers who can create independent learners are essential in higher education. Our perception is that while our universities are showing a renewed interest in teaching, they have a long way to go. According to one lecturer interviewed by the Committee, 'Most lecturers are good discipline specialists, but can't teach for nuts.' The attitude that exists within academia that one doesn't train to teach will not be possible in the future. University teaching is quite different from school teaching. If academics are to enjoy the freedom to develop their own courses and control their examination and assessment methods, they must be properly qualified to do so. The student population is far more diverse than formerly. It includes students whose English is poor, students with disabilities, religious groups with particular needs and expectations, and Indigenous students. The new technologies and teaching environments require new skills of academics. A wide range of pedagogical skills is required—for example, to cope with students the teacher rarely sees in distance education, to effectively conduct a tutorial and present a lecture to a large group of students.

There is little doubt that employers and students will become more assertive in expressing their expectations of the higher education system, as they themselves confront an increasingly competitive marketplace. Competitive pressures are likely to lead employers to focus more on what graduates can do and less on which institutions they attended. It is clear that achieving a good match between graduate attributes and employer needs requires strong, ongoing dialogue between universities and employers. It is equally clear that universities face a major challenge in determining how best to teach large numbers of students in a climate of ongoing public funding restraint.

² Conducted annually by the Graduate Careers Council of Australia. In 1996 the survey elicited 94,000 responses with a return rate of 68 per cent.

In relation to research

Governments of advanced and rapidly developing countries have recognised the economic significance of innovation. A 1996 OECD study estimated that innovation accounts for 50 per cent of long-term economic growth in advanced industrial economies.³

Universities make a major contribution to the national innovation system through their provision of research training and their research activities. The emerging view in many OECD countries is that research and development (R&D) collaboration between universities and industry will lead to more innovation and economic growth. This is particularly true in Australia because, relative to other OECD countries, we have low levels of industrial investment in R&D and high levels of public sector R&D.

In our view, we could get better value from our public investment in higher education research by developing more effective mechanisms for transferring knowledge and skills and for diffusing technology. We expect that the community will increasingly seek assurance that the research training and research conducted by universities are relevant to national needs.

A balance between the research training, research and other teaching activities of universities is needed. For this reason, and because the level of funding available cannot possibly match the demand in universities to undertake research, it is inevitable that the need to ration funds will continue. Having a more systematic understanding of priorities will therefore be increasingly important.

Several OECD countries have adopted foresighting as an approach to technological forecasting, strategic planning and priority setting within the machinery of government.⁴ The foresighting activity in these countries involves government agencies, universities, research institutions, business and industry.

In 1996, the Australian Science, Technology and Engineering Council (ASTEC) undertook a foresighting exercise which sought to identify the key forces for change and generic priorities for matching science and technology to future needs in the twenty-first century. To respond to these forces for change, the national innovation system will need to play an enhanced role by becoming better integrated with the social, economic and environmental needs of our community.⁵

Innovation is a major factor that will determine the competitiveness of firms and economies in the twenty-first century. Our capacity to develop, commercialise and take up new products and processes is a key driver of growth ... Key elements of an effective innovation system are: an education system which encourages creativity and entrepreneurship and a research base which provides excellent basic and applied research.

Investing for Growth, Government's Industry Statement, December 1997.

International attention has started to focus on the importance of addressing systemic failures which may impede innovation. Of particular concern in this regard are poor levels of interaction between the various parties (industry, universities and the public research institutes); mismatches between the basic research conducted in public institutions and the more applied research conducted by industry; failure of the technology transfer institutions; and information and absorptive deficiencies on the part of industry.

OECD, *National Innovation Systems*, OECD, 1997.

³ See OECD, *Technology, Productivity and Job Creation*, OECD, Paris, 1996.

⁴ The Netherlands has established an independent foresighting steering committee within the Ministry of Education and Science. The UK foresighting process is supported by the Office of Science and Technology. The USA has biennial foresight investigations supported by the Office of Science and Technology Policy in the Executive Office of the President. Japan has a long-term commitment to foresight led by the National Institute for Science and Technology Policy. The NZ Ministry of Research, Science and Technology has adopted foresighting as a tool for planning and priority setting. ASTEC has undertaken six foresighting studies associated with priority setting since 1981.

⁵ Innovation could be described as the process of gaining competitive advantage through the application of knowledge and technology to generate new and improved products and services. The national innovation system consists of all players involved in the process of innovation, including universities, research institutions, government agencies, business and industry.

The Review Committee notes that the ASTEC exercise is the only recent comprehensive Australian study of this kind. We believe that there should be an active debate among all stakeholders in Australia's national innovation system to identify broad national priorities for Australian research in the twenty-first century.

Technology will revolutionise higher education

Developments in information and communications technologies, especially the growth of the Internet and the World Wide Web, will be major drivers of change over the coming decades. They will create many opportunities for higher education institutions to become better and more cost effective in their administration, in the way they teach and in the way they conduct research.

Opportunities to improve administration

The report prepared for the Committee by Global Alliance Limited (GAL) argued that the new technologies will enable universities to reduce costs in what it described as 'back office' functions such as marketing, management of student enquiries, testing of prior skills and credentials, course registration, processing financial transactions, management of marginal capacity, and the production and despatch of course materials.⁶

This view seems to have broad support, attracting universal agreement at one of the Round Table discussions hosted by the Review Committee after the release of the Discussion Paper. The consensus was that the impact of information technology on the 'back office' will be more important than its impact on the student-teacher interface, as information technology offers the potential for large savings and the opportunity to prune internal bureaucracies.

That said, the re-engineering of internal processes is risky—we were advised that the failure rate is about 70 per cent—and there is no guaranteed, standard way to go about it. While there is a large potential for rationalisation because of the underlying similarities in administrative processes of universities, the record of cooperation between universities is mixed.⁷ Another problem is the hump in costs when technology is introduced—the changes, although eventually bringing benefits, are not very cost effective in the short term. University funding systems are not well suited to manage such expenditure.

We expect universities to adopt a range of strategies. Some may choose to design and operate their own systems, while others may choose to outsource their systems to third party providers. From a policy perspective, it is important that universities have strong incentives to capture available major cost savings, that they are able to access the resources they need to fund major re-engineering exercises and that we avoid the temptation of imposing solutions on them from outside.

Opportunities to improve teaching

The Discussion Paper emphasised the potential of the new technologies to revolutionise teaching and learning. This provoked vigorous debate.

Many of the academics and students the Committee met stressed the educational importance of placing learning within the academic community, and of the dialogue between teacher and student, and between student and student. A number of respondents to the Discussion Paper suggested that experience

⁶ GAL, *Australian Higher Education in an Era of Mass Customisation*, Appendix 11 of the Discussion Paper, 1997, pp. 29-31.

⁷ Instances of successful collaborative action include the use of Admissions Centres to jointly handle applications for student places and the establishment, through the AVCC, of AARNet, which provided widespread Internet access for Australian universities as well as for the broader community.

indicates that technology makes education more, not less, expensive. Some expressed concern that a move to computer-based learning materials might disadvantage people who do not have access to computers or who do not have a high degree of familiarity with computers, especially older people.

We are convinced that technologies offer significant opportunities to higher education institutions to enhance the quality, accessibility and cost effectiveness of higher education teaching and research, for example, by:

- enhancing interaction between student and academic staff—electronic mail, computer conferencing and the World Wide Web enable students and staff to converse and exchange work much more effectively;
- improving communication among students—the effectiveness of study groups, collaborative learning arrangements, group problem solving and discussion of assignments can be improved through the use of modern communication tools;
- encouraging active learning; for example, by the use of simulations that allow students to manipulate variables that influence particular phenomena;
- helping students to develop and practise research skills in ‘dry’ simulated laboratories before they use riskier, more expensive real equipment;
- enhancing the provision of feedback to students (eg through electronic mail or by the use of computers to measure and record performance);
- raising the efficiency of study time by reducing the time students spend travelling to and from campus and reducing the time they take to gain access to study resources; and
- varying the ways in which material is presented, and learning structured, to accommodate different learning styles.⁸

The GAL report points out that traditional, prestigious institutions, such as the University of California at Berkeley, have also recognised the potential value of new technologies and are beginning to invest significant amounts in online courses.

The technologies are opening up a vast range of exciting possibilities for improving the way in which we can meet the learning needs of Australians and project Australian higher education into the international arena. Already these technologies can be applied in many ways to suit the needs of particular disciplines and particular students. Ongoing experimentation will establish whether, when and how particular applications of technology will raise educational quality or reduce costs in particular learning contexts. A future policy framework will need to allow, and indeed encourage, such experimentation.

A number of respondents to the Discussion Paper argued that technology adds to, rather than reduces, the cost of higher education teaching. This is undoubtedly true where the technology acts as a ‘bolt-on’ to traditional methods—and using technology in this way will be appropriate in some circumstances.

Where the objective is to reduce costs, universities will need to rethink the way in which they design and deliver courses. Producing and maintaining high quality computer-based learning materials can be very expensive. To make these materials available at low cost, universities need to distribute them to large numbers of students. To date, the capacity of universities to achieve economies of scale has been constrained by the widespread reluctance of academics to use materials that they have not themselves developed—the so-called ‘not invented here’ syndrome. Up to a point, this syndrome can be justified by the need to preserve scope for experimentation and diversity in what is offered from university to university.

⁸ Arthur W. Chickering and Stephen C. Ehrmann, *Implementing the Seven Principles: Technology as Lever*, accessible at <http://www.aahc.org/technology/ehrmann.htm>.

However, this argument is difficult to sustain where subject matter is largely standard across institutions and no longer subject to academic debate. In such cases, it is more accurate to describe course offerings as ‘expensively fragmented’ than ‘healthily diverse’. A future policy framework will need to provide incentives for academics to seek out and use high quality computer-based learning materials produced by others.

We acknowledge the fears felt by some in the academic community that the new technologies may reduce opportunities for human interaction and in this way reduce the quality of teaching.

Given the emphasis that employers place on skills such as teamwork and verbal communication, we would be very surprised if face-to-face instruction were ever to disappear from higher education. That said, most people in the sector would acknowledge that, for one reason or another, current face-to-face teaching does not always live up to—and probably never has lived up to—the ideal image of it that is conjured up by many who criticise the new technologies. We believe that the new technologies, whose power resides largely in their ability to enhance communication, offer great opportunities for enhancing teacher–student and student–student interaction, *as well as* providing superior resources for independent study. Developments over the next 20 years will almost certainly extend further their capabilities in both respects. The challenge will be to develop a better understanding of the unique attributes of face-to-face teaching and to be willing to compare these objectively and openly with what the new technologies can offer.

I ... believe that what can happen in live face-to-face communication is qualitatively different from what can happen in any other medium. However, I think we have barely begun to identify and make use of the differences. I look forward to the pressure brought by the competition from the increasingly powerful forms of telecommunications to force us to discover what is truly unique about face-to-face communications. Educators have more at stake than most—and better resources than most—to encourage us to identify and make the most effective use of what we find to be the unique benefits of face-to-face communication. I hope we do the same with other media as well. This line of thought has many implications for the changing role of faculty members and other professionals who support efforts to understand and improve teaching and learning.

Steven W. Gilbert.⁹

Opportunities in research

Information and communications technologies are already significantly affecting the way research is conducted and the way researchers relate to one another. Over the next 20 years, research will be shaped by a continuation and intensification of a number of existing trends.

- Many branches of science and technology will increasingly be able to supplement empirical and theoretical work with computational methods such as simulation. Consequently, they will be able to adopt new approaches to tackling problems within existing frontiers as well as address problems beyond the reach of traditional empirical and theoretical methods.
- Virtual research operations will enable researchers located in different continents to collaborate without any face-to-face contact and to publish papers jointly on the Internet.
- Transdisciplinary research will enable researchers to resolve complex problems by drawing on specialised knowledge from diverse fields.

⁹ Posted on the TLT Group’s AAHESGIT Listserver, ‘Face-to-face versus extreme distance education’, 9 March, 1998.

At a Round Table discussion on research held by the Committee, participants concluded that universities that choose to emphasise research in their overall missions are likely to develop strategies that include accessing R&D funding on a global scale; joining international research consortia; operating globally (eg in areas of recruitment and staff movement); developing multidisciplinary teams; pursuing top researchers and R&D contracts in international markets; and becoming leaders in electronic research.

The technologies are accelerating the process of discovery in research by enabling rapid communication among colleagues around the world. They also facilitate communication within a research community that is becoming increasingly fragmented by growing disciplinary specialisation.

If we are to maintain our competitiveness in research, we can ill afford not to adopt and invest in applications of information and communications technologies.

The Internet is not merely speeding up the same kinds of interactions that would have occurred in other ways. The many-to-many nature of the network medium is lowering barriers to collaboration. A physicist can draft a paper and e-mail it to colleagues around the world. Although ordinary mail and, more recently, the fax machine, provide the same basic function, the very malleability of electronic text encourages continuous revision and group-thinking. The result is that by the time a paper is submitted to a journal it will already have been scrutinised by the people most likely to detect its flaws.

Herb Brody, 'Wired Science', *Technology Review*, MIT, October 1996. Available at <http://web.mit.edu/techreview/www/articles/oct96/brody.html>

Competition will intensify

Competition among Australian universities has intensified noticeably over the past decade. As geography becomes less of a limiting factor in the provision of education, we expect competition between Australian universities to become more and more intense.

Potential competitors for Australian students include not just Australian higher education institutions, but also providers in other education sectors, new entrants in adjacent industries such as publishing, media and telecommunications, international providers, and the in-house education and training facilities of major companies.

Indications are that, in the short to medium terms, competitive pressures emanating from outside the sector will be moderate in comparison with internal pressures. The GAL report suggests that Australian higher education providers appear to be cost competitive with other Western providers in the delivery of conventional higher education, primarily due to their low (by Western standards) wage costs and the economies of scale they have achieved over the past decade. Because Australia is already well served by a strong higher education system, potential competitors in the international arena may see it as an unattractive initial target, compared with rapidly developing countries such as China.

Currently, the funding framework strongly discourages international competition by restricting the availability of Commonwealth funds to a designated group of Australian providers (although it does not rule out the possibility of international providers getting 'behind the tariff wall' by entering into an alliance with one of the designated Australian providers). Research commissioned by DEETYA during 1997 indicates that corporate players outside the higher education sector, particularly in media and communications, remain unconvinced of the profitability or desirability of becoming involved in higher education.¹⁰

¹⁰ Reported in Cunningham, Tapsall, Ryan, Stedman, Bagdon and Flew, *New Media and Borderless Education*, DEETYA Evaluations and Investigations Program, AGPS, January 1998.

In the longer term, we expect international competitive pressures to intensify as the power of information and communications technologies increases and international pressures for trade liberalisation continue to grow. And, in the modern era, the long term is often much closer than we think. The only lasting protection against the threat of world competition, and the only way to realise the promise of an increasingly globalised higher education marketplace, is to be world competitive, both domestically and internationally—now!

Pressures for structural change will gather

The cost structure of higher education will change as information and communications technologies are increasingly applied. That change in cost structure in turn will raise questions about the existing structure of the higher education sector. Questions will be raised (and, indeed, are already being raised in public debate).

- How many providers does Australia need to optimise its delivery of higher education services?
- What kinds of services should each provide? Is a system composed mostly of large, comprehensive providers (as the current system is) best, or would it be better if there were more room for small providers focusing on excellence in particular areas?
- Is it best for providers to seek to produce most of their academic support services, such as library services, in house (as at present), or would it be better for them to acquire these services from specialist outside organisations which could capture scale economies?
- When rich, interactive services can be delivered online, what exactly is the purpose of the university campuses? Is it to be close to their 'feeder' populations and, if so, why?
- How should universities relate to providers in other educational sectors and in other industries? Should they seek to keep their distance or build closer relationships?
- To what extent can providers hope to address a world market for their services and to what extent will demand for higher education remain culturally and geographically localised?

GAL's authors envisage a world in which the structure of the higher education system has evolved to meet the varying weightings assigned by different student groups to particular elements of what is currently offered by higher education—for example, access to employment following graduation, prestige, the ability to network with fellow graduates, an attractive social and physical environment and so on. They see it as likely that, to a greater or lesser degree, many of the functions currently handled within the ambit of individual universities will eventually be parcelled out to external specialist providers.

Vertical integration in space makes less sense in a world where telecommunications technologies enable virtual communities where space does not matter, overheads are minimal and collaboration is with colleagues and students half a world away.

GAL report, op. cit., p. 59.

Another possible development is the 'mega-university'. Sir John Daniel, Vice-Chancellor of the UK Open University, points out in a recent book that there are 11 mega-universities around the world, each of these enrolling over 100,000 active students in degree-level courses, and that these are mostly new institutions that have quickly become the largest universities in their national higher education systems.¹¹

¹¹ John Daniel, *Mega-universities and the Knowledge Media*, Kogan Page, 1996, pp. 29-45.

Against this, Daniel notes: 'Others argue that, because of their size and commitment to industrial methods, the mega-universities will not be nimble enough to survive in a post-industrial age. Since this claim has been made by people with direct experience of mega-universities, some people expect the eventual demise of the mega-universities.'¹²

Currently, the structure of the higher education system in Australia is set largely by government fiat. The *Higher Education Funding Act 1988* limits the recipients of public higher education funding to a small group of providers. The Commonwealth's power to influence the structure of the system was illustrated vividly in the wave of institutional amalgamations that followed the release of the 1988 White Paper.

In our view, the prospects of an optimal higher education structure delivered by government fiat, in the complex and dynamic environment of the next century, are not high. Attempts at prescription are fraught with high uncertainty. Centralised decision making becomes more difficult the larger and more diverse the system. Our policy framework must allow greater freedom for the structure of the sector to evolve naturally in response to the changing needs of its clients and the continually increasing range of possibilities which the new technologies open up for the production and distribution of higher education. It will be important also to ensure that providers have access to the capital necessary to make the structural adjustments that will be needed.

However, we are conscious that our higher education institutions do not exist solely to meet the direct needs of their students. They play important roles in our broader social and cultural affairs and provide employment and income generation opportunities in local communities. The responsibility of government will be explicitly to identify values that require special protection and to provide the funding necessary to ensure that these are preserved.

International demand for higher education services will grow

In 1997, almost 63,000 international students were enrolled in courses at Australian universities. Most of those students were paying fees. By comparison, in 1987 there were 17,000 overseas students enrolled in higher education, of whom only 1,000 were paying fees. Australia is a highly successful exporter of higher education services, with more overseas students per capita than the USA, the UK or Canada.

In its original submission to the review, IDP Education Australia argued that there is potential for massive growth in international demand for Australia's higher education, citing a 1995 study which made the following projections.

- Globally, the number of students at universities will grow from 42 million in 1990 to 97 million in 2010 and 159 million in 2025.
- The number of students at universities in Asia will grow from 17 million in 1990 to 45 million in 2010 and 87 million in 2025.
- The global flow of university students will grow from 1.4 million in 1992 to 2.8 million in 2010 and 4.9 million in 2025. Numbers of international students from Asia will grow from 600,000 in 1992 to 1.4 million in 2010 and 2.9 million in 2025. Australia has the potential to be host to 206,000 international higher education students by the year 2010.

The countries from which our universities have traditionally recruited overseas

students are developing their own education and training systems to meet domestic demand, suggesting that the international student market will be much more competitive in future for Australian providers. Currently, economic difficulties in a number of Asian countries, notably Malaysia, Thailand, Singapore and Taiwan, are making it difficult for providers to maintain student numbers.¹³

If Australian providers are to make the best of their share of the long-term growth in the international student market they will need to develop new approaches to complement the traditional approach of bringing fee paying students to Australia for at least part of their study period. IDP Education Australia in its submission advised that offshore and distance education strategies will be required to enable Australian higher education to meet demand and suggested that new technologies should play a significant role in service delivery. IDP suggests that a myriad of 'products' are likely to evolve to meet the needs of many different market niches.

No-one can be certain whether the current economic difficulties in some Asian countries represent a short-term 'blip' in a long-term growth trend or whether they signal serious long-term problems. We can be confident that, in the longer term, the importance of knowledge and skills will continue to grow and that higher education services will be exchanged more and more on an international basis. We know that Australian higher education providers are highly dependent on earnings from overseas students. On balance, we consider that we should plan on the basis that the international market for higher education services has large growth potential. We should be prepared to work very hard to maintain and improve our market share, recognising again that the best way to manage uncertainties in the international marketplace is to be as competitive as possible.

The policy framework should take account of the market potential and the importance to Australia of realising it.

Domestic demand will grow

We believe that there are good prospects for growth in domestic demand for higher education student places over the next two decades, despite recent downturns in demand and a flat demographic outlook.

As measured by the number of applications received by State Admissions Centres, demand for places has been declining since 1993, with a 3 per cent decline from 1997 to 1998 (comprising a 2.3 per cent drop among school leavers and a 4.6 per cent drop among other applicants).¹⁴

We estimate that demographic trends will contribute about 6 per cent to total student numbers by 2007 and 11 per cent by 2017.

Almost three-quarters of students are aged under 30 years and 59 per cent are under 25 years—ratios that have remained virtually unchanged over the past decade.¹⁵ A demographic surge in the 17–19 years cohort contributed to the increases in demand for higher education recorded in the late 1980s. However, this cohort has been declining since 1990. It is projected to rise again from 1998, but more moderately than was the case in the late 1980s. Between 1981 and 1992, a sharp rise in the Year 12 retention rate (from 34.8 per cent to 77.1 per cent) added significantly to student demand, but this rate declined to 71.3 per cent by 1996.¹⁶

¹³ *The Asian Deflation and Australian Education*, Summary of a Report by Professor Raoul Mortley, AIEF, 1998 (yet to be released) p. 2. The report predicts declines in new enrolments over the next two years in the order of 20 per cent for Malaysia, 40 per cent for Thailand, 20 per cent for Singapore and 15 per cent for Taiwan.

¹⁴ AVCC, *Survey of Applicants for Undergraduate Higher Education Courses*, 1996.

¹⁵ DEETYA, *Selected Higher Education Student Statistics 1996*, AGPS, Canberra, 1997. Based on counts of student numbers at 31 March 1996.

¹⁶ ABS, *Schools, Australia*, 1981, 1992 and 1995, Cat. no. 4221.0. The preliminary figure for 1997 is 71.8 per cent, suggesting that the decline may now have been arrested.

The 30–64 years population cohort is projected to grow significantly (by 34 per cent) between 1997 and 2017. This will have only a modest impact on demand if rates of participation in this group remain at traditional levels, because their rates of participation are much lower than those of younger people.

However, we consider that there are prospects for significant growth in demand for continuing education among mature age students. The underlying demand for higher education is being supported by a shift in the demand for labour in favour of skilled workers. As the Department of Industry, Science and Tourism noted in its response to the Discussion Paper:

Analysis of the available data indicates that over the period May 1987 to May 1997 there was a very large increase in the demand for employees with skills. Employment in high skilled occupations increased by around 43 per cent, and by 24 per cent in medium skilled occupations. By contrast, employment in the lower skilled occupations fell by 6 per cent over the same period.¹⁷

Indications are that these trends will continue. Projections published by DEETYA in 1995 indicate (in relation to the period 1995–2005):

There will be strong growth in demand for the services provided by managers and para-professionals across a wide range of industries. These occupational groups will account for a large share of the additional jobs created over the next decade ... Employment for many low skilled occupations such as machine operators and labourers is projected to decline or grow relatively slowly as jobs are either replaced through automation or transferred offshore.¹⁸

Data from the Graduate Careers Council of Australia show that, despite the growth in their numbers over recent years, graduates are still being absorbed readily into, and maintaining their advantage in, the labour market. Of bachelor degree graduates who were available for full-time employment in 1997, 79.2 per cent were in full-time employment within four months of completing their degrees in 1996.¹⁹ In 1997, the unemployment rate for persons with a bachelor or higher degree was 3.5 per cent, compared with 9.4 per cent for the remainder of the labour force.²⁰

The GAL report states that there is substantial evidence in the USA that the market for continuing education is growing dramatically, particularly in the private for-profit sector, but that the available statistics in Australia suggest only steady but unspectacular growth.²¹ In part, this might be explained by the observation that what is delivered in higher education institutions, and the way in which it is delivered, have traditionally been targeted to the needs of the younger age groups. Older students, particularly those who are paying fees, are likely to have more clearly defined expectations of higher education than school leavers do, and more likely to have competing family and work related demands on their time. For them, the appeals of campus life will frequently be outweighed by the inconvenience of having to attend classes at specified times and places. They are likely to be responsive to modes of delivery that increase the convenience and accessibility of learning.

Meeting the challenges

We believe that the operating environment for higher education over the next 20 years will become increasingly turbulent. The Australian community's expectations of higher education will rise as knowledge becomes more and more central to all aspects of our individual and social lives. The worldwide demand for learning will

¹⁷ DIST, Response to the Discussion Paper, No. 111.

¹⁸ DEETYA, *Australia's Workforce 2005: jobs in the future*, AGPS, November 1995, p. 98.

¹⁹ Drawn from the Gradlink Web site at <http://www.gradlink.edu.au/gradfrm.htm> (Gradlink has been developed by the GCCA, in consultation with NAGCA and with the financial backing of Australian universities, to link university graduates with potential employers throughout Australia).

²⁰ ABS, *Transition from Education to Work*, Table 11, Cat. no. 6227.0, May 1997.

²¹ GAL, op cit 74-75.

almost certainly increase, offering expanding opportunities for Australian universities to provide continuing education for Australians and to earn income in international markets, although those markets will be contested vigorously. The new information and communications technologies will revolutionise the business of higher education, producing significant pressures for structural change and generating a need for investment capital.

Taken together, the challenges these developments pose for universities will be at least as great as those they have faced over the past decade. To a very large extent, the accomplishments of the past decade have been achieved by stretching the old way of doing things to their very limits (indeed, some would say that the old ways have already been stretched beyond their limits).

The challenge now is to learn to do things differently. Universities will need to review continuously the way in which they go about their business. They will need to be attuned more closely than ever before to the needs of their various clients, and to be more willing and able than ever before to respond quickly and flexibly to their diverse and changing needs.

It is imperative for Australia that our universities respond successfully to these challenges, as they have responded to past challenges. Choosing not to change is not an option either for individual universities or for the Australian community. The policy and funding framework will need to support and encourage them to make the changes that are needed.

Chapter 3

The current policy and funding framework for higher education

Flexibility and responsiveness will be the watchwords for success over the next 20 years—for individuals, for organisations (including higher education institutions) and for nations. The demands made on the higher education system will grow, diversify and rapidly change. Australians will demand flexibility over what, how, when and where they study, and it will be critical for our national wellbeing that those demands be met.

In a globally competitive environment, Australia will need to get the best possible value from its educational dollar ('more scholar for the dollar', as one Review Committee member expressed it). We will move further into a major technological revolution which has the potential to transform the production, distribution and exchange of higher education teaching and research, and which will lead to possible flow-on effects in the structure of the sector and the way it relates to other sectors. Notwithstanding the current economic difficulties in Asia, we can expect the worldwide demand for educational services to expand, opening up enormous opportunities for Australian providers if they can remain at the leading edge of world educational practice.

In this chapter we consider the policy and funding framework and draw some conclusions about how well the system can adjust to the likely changes in the operating environment. We begin by considering the achievements of the higher education system under the current policy and funding regime. We then consider shortcomings that we perceive in the framework in relation to the future environment in which it will operate.

Where possible in the analysis that follows, we provide international comparisons to put the Australian system in context. However, international comparisons of higher education are often difficult owing to significant differences in how countries organise and define higher education, and postsecondary education as a whole. Other difficulties arise from differences in statistical systems and how various countries treat specific areas of operations (eg research). It is also difficult to quantify equivalent enrolments, especially in European countries that do not distinguish full-time from part-time enrolments.¹

Achievements of the current policy and funding framework

The policy and funding framework that has supported the higher education system over the past decade appears to have served Australia well in that period. It has successfully sustained massive growth in student numbers and, in doing so, has enhanced Australians' access to higher education. It has supported the emergence of higher education as a major export earner for Australia. It has enabled Australia to retain its position of strength as a provider of distance education. It has supported a significant expansion of funding for research. Relative to the policy and funding frameworks of other countries, it accords a high degree of autonomy to institutions. In the Higher Education Contribution Scheme (HECS), it incorporates a major funding innovation.

¹ For a discussion of the problems of international comparisons (with special reference to the UK), see Gareth Williams 'Resources for Higher Education in OECD countries', Commissioned report for the Council for Industry and Higher Education, the Committee of Vice-Chancellors and Principals of the United Kingdom and the Higher Education Funding Council for England, December 1996.

Sustained massive growth in student numbers

The numbers of Australian students in publicly funded higher education institutions grew from 394,000 in 1987 to 659,000 in 1997. In contrast to the United Kingdom, in 1988 the Commonwealth recognised that expanded student numbers in Australia would require funding that could not be met solely from public sources.² HECS was introduced in 1989 to provide an alternative source of funds, in recognition that individual students, as well as the community as a whole, benefit from higher education.

The key features of students and of the types of study being undertaken in Australian higher education in 1997 were as follows.

- Twenty-seven per cent of students were aged 19 years or less, 32 per cent were aged 20–24, 13 per cent were aged 25–29 and 27 per cent were 30 years or over. This distribution is very similar to that recorded for 1987.
- Fifty-nine per cent of students were studying full time on campus, 27 per cent were studying part time on campus and 13 per cent were studying externally. These figures have remained relatively stable over the past 10 years.
- Seventy-five per cent of students were enrolled in bachelor degree courses, 21 per cent in postgraduate courses, and the remainder in other undergraduate courses (2 per cent) or non-award and enabling courses.
 - Postgraduates had begun to increase their share of the student population in the early 1990s, from a base of 16–17 per cent, which until then had been steady since 1983; and
 - the percentage of undergraduates studying for a bachelor degree (97 per cent) had increased from 80 per cent in 1997.

Compared with students in other OECD countries, a high proportion of the Australian student population is able to access part-time and external study, and this has been the case for some time.³ Data on the ages of students show that the system provides ‘mature age’ students with significant access to higher education.

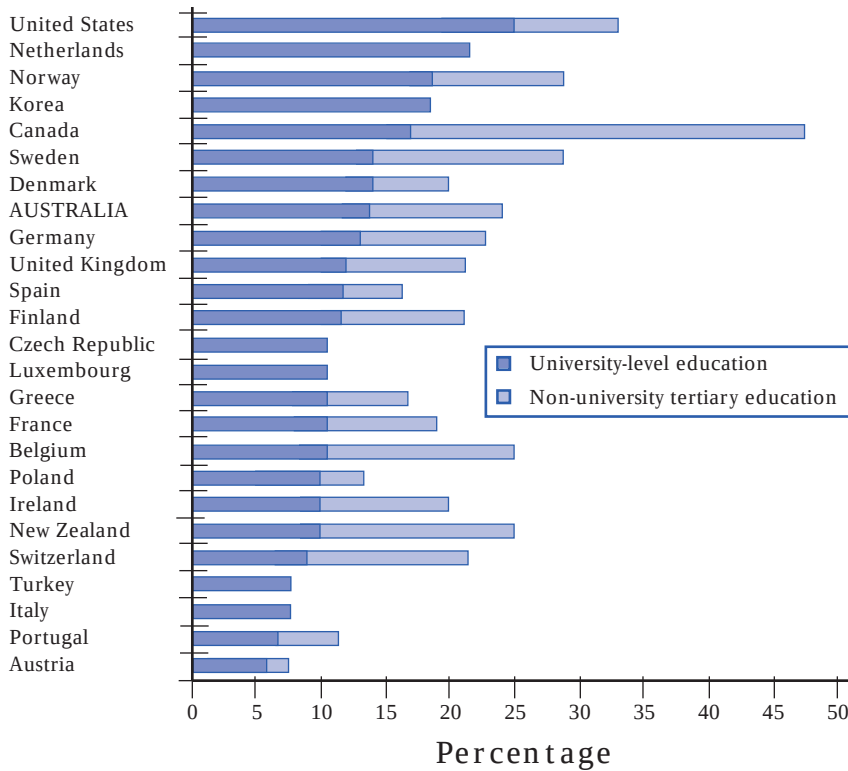
The percentage of the Australian population aged 25–64 years of age with university level and non-university level tertiary education is only just above the mean for OECD countries in both cases (see figure 3.1).⁴ A significant proportion of the Australian population aged 30–39 years is enrolled in formal education of some kind.

² Report of the National Committee of Inquiry into Higher Education (Dearing Report), 1997, chapter 3.

³ OECD, *Education at a Glance: OECD indicators 1997*, p. 136.

⁴ *ibid.*, Table A2.1.

Figure 3.1: Percentage of population 25 to 64 years of age by highest completed level of education (1995, OECD)



On current patterns, it appears that about 45 per cent of current teenagers will enter higher education at some point in their lives. A further 45 per cent of current teenagers are likely to commence Vocational Education and Training which, when combined with figures for those commencing higher education, equates to almost 90 per cent commencing some form of tertiary education or training in the course of their lifetime.⁵

Nearly 40 per cent of those who complete Year 12 enter higher education within two years of leaving school. The rate of participation in higher education by 17–19 year olds increased from 109 per thousand in 1985 to 172 per thousand in 1995. Participation by students aged between 20 and 24 years, while lower, has risen almost as rapidly—from 91 to 151 per thousand over the same period.⁶ The Committee believes that Australia is well placed to aspire to the goal of universal access to postsecondary study.

OECD measures of net enrolment in public and private university education for persons 17–34 years of age show that participation in Australia is higher than in most countries, but still lower than in Canada, the United States, Denmark, Finland, Norway, Netherlands and Spain (see figure 3.2).⁷ Australia's participation rate (9.4 per cent) is comparable to that of New Zealand's (9.3 per cent).⁸

⁵ DEETYA, *Characteristics and performance of higher education institutions (A preliminary investigation)*, 1997, p. 12.

⁶ DEETYA, *Higher Education Participation Rates*, Australia, AGPS, 1997.

⁷ The OECD calculates net enrolment by dividing the number of students in a specified age group by the total population in that age group (times 100). See OECD, *op. cit.*, p. 168.

⁸ *ibid.*, Table C5.2a. No distinction is made between full-time and part-time enrolment (head count basis).

Figure 3.2: Net enrolment in public and private tertiary education for persons 17 to 34 years of age (OECD, 1995)

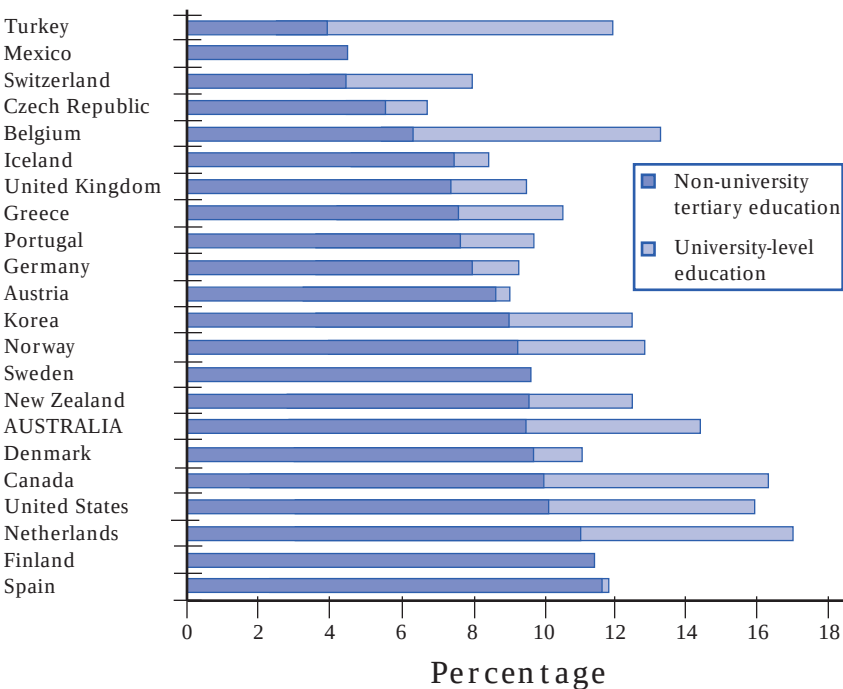
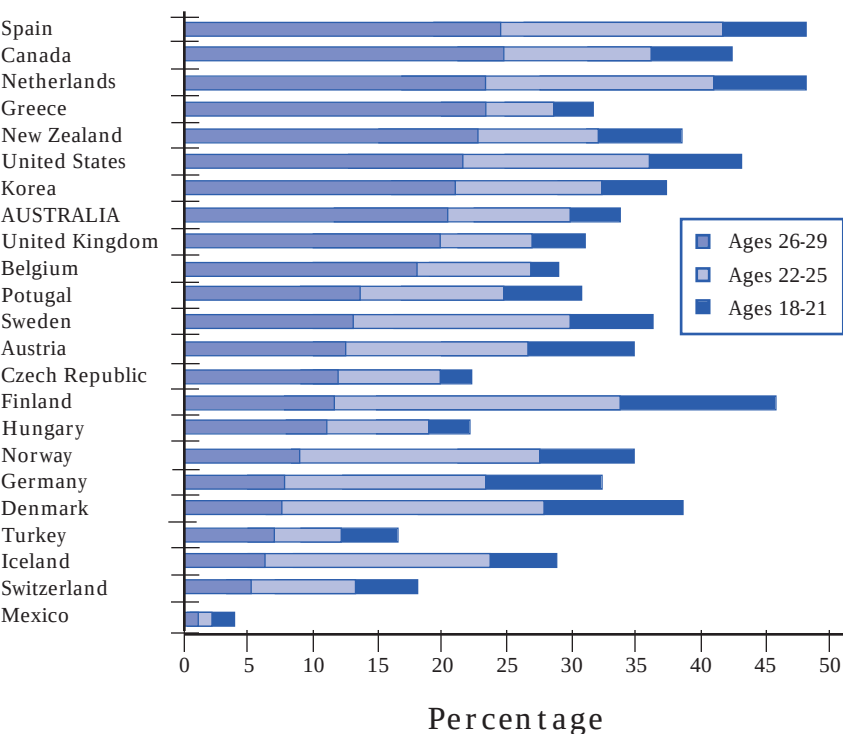


Figure 3.3: Net enrolment in public and private tertiary education for persons 18 to 21, 22 to 25 and 26 to 29 years of age (based on head counts, OECD, 1995)



Compared with other OECD countries, Australia's rates of higher education participation are high for 18–21 year olds and medium to low for 22–29 year olds, reflecting the age at which most Australians leave school and the shorter duration of Australian undergraduate courses (see figure 3.3).⁹

The accessibility of Australia's higher education system is clearly a strength, particularly as we move towards the practical implementation of the goal of lifelong learning for all. Australia's higher education system has catered very effectively for students who are either not able, or choose not to, study full time or on campus. Entry to higher education for older students is facilitated by the ready availability of alternative modes of study, particularly distance education and open learning. Australia has been an innovator in these areas.

Innovative Higher Education Contribution Scheme

HECS and income support arrangements are the principal means by which access is maintained, regardless of a student's financial circumstances.

Under the scheme, students may pay up front on enrolment (attracting a 25 per cent discount) or defer payment until their taxable income reaches a threshold level. Where payments are deferred, repayments are income contingent and free of real interest (liabilities are adjusted in line with the Consumer Price Index to maintain their real value). The repayment rate ranges from 3–6 per cent of taxable income in seven bands. Repayment liability can be remitted or repayments postponed in defined 'special circumstances'.

From 1989 to 1996, the required annual HECS contribution for a full-time student was approximately one-fifth of the average amount paid by the Commonwealth to universities for a full-time student place. From 1997 the contribution was differentiated (\$3,300, \$4,700 and \$5,500) according to the discipline studied. The income threshold for repayments in 1997–98 is \$20,700. HECS revenue totalled \$491.3 million in 1996, and is projected to rise to \$1.4 billion by 2000. Accumulated HECS debt totalled \$3.7 billion in 1996.

The requirement to pay up front (or borrow from a bank at commercial rates) represents a greater disincentive than the level of tuition charges for students wishing to study at private institutions, and creates significant inequities between students in the public and private sectors. Government-provided income-contingent finance is available only to HECS liable students at public universities and to students studying with Open Learning Australia (OLA).

In 1997, 25 per cent of students (on an equivalent full-time student unit, EFTSU, basis) eligible to defer their HECS contribution chose to pay it up front. A recent survey of students paying their HECS up front found that 42 per cent of students sourced their payment from personal savings, 42 per cent received the funds from family members and 12 per cent had the payment made by their employer. More than 70 per cent of those students paying their HECS up front were employed. About 40 per cent of students studying through OLA use the Open Learning Deferred Payment Scheme.

The impact of HECS on participation in higher education was assessed through surveys of potential and actual students in late 1989.¹⁰ The impact was minor at both entry and undergraduate levels. This was confirmed further by a survey conducted during 1991 under the auspices of the National Board of Employment,

⁹ *ibid.*, Table C5.2b.

¹⁰ See Robertson, Sloan and Bardsley, *The Impact of the Higher Education Contribution Scheme (HECS)*, Evaluations and Investigations Program, DEET, AGPS, 1990.

Education and Training (NBEET), which focused on disadvantaged groups.¹¹ Bruce Chapman, in the paper commissioned by the Review Committee, considered the evidence from the Australian Council of Educational Research, which collects time series data on the characteristics and educational and employment participation of young people. His analysis indicates that HECS, at least in its pre-1997 form, had no discernible effects on the socioeconomic composition of the student body.

DEETYA analysed the impact of differentiated HECS contributions on the number of students applying to enter higher education institutions.¹² It found that the changes to the HECS arrangements in 1996 did not appear to have significantly reduced the number of Year 12 applicants in 1997 or to have affected the level of applications by discipline, although there were indications that the number of mature age applicants may have been affected. It is too early to know whether this will be a continuing trend. However, given the imperatives of lifelong learning and the increasing numbers of older students who will wish to access higher education, the Government will need to monitor this carefully.

Although the scheme's income-contingent loan component overcomes the problem of student access to capital markets very well, it is an imperfect *pricing* mechanism. It provides no direct link between the student and the institution, and contribution levels are centrally set by the Commonwealth for the system as a whole. The present differentiated levels of contribution lack a sound basis. The scheme also delivers to students an additional public subsidy which is not transparent.

Emergence of a major export earner

Until 1990, most overseas students studying in Australia were subsidised. Since then, no new subsidised students have been accepted. The deregulation of this area of university operations provided universities with a new source of extra funding. A full fee paying overseas student market has developed, and grown strongly, in recent years.

In 1997, 10 per cent (62,974) of all students were overseas students—a significant increase on 1996 levels (53,188), and nearly four times the number in 1985. The numbers of overseas students studying part time have also increased substantially (from a lower base).

UNESCO has estimated that, globally, 1.35 million tertiary students study outside their home countries, with the number increasing each year.¹³ Australia's estimated share of these students in 1994 was about 3 per cent. Education (across all sectors) is now Australia's fifth largest source of service export income, generating an estimated \$3.2 billion in 1996—up from \$2.3 billion in 1995 and \$2.9 billion in 1996.¹⁴ Relative to the size of its population, Australia is a highly successful exporter of higher education services, with more overseas students per capita than the USA, the UK or Canada.

¹¹ See NBEET, *Assessment of the Impact of the Higher Education Contribution Scheme on the Potentially Disadvantaged*, Commissioned Report No. 15, AGPS, 1992.

¹² Les Andrews, *The Effect of HECS on Interest in Undertaking Higher Education*, AGPS, 1997.

¹³ UNESCO, *UNESCO Statistical Yearbook 1996*, UNESCO, 1997.

¹⁴ Estimates provided by the Australian International Education Foundation.

Expanded research effort

The Commonwealth provides targeted funding to researchers and universities for research grants, research fellowships, research centres, postgraduate awards and research infrastructure. Most targeted funding is allocated on a competitive basis on the advice of the Australian Research Council (ARC).

The ARC is a statutory authority established under the *Employment, Education and Training Act 1988*. As well as advising on the allocation of funding, it provides advice on national research priorities, the coordination of research policy, research programs and training, and the improvement of research collaboration and transfer.

Other funding for research and research training is provided through various components of university operating grants.

Funding arrangements for higher education research and research training

Current arrangements for the funding of higher education research are directed primarily to basic research, research training and collaboration with industry. Funds provided for higher education research and research training in 1997 were as follows:¹⁵

	\$ million
ARC/DEETYA targeted research funding (through peer reviewed and performance based programs, \$47 million of which is directed to collaboration with industry)	410
Institute of Advanced Studies, ANU, component of the operating grant	155
Research Quantum (RQ) of the operating grant	220
Research Training Component (RTC) of operating grant (estimated)	470
Other portfolios	220
Industry and other	215
TOTAL	1,690

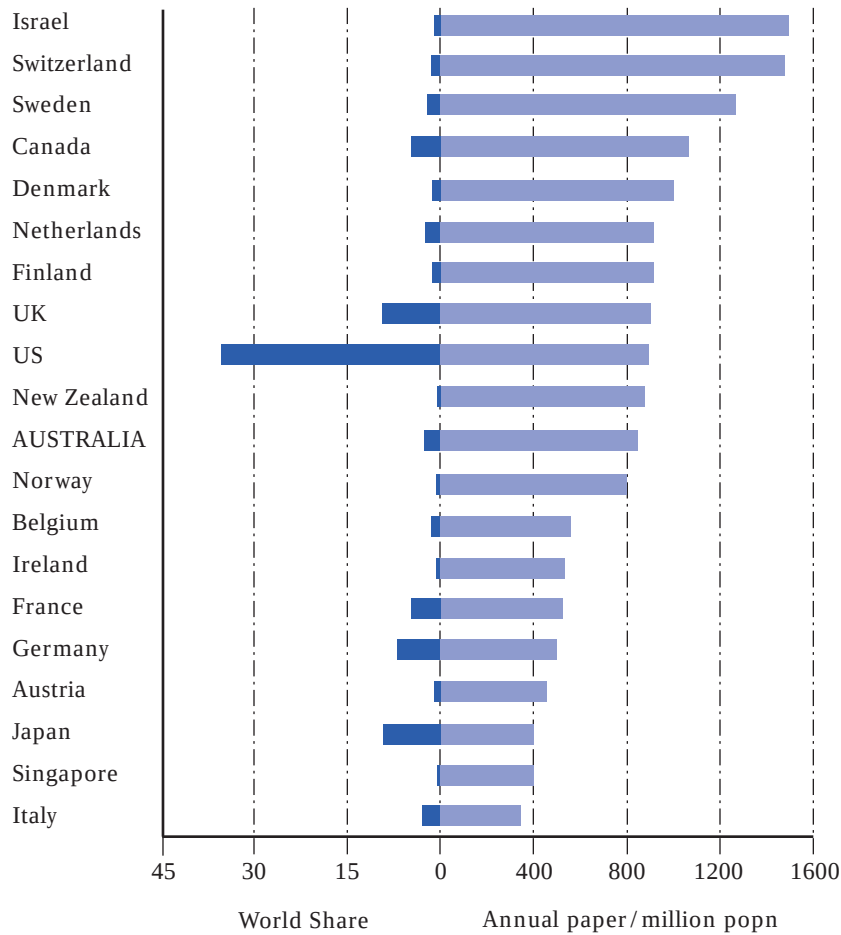
In addition, operating grant funding supports some research activity, primarily in the form of internal grants, scholarships, fellowships and staff time spent on research activity.

Australian researchers, the majority of whom are in the university system, produced 2.5 per cent of world scientific papers over the five years to 1994. On a population share basis, Australia was ranked eleventh in the world in research output (see figure 3.4).¹⁶

¹⁵ DEETYA estimates. 'Other portfolios' and 'Industry and other' figures are for 1996. Programs directed to collaboration with industry in 1997 are Collaborative Research Grants \$26.1m, APAs(I) \$9.3m, Key Centres \$3.5m, Advanced Engineering Centres \$2.1m, and High Performance Computing and Communications \$6m.

¹⁶ DIST, *Australian Science and Technology—at a glance*, 1997, 1997, p. 48.

Figure 3.4: International performance in research



The key strengths of the higher education research system are:

- the quantity and quality of Australia's basic research, and the strong research culture of Australian universities;
- the collaboration between universities and the wider community, and the significant contribution of higher education research training and research to Australia's economic and social development;
- the allocation of funds through competitive processes that are open to all universities, and the emphasis on research excellence that is engendered by those processes; and
- the diversity of funding sources and mechanisms across Commonwealth portfolios.

As with the USA and the UK, it is Australia's reputation as an innovative and research-intensive culture that attracts substantial numbers of international students to Australian universities.

University of New South Wales, Response to the Discussion Paper, No. 80.

However, there are also challenges to which the Government and the sector need to respond, including:

- the scope for developing a more effective overall research training strategy within existing funding levels;
- the absence of an explicit, transparent and inclusive process of priority setting for publicly funded university research coordinated with the priorities of other research performers;
- the need for more effective mechanisms for the transfer of knowledge and skills among universities, industry and the broader community;
- the need for greater transparency and accountability in the costing and pricing of research;
- a poor capacity by the higher education sector to invest in strategic infrastructure, and overall inadequate support for research infrastructure; and
- the need to review the structure and administration of research and research training programs and advising arrangements with a view to greater efficacy.

Institutional autonomy

Universities in Australia:

- are free from the direct influence of governments in matters of everyday management;
- choose their own students;
- have complete control over staff appointments and promotion; and
- are self-accrediting bodies free to determine their own curriculum content, teaching methods and assessment arrangements.

Australian public universities have a greater degree of autonomy in the management of resources and in academic matters than institutions in most other public systems around the world. Although a study by the Commonwealth Higher Education Management Service (CHEMS) of the relationships between governments and universities across Commonwealth countries found that it was evident from legal documentation that government is closely involved with Australasian institutions, other sources (including a survey) suggested less government interference in academic freedom and institutional autonomy than was the case for other Commonwealth countries.¹⁷ The investigation also concluded that Australian institutions had greater freedom from government control than institutions in New Zealand.

This degree of autonomy puts institutions in a good position to respond to, and take advantage of, developments in the higher education environment as they occur, while maintaining their mission and aims. This tradition of comparative autonomy in government–university relations provides a good foundation on which to position Australia’s universities for the next phase of their development.

Major shortcomings of the current framework

Although the framework has done well in supporting the major changes of the past decade, it is clear that it is now exhibiting a number of major shortcomings. The Review Committee believes that the framework will not be able to support the

¹⁷ See CHEMS (Geoffrey Richardson and John Fielder), *Measuring the Grip of the State*, CHEMS, 1997.

higher education system in achieving the objectives for the sector we outlined in chapter 1. In particular, the system remains predominantly centrally planned, despite the autonomy enjoyed by institutions and recent deregulatory moves. The present Commonwealth funding structure does not provide for the primacy of students' needs. It does not encourage diversity; nor does it provide institutions with strong incentives to understand their costs and to minimise them for a given level of quality.

Administrative complexity and funding anomalies are increased by the mix of Commonwealth and State involvement, and funding incentives which encourage research activity at the expense of teaching. Regulatory arrangements are inconsistent and performance on equity has been only partially successful. The present framework does not adequately address some aspects of the sector's operations as an industry in its own right.

Planning is too centralised

Current arrangements for financing Australian higher education are a mix of central control and institutional choice. The existing balance between centralised and decentralised decision making resulted from incremental changes to the funding and policy framework which was established in 1989 following the then Government's Green and White papers.¹⁸

Higher education operating and capital funding

The current funding arrangements for Australia's public higher education system were set in place following the 1988 White Paper, *Higher Education: a policy statement*.

Operating funding

Operating funding is provided to institutions to cover the general teaching and research functions of universities and is allocated on a formula-related basis. Institutions are funded for a target student load. The funding received in any one year is essentially based on the previous year's grant, adjusted for the flow-through effects of previous decisions regarding growth funding or other alterations to funding.

While funding is related to the student profiles of institutions, it is not formula driven. The link between funding and student profile is provided by an exercise to equalise funding between institutions undertaken in 1990 and based on a costing model known as the Relative Funding Model.

Institutions are provided with a block operating grant and funded on a rolling triennial basis.

From 1998, institutions will be automatically penalised for failing to meet targets and will be paid for enrolments in excess of targets at a rate equivalent to the discounted HECS charge.

Capital Funding

Capital funding is provided as a component of the operating grant, with the exception of the Capital Development Pool (CDP), which has a 1998 allocation of \$38 million. Funding from the CDP is provided for specific projects, usually new campus developments.

¹⁸ DEET, *Higher Education: a Policy Statement*, circulated by The Hon. J. S. Dawkins MP, Minister for Employment, Education and Training, July 1988.

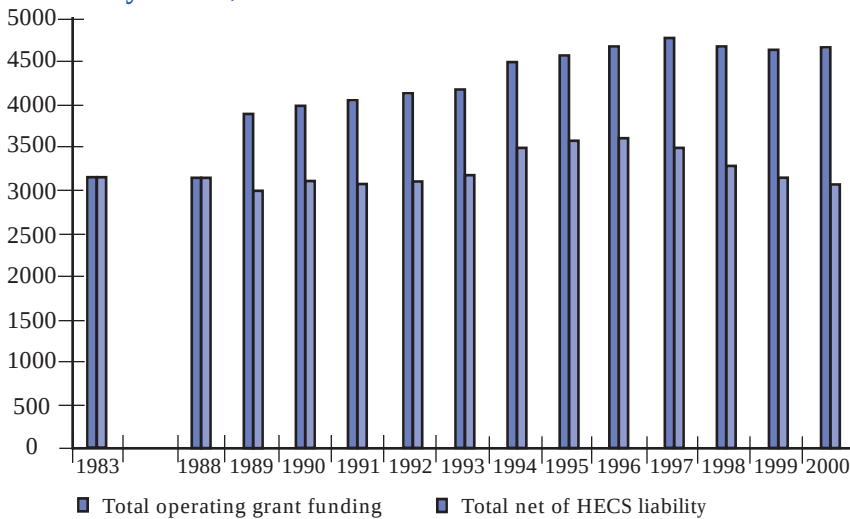
The Commonwealth Government remains the dominant provider of funding for higher education in Australia. The Government, through the Employment, Education, Training and Youth Affairs portfolio (and including transfers from the HECS Trust Fund), provides \$5.6 billion of the \$8.4 billion available to higher education. The *Higher Education Funding Report for the 1998–2000 Triennium* indicates that the Commonwealth Government will remain the largest single source of revenue for universities into the next century.

Additional non-government funding has resulted from Commonwealth policy changes concerning fees for overseas students (since 1990), postgraduate students (since the late 1980s) and undergraduate students (since 1998), as well as the implementation of HECS.

In 1990, Commonwealth grants (net of HECS liabilities) provided 63 per cent of university income. In 1996, 57 per cent of university operating revenue was provided by the Commonwealth. HECS contributed about 11.6 per cent of funding (or 9.5 per cent based on HECS revenue received by the Commonwealth rather than total HECS liability incurred). Fees and charges have contributed an increasing percentage of funds: 13.4 per cent in 1996 compared with 8.4 per cent in 1990.¹⁹

The decline in the public component of operating funds provided to universities from 1997 is illustrated in figure 3.5.

Figure 3.5: Commonwealth operating grants for higher education—total and total net of HECS liability: 1983, 1988 to 2000²⁰

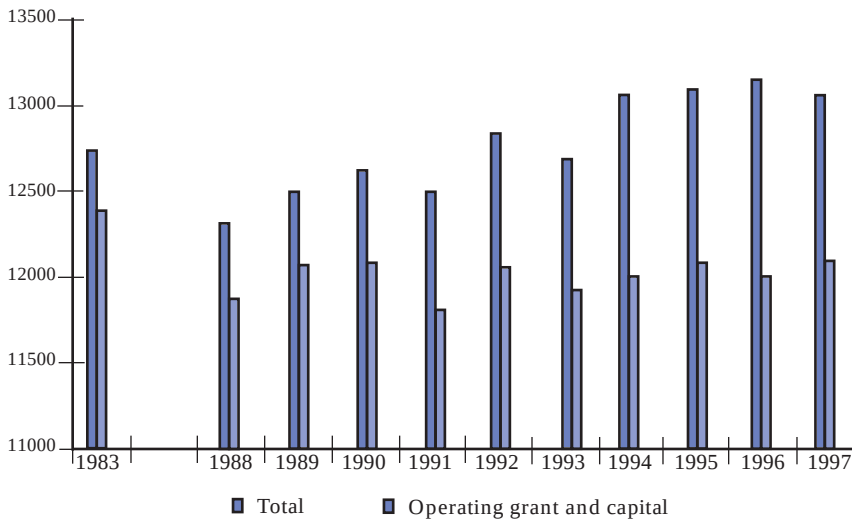


Despite the decline in its *share* of aggregate funding, Commonwealth funding has largely kept pace with the growth in student enrolments. Total Commonwealth funding per EFTSU generally increased in real terms from 1989, following declines during the 1980s. This largely reflected growth in targeted research funding. Per EFTSU, funding provided as operating grant and for capital purposes has declined modestly, to be 2 per cent lower now than in 1983 (see figure 3.6).

¹⁹ DEET, *Selected Higher Education Statistics 1991*, AGPS, Canberra, 1992; and DEETYA, *Selected Higher Education Finance Statistics 1996*, AGPS, Canberra, 1997.

²⁰ Higher Education Division, DEETYA. Figures for 1998 to 2000 are estimates. HECS liability and operating grant funding is recorded in constant 1998 dollars. Operating grant funding excludes capital roll-in, open learning, multimedia, student unions, quality assurance and innovation and Commonwealth Industry Places Scheme funding. It includes relative funding adjustments, Research Quantum, National Priority (Reserve) Fund, superannuation, Aboriginal Participation funds and teaching hospitals. It also includes funding for the John Curtin School of Medical Research (except between 1993 and June 1997 when it was funded outside the Education portfolio). Operating grant funding is not adjusted for the transfer of research funding from universities to ARC from 1989 to 1991.

Figure 3.6: Commonwealth funding per EFTSU, 1983, 1988 to 1997



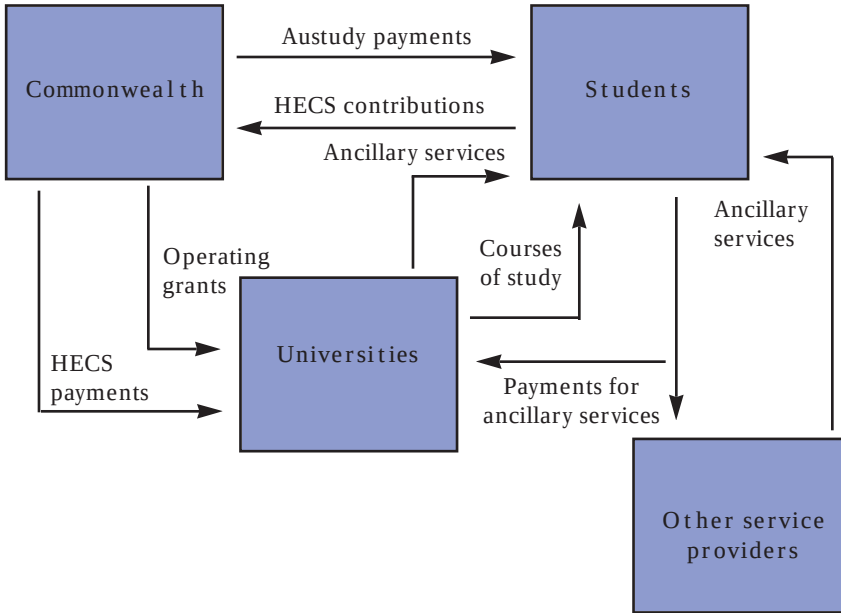
As well as providing scope for universities to access increased non-government funding for their activities, governments have progressively relaxed the level of administrative control over publicly funded universities to allow student demand to play an increased role in the allocation of resources and to provide institutions with greater responsibility for managing their resources. The new industrial relations framework, with the Commonwealth's withdrawal from a direct role in salary bargaining, has emphasised wage and salary bargaining at the enterprise level.

Despite these changes, the higher education system essentially remains centrally planned.

- As outlined above, the size of the largest single element of each institution's income is still determined by the Commonwealth.
- The number of publicly funded domestic students at any particular public university is constrained by centrally set student load targets, as is the distribution of activity between levels of award and, to a lesser extent, between disciplines.
- The Commonwealth maintains controls over tuition charges for domestic students at the undergraduate level.
- The Commonwealth continues to influence salary outcomes through the supplementation arrangements which apply to Commonwealth grants and rules on tuition and other charges for students.
- The Commonwealth continues to regulate a range of activities, such as the fees for overseas students, through the Higher Education Funding Act.

The present structure of the sector and its relationship to the Commonwealth are illustrated in figure 3.7.

Figure 3.7: Current financial relationships between the Commonwealth, students, universities and other service providers

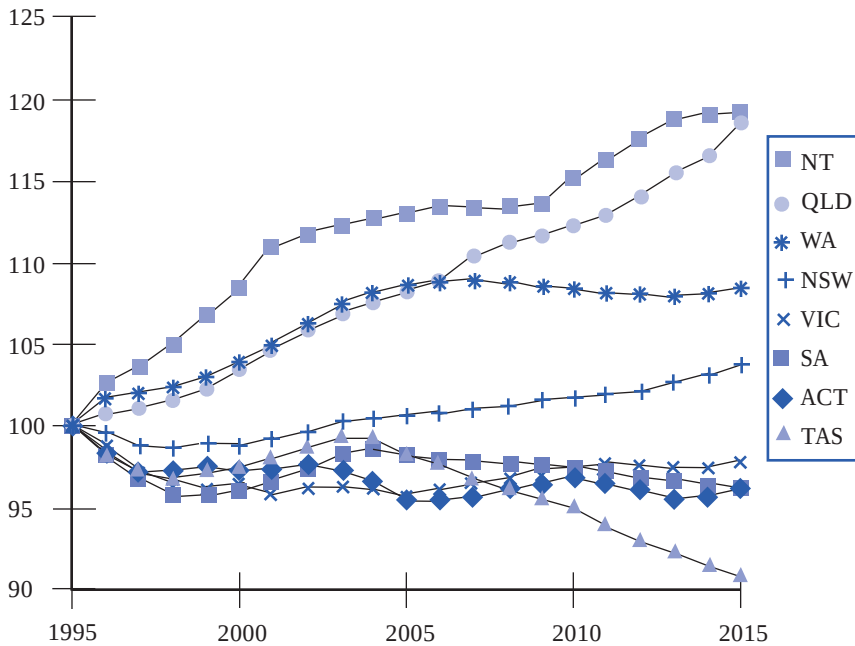


Far from being able to cope with the future environment, the level of central planning illustrated in figure 3.7 already shows signs of strain. The distribution of students across universities would be different if the decision about where to study were left to students and universities rather than based on centrally decided student load targets that take only indirect account of student demand. Changes in institutions' entry cut-off scores between years show that many universities could potentially take greater numbers of students without compromising entry standards. Targets effectively restrict the freedom of institutions to select students they judge capable of successfully undertaking higher education studies, and restricts students' choice of university. Targets also cushion institutions from the need to adapt to changes in demand.

Current funding arrangements exacerbate the inflexibility of the system by virtually guaranteeing institutions that each year they will receive the operating funds they received in the previous year. Once operating resources are allocated to institutions, they are effectively 'locked in' indefinitely owing to the absence of any suitable, widely accepted mechanism to reallocate resources.

This is not a sustainable situation, as Australia's changing demography alone will require resources to be redistributed between institutions. While the population in the age group from which most higher education students are drawn is projected to grow slowly over the next two decades, the geographic distribution of this group will change considerably, with high rates of growth in some regions and declines in others. Numbers will grow steadily in Queensland, Western Australia and the Northern Territory over the next two decades, but be stable or decline in the other States and the Australian Capital Territory (see figure 3.8).

Figure 3.8: Projected demographic impact on demand for undergraduate places by State/Territory (index 1995=100)²¹



At present, each university's decisions about resource allocation and quality are driven by government funding decisions. Furthermore, universities are not financially accountable to students. At the undergraduate level, the Commonwealth continues to act as the purchaser of places on behalf of students. Students do not have a direct financial relationship with the institutions at which they study, as HECS payments represent payment by them to the Commonwealth rather than the institutions. Universities are financially accountable to the Commonwealth rather than to students, and it is only natural that they respond primarily to the signals and decisions of the central funding agency. In effect, the current arrangements assume that central administrators know more about the capacities of institutions and the needs of students than do institutions and students themselves.

Greater sensitivity by institutions to the changing preferences of students would assist in the adjustments that changing demography, ongoing pressures for retraining and skills renewal and lifelong learning will require.

Regulatory arrangements are inconsistent

The present regulatory arrangements have evolved in an ad hoc fashion over a number of years, leaving the system with an inconsistent mix of regulation and deregulation. This is apparent in four main areas: salaries, fee-paying arrangements, the interface between the higher education and Vocational Education and Training sectors, and an unclear delineation of roles between the Commonwealth and States in the higher education area.

²¹ ABS, *Projections of the populations of Australia, States and Territories*, Cat. no. 3222.0, Canberra, 1996.

Salaries

The inconsistency of the present regulatory arrangements is particularly evident in relation to wages and salaries. Partial deregulation has provided institutions with increased freedom in wage bargaining but not with the flexibility or incentive to make use of that freedom in ways beneficial to both staff and students.

Before 1995 the Commonwealth was a direct party to wage fixing in the higher education sector and fully funded wage rises agreed to by the Industrial Relations Commission through supplementation of operating grants. Since 1996, the Commonwealth has ceased to be a direct party in the wage and salary bargaining in higher education institutions. It is now expected that bargaining will be carried out at the enterprise level.

Decentralised industrial relations arrangements have also been accompanied by changes in the way in which wage and salary increases in the university sector are funded. The Commonwealth considers that institutions should fund wage rises above the minimum levels provided by the Safety Net Adjustment (SNA). The notional salaries component of operating grants (75 per cent) is indexed on the basis of movements in the SNA (estimated to be approximately 1.5 per cent per annum).²²

Assuming higher education salaries move in line with economy-wide price increases, the real purchasing power of operating grants will decline unless they are offset by 'productivity' improvements. Thus any increase in salaries is likely to mean a reduction in staff unless universities have access to alternative sources of revenue.

However, institutions' greater industrial relations freedom has taken place within a financing framework in which there has not been a commensurate increase in their capacity to earn additional revenue.

- Student numbers in institutions are constrained by targets set by government.
- Restrictions on charging fees additional to HECS and regulating tuition charges through HECS mean that increases in wage costs cannot be funded through increased student charges.
- While institutions now have a limited capacity to charge fees for undergraduate students in places additional to their Commonwealth target load, any fees must be set against the framework of the current HECS arrangements.

Although institutions are expected to work within a deregulated industrial relations framework, they are constrained by their limited flexibility to set fees and expand student numbers. At the same time, institutions are not subject to the competitive pressures experienced by other industries. This stifles incentives for staff and management to achieve cost efficiency and improve productivity. As Chapman has observed, these arrangements do not represent a workable policy position in the medium to long term.²³

²² Australian Industrial Relations Commission.

²³ Bruce Chapman, *Some Financing Issues for Australian Higher Education Teaching*, Appendix 13 of Discussion Paper, 1997.

Chapman on enterprise bargaining

The essential problem with the application of an enterprise bargaining regime to what is basically a publicly funded system is that, unlike the application of enterprise bargaining in the private sector, there are no instruments available to make the arrangement operational. Private sector enterprise bargaining is much more workable because there are many things that a firm can adjust to accommodate a change in working relationships. Most obviously, private firms can choose to vary their prices, or they can institute profit sharing relationships, or they can change the level and/or quality of output.

However, universities in an enterprise bargaining situation face the unpalatable option of a fixed pie: they can, for example, choose to give salaried staff a pay rise to maintain real incomes, but if this option is taken something else has to give, such as the lay off of staff. And in the context of governments not being willing to increase or even maintain real levels of higher education expenditure, an enterprise bargaining system inevitably exerts significant pressure for the sector to find independent funding sources. Enterprise bargaining as an industrial relations arrangement only makes sense if there is an instrument available that can adjust to take into account changed economic relations between employers and employees.²⁴

In papers commissioned by the Review Committee, both Chapman and Global Alliance Ltd (GAL) expressed concern about current reward structures for academic staff.²⁵ Among others, they believe that these structures and, in particular, salary levels will not encourage the 'best and brightest' to continue with their studies or even to consider academic careers. Chapman points out that the salary of a Level E professor decreased by 25 per cent in real terms over the period 1983 to 1996.²⁶ In addition, the structures provide no incentive for university academics to improve teaching productivity, as most rewards flow to students or the institution, not to teaching staff.

Fee paying arrangements

The progressive deregulation of fees and the recent changes to HECS have resulted in a fees policy that lacks overall coherence.

- At the *postgraduate level*, students, with the exception of those undertaking first professional qualifications in teaching, nursing and medicine, may be charged up-front tuition fees. There are no restrictions on the fee level. At present, institutions may count fee paying postgraduate places in their total places target. However, from 2000 this will no longer be the case.
- At the *undergraduate level*, institutions are able to charge fees to students occupying places additional to the undergraduate target. Minimum fees equivalent to the relevant discounted HECS rate apply. Fee paying students are restricted to 25 per cent of the students in any given course.
- Overseas students are required to pay tuition fees. Minimum fees set by the Commonwealth ensure that overseas students are not cross-subsidised from operating grant funding. Most rates set are less than the notional rates at which the Commonwealth funds public institutions. A comparative analysis of the cost of courses for overseas students in a number of countries suggests that the minimum fees may limit the competitiveness of Australian

²⁴ *ibid.*

²⁵ *ibid.* and Global Alliance Ltd, *Australian Higher Education in the Era of Mass Customisation*, Appendix 11, 1997.

²⁶ Chapman, *op. cit.*

institutions. The comparison shows that fees for arts, business, engineering and science cluster 'above a floor dictated by the minimum indicative fee'.²⁷ This means that fees for engineering and science courses in Australia are higher than for equivalent courses in US public universities.

Integration of the postsecondary education sector

There is no easily defined boundary between the higher education and the Vocational Education and Training (VET) sectors in post-compulsory education. While the trade and vocational programs offered by VET providers are differentiated from the higher degree study offered by universities, considerable commonality exists at diploma through to degree levels.

Linkages between the Vocational Education and Training sector and the higher education sector have improved significantly during the 1990s with institutions concentrating on credit transfer, recognising prior learning and increasingly recognising the benefits derived from cooperative arrangements. In 1995, NBEET identified seven types of collaboration between the higher education and VET sectors:

- pathways between university and TAFE, particularly arrangements for credit transfer and articulated courses;
- joint courses;
- co-location and joint developments;
- cross-sectoral institutions (eg Royal Melbourne Institute of Technology);
- cross-sectoral provision of units of study;
- specialised education and training facilities; and
- strategic alliances.

Higher education and VET provision increasingly represent *alternatives* for many people as well as *complements* to their current study choices. This is illustrated by the overlap of awards and growing credit transfer and articulation arrangements.

In 1995, 5 per cent of students commencing a bachelor degree were admitted on the basis of a completed TAFE qualification.²⁸ In 1997, this had increased slightly to 7 per cent (14,320 students). Students flow in the other direction in even greater numbers: in 1996, 17 per cent (42,786) of clients in vocational programs had previously completed a degree and/or postgraduate diploma.

However, separate regulatory and funding arrangements for the two sectors mean that the best use is not made of the resources available for postsecondary education in Australia. Artificial administrative boundaries may distort students' choices between VET and higher education and also affect the way institutions in both sectors respond to student and employer needs.

- Although it is difficult to make comparisons between the VET and higher education sectors, estimates indicate that public funding per full-time equivalent student for TAFE is, on average, greater in absolute terms than that provided for higher education.
- Most higher education students in undergraduate courses may defer payment of tuition charges through HECS. No such benefit is available for TAFE students.

²⁷ IDP Education Australia, *Comparative Costs of Higher Education Courses for International Students in Australia, New Zealand, the United Kingdom, Canada and the United States*, AGPS, Canberra, 1997, p. 66.

²⁸ It is difficult to obtain comparable data prior to this.

- Current fee arrangements do not efficiently distribute public resources between sectors. Lower student charges in TAFE mean that it is cheaper for a student to undertake two years of a TAFE qualification which provides a year's credit towards a degree than to undertake the first year of a degree. In terms of the public funding provided, the reverse is true.

Within these constraints, individual higher education institutions have done their best to assist students by simplifying credit transfer arrangements and collaborating with VET providers.

While the distinctions (between the purpose and operation of VET and higher education) are critical and need to be acknowledged, they need not, however, be a barrier to a seamless system if they are recognised and accounted for in the development of such a system.

Australian National Training Authority, Response to the Discussion Paper, No. 109.

There are real and valuable differences between university and adult vocational education. The aim should be to remove barriers from student pathways, not diminish the diversity and vitality of tertiary education.

Robin Ryan, Response to the Discussion Paper, No. 86.

Higher education and VET are best conceived of as parts of a continuum of postsecondary provision. The Review Committee strongly affirms the distinctive missions of the institutions which belong to the two sectors. We also recognise that, at the margin, strict definition is difficult, as attempts to regulate the boundaries have shown. In an increasingly competitive environment the boundaries will be harder to define. Institutions may wish to enter into cross-sectoral and international partnerships or establish spin-off companies in their attempts to exploit education and training opportunities, either in new fields such as hospitality or in growing areas of provision such as professional upgrading. Most institutions from both sectors are establishing attractive courses for overseas students and there is overlap here. The fact is that students are also ignoring boundaries as they seek to put together 'packages' of education.

If the best use is to be made of the public resources invested in postsecondary education, arrangements must facilitate the development of pathways and study combinations which make use of the strengths of different institutions and broaden the range of options for students.

Mixed Commonwealth and State involvement

The Commonwealth does not have constitutional power over higher education—all but two universities and the Australian Maritime College (AMC) were established under State legislation. However, the Commonwealth plays a pivotal role in higher education policy and administration, flowing from its responsibility for higher education funding.

The States are responsible for higher education legislation and governance. They identify broad priorities for developing the higher education sector, taking account of their obligations in respect of other levels of education, regional development, planning and infrastructure provision. Multilateral consultation between the Commonwealth and the States on higher education matters takes place through the Ministerial Council on Employment, Education, Training and Youth Affairs. Commonwealth–State joint planning committees provide advice to State and

Commonwealth ministers on matters such as State specific higher education needs, the source and distribution of higher education resources among the institutions within States, and other matters such as mergers and rationalisation of institutions and campuses and cooperation with TAFE.

In its report to the Government, the National Commission of Audit argued for a clearer Commonwealth–State delineation of roles across the education sector generally.²⁹ It recommended that the Commonwealth negotiate with the States the following delineation of roles:

- the States' role should encompass preschool, primary and secondary education, and Commonwealth funding of secondary education should be transferred by untied grants to the States; and
- the Commonwealth's role should encompass Vocational Education and Training, and higher education and State funding of VET should be transferred to the Commonwealth through a reduction in general purpose grants.³⁰

The historical roles of the Commonwealth and the States in the higher education sector will create difficulties in facilitating change. Negotiation between the two levels will be required to allow changes in regard to:

- governance and management reform;
- regulatory arrangements concerning the interface between the VET and higher education sector; and
- competition reform.

A clearer and more straightforward distinction of the Commonwealth and State roles in the area of education and training would help universities to manage their relationship with government as well as to improve policy making.

Structure of incentives is poor

The current policy and funding framework provides little incentive for institutions to be different or to innovate. In addition, present incentives encourage institutions to undertake research activity at the expense of pursuing excellence in teaching.

Diversity is not encouraged

In 1987, 19 universities, 46 colleges of advanced education and 24 other publicly funded institutions were providing 'advanced' and higher education. After a decade of restructuring following the abolition of the binary divide, the Australian higher education system comprises:

- thirty-six Commonwealth funded universities which, collectively, dominate the system;
- four higher education institutions that are not universities (Avondale College, Marcus Oldham College, the AMC and Batchelor College) but which receive operating grant funds from the Commonwealth;
- the Australian Film, Television and Radio School (AFTRS), the National Institute of Dramatic Art (NIDA) and the Australian Defence Force Academy (ADFA), which receive their main operating funds from other portfolios;³¹

²⁹ See *National Commission of Audit: Report to the Commonwealth Government*, AGPS, Canberra, June 1996.

³⁰ The report made other recommendations relating to the funding of VET and higher education.

³¹ AFTRS and NIDA are supported through the Communications and the Arts portfolio. ADFA is supported through the Defence portfolio.

- two private universities which do not receive operating grant funds from the Commonwealth although they do have access to some forms of public funding provided for research (Bond and Notre Dame); and
- more than 40 other private providers, including theological colleges and providers with specialist interests in particular artistic or vocational fields.

Clearly, a degree of diversity exists among the 36 Commonwealth funded universities. Some institutions place more emphasis on the delivery of distance education, others more on the overseas student market. All universities participate in research, although some are involved in research to a greater extent than others.

Apart from differences in emphasis, however, Australian public universities are all comprehensive institutions of higher education. The current system of centralised resource allocation and controls over tuition fees encourages 'a one size fits all' system. While there is some diversity in mission, clientele, mode of delivery, educational philosophy and style within the system, far greater differentiation is possible and, indeed, desirable.

Institutions have little scope to influence the revenue they gain from teaching publicly funded students. Funding per student is centrally determined. HECS charges for undergraduates are set by the Commonwealth and, in fact, represent a charge levied by the Commonwealth rather than individual institutions. In other words, institutions, in making choices regarding the nature and the composition of inputs, are constrained by centrally determined budgets rather than influenced by an assessment of student needs.

There is no real incentive, for example, for universities to seek low cost delivery options. As a result, such options are available only through 'roundabout' mechanisms, such as the courses offered by OLA, by institutions' private arms or through arrangements with private higher education or Vocational Education and Training providers. Our consideration of the future environment in chapter 2 makes clear that a much greater diversity in delivery options, including low cost options, will be necessary.

A less than ideal environment for innovation

The current funding arrangements do not encourage any large scale re-examination of traditional methods by institutions. Significant re-engineering of internal processes is a difficult task and, without clear incentives to undertake it, institutions are likely to avoid tackling the issue.

Present incentives tend to encourage the system to invest in large scale 'bricks and mortar' infrastructure such as lecture theatres because capital funding is usually easier to obtain for these purposes. New technologies may offer cheaper means of communicating information to large numbers of people, although some level of initial investment is required.

The present financing framework does not really encourage collective action across the sector to build and maintain expensive support services such as library services.

Our universities are increasingly, and desirably, competitive but that competitiveness depends on a strong infrastructure created through collaborative action.

Council of Australian University Librarians, Response to the Discussion Paper, No. 78.

Centrally set funding rates mean that institutions can afford to defer to the 'not invented here' principle in developing individual courses and course materials, rather than collaborating to develop better quality and less expensive materials.

Incentives are skewed toward research

Within the current funding framework, the incentives to undertake research activity are greater than those encouraging excellence in teaching. Research is the only area of activity in which variables the institutions control relate directly to public funding. It is also the area of activity in which there is the greatest opportunity to gain marginal increases in revenue. This stands in contrast to the allocation of operating funding for teaching, which does not directly reflect the demand for places at a particular institution or the quality of teaching and learning provided.

Significant steps have been taken in the Northern Territory University over the past few years to promote excellence in teaching ... There is still a perception that research counts for more and achievements in research are apparently easier to measure. This culture will take a while to change regardless of the framework.

Northern Territory University, Response to the Discussion Paper, No. 54.

Effective management is hindered

The present funding framework does not assist, or provide incentives for, institutions to manage effectively. Governance structures hamper management and there are no incentives for institutions to be aware of their costs or to minimise them. The public support provided to institutions and students is not always delivered in a transparent way.

Governance structures hamper management

Despite the high level of autonomy provided to higher education institutions, outdated governance arrangements disadvantage many in pursuing their objectives. University governance and management were reviewed in 1995 by a committee chaired by David Hoare.³² That committee's report concluded that several factors were working against the effective operation of governing bodies:

- lack of clarity about their primary role (guidance and review versus executive management, advancement of corporate versus sectional interests);
- their relationship with their own committees (in most universities much of the work of governing bodies is undertaken by committees);
- their relationship with the vice-chancellor (a clear definition is needed);
- their size and composition (quality of members is more important than size of membership and 10–15 members can generally provide an appropriate mix of members);
- shortcomings in definition of members' obligations and their induction and training; and
- enabling legislation too general in some areas and over-restrictive in others.

In relation to strategic management, the Hoare report found that although institutions have defined strategic planning processes these vary in quality across the sector and could be improved.³³

³² See Higher Education Management Review, Summary of Committee Report and Recommendations, AGPS, Canberra, December 1995.

³³ *ibid.*, p. 62.

The Government did not formally respond to the Hoare report. Some adjustments have been made at the individual institution level. However, current governance arrangements continue to hinder businesslike operation.

No incentives to be 'cost aware'

Australia's universities lack information about costs and, consequently, do not have a good understanding of their cost structures. While it is accepted that the particular range of service offered to students is a matter of choice, lack of understanding of costs does not equip institutions well to manage in an environment where price competition is likely to become more intense. In a more competitive environment, success or failure will depend more critically on their capacity to make economic decisions about different types of provision.

Many institutions are attempting to come to grips with these issues by reducing their administrative overhead costs. A small number are attempting to reduce costs by using information technologies to automate administrative processes. With some exceptions, Australian higher education institutions appear to be approaching issues of costs using the domestic higher education market as the benchmark. Given the imperatives of globalisation, it may be important to consider these issues more from an international viewpoint.

No incentives to minimise costs

Under current arrangements, low cost delivery benefits institutions rather than students. With centrally fixed student charges, reduced costs cannot be passed on to students in the form of lower fees. In the absence of price competition, institutions are able to pocket the difference between the funding they receive from the Government and actual costs of delivery, and use it for activities that they or the Government value.

The commissioned paper by Global Alliance Ltd points out that the substantial cost difference between providing education to first year students and providing it to students in later years, as well as that between some courses and others, provides scope for large cross-subsidisation.

There is also no incentive to develop low cost options which students may prefer. Controls over student numbers mean that institutions cannot make a trade-off between cost and volume; that is, they cannot choose to follow a strategy of increasing student numbers as an offset to lower student charges. The only students to benefit from the existence of lower cost study options are those who enrol in units provided by the OLA.

Controls over tuition fees restrict institutions' capacity to offer more expensive, higher quality options. Centrally constrained budgets mean that institutional choices in areas such as the level of support provided to students, staff student ratios and the quality of staff are constrained by administrative decision rather than students' willingness to pay.

Equally important, without greater pricing flexibility, institutions may be at a competitive disadvantage if overseas universities decide to enter the Australian market; for example, by using flexible delivery technologies or the VET sector as a delivery platform for higher education study at prices equal to, or less than, current HECS charges.

Public support for institutions and students is not always transparent

Public support for institutions and for students undertaking higher education is delivered in a mix of ways and is often not identifiable.

- Public resources tied up in university assets have potential uses other than educational uses. In some cases an alternative use of the asset may provide a greater return. The opportunity cost to the community is not recognised or accounted for in resource allocation decisions by institutions.
- Subsidies for teaching and research are not explicitly differentiated. Commonwealth operating grants pay for both teaching and some staff research time. The resources devoted directly or indirectly to teaching are often considerably less than the operating funding allocated.
- Public funding provided to students who defer payment of the tuition charge through HECS is hidden. Students who defer payment of HECS receive the benefit of an interest free loan. The Government pays the difference between the cost of borrowing funds and the rate of inflation, and also bears the cost of administration and default. The value of this benefit to students varies according to how quickly they repay the debt. These costs are, to some extent, recognised indirectly through the 25 per cent discount provided to up-front HECS payers.

Some equity aims have not been achieved

The 1988 White Paper emphasised equity as a higher education policy objective. In 1990, the Government released a policy framework for equity in higher education.³⁴ One of the main aims of the equity framework was to ensure that students from all social groups have the opportunity to participate successfully in higher education, with the student population reflecting more closely the composition of society as a whole. Responsibility for pursuing national targets is vested in the universities. Institutions are required to include an equity plan in their educational profiles, and the funding they receive under the Higher Education Equity Program depends on assessment of those plans.

Women

Clearly some groups have benefited from the Government's equity initiatives in the past decade. Women's participation in higher education is now greater than men's. In 1997, 54 per cent of students were females, up from 50 per cent in 1987. Women's participation in non-traditional areas of study has also increased. Between 1987 and 1997 the proportion of women increased in:

- business, from 35 per cent to 47 per cent;
- architecture, from 30 per cent to 36 per cent;
- engineering, from 7 per cent to 14 per cent; and
- science, from 36 per cent to 41 per cent.

In engineering, where women are still significantly under-represented, their success and retention rates are at least as good as those for men.

Aboriginal and Torres Strait Islanders

In 1997, one per cent (7,461) of students were Aboriginal or Torres Strait Islanders. Aboriginal and Torres Strait Islander student numbers had grown nearly ninefold (from 854) since 1982.³⁵ Half (3,743) were enrolled at bachelor level and approximately one-fifth (1,442) in enabling courses.

³⁴ DEETYA and NBEET, *A Fair Chance for All: Higher Education That's Within Everyone's Reach*, AGPS, Canberra, 1990.

³⁵ Figures for Aboriginal students are not available for 1983–86.

Initiatives to introduce Aboriginal and Torres Strait Islander students to higher education have been very successful. The number of Indigenous students has more than trebled, albeit from a low base. In 1996, the proportion of Indigenous students among commencing students was broadly comparable with the proportion of Indigenous people in the university age population.

However, Aboriginal and Torres Strait Islanders continued to be under-represented in many disciplines (particularly law and medicine) and in postgraduate study. Almost half of Indigenous students embarking on higher education courses were enrolled in sub-degree courses and their success rate was low—about 65 per cent, compared with 85 per cent for other students.

Students with disabilities

Students with disabilities continue to be under-represented in higher education, although their numbers are growing steadily as a result of recent program action and increased targeting by institutions. These students, once provided with appropriate facilities for pursuing higher education, generally perform as well as students without disabilities.

Non-English speaking background

Fifteen per cent of domestic students in 1997 came from homes in which the language spoken at home was not English. This was significantly greater than the proportion of non-English speaking background people in the 17–64 population group (approximately 8 per cent).

Lower socioeconomic status and rural and isolated

Students continue to be drawn disproportionately from higher Socio-Economic Status (SES) backgrounds and from urban areas. In 1996, a Higher Education Council report commented that, while considerable progress had been achieved over the previous five years, people from low socioeconomic groups and from rural and isolated areas were still significantly under-represented in higher education.³⁶

Although the numbers of students from such backgrounds entering higher education have increased, their share of total new commencements, relative to those of other students, has not. For those who have entered higher education, however, success and retention rates are comparable to those for other students.

The rural and isolated equity group was the only group to show an overall decline in access and participation from 1991 to 1995. The Higher Education Council pointed out that ‘the isolated group is one of the most disadvantaged equity groups in terms of access and the most under-represented group in terms of participation’.³⁷

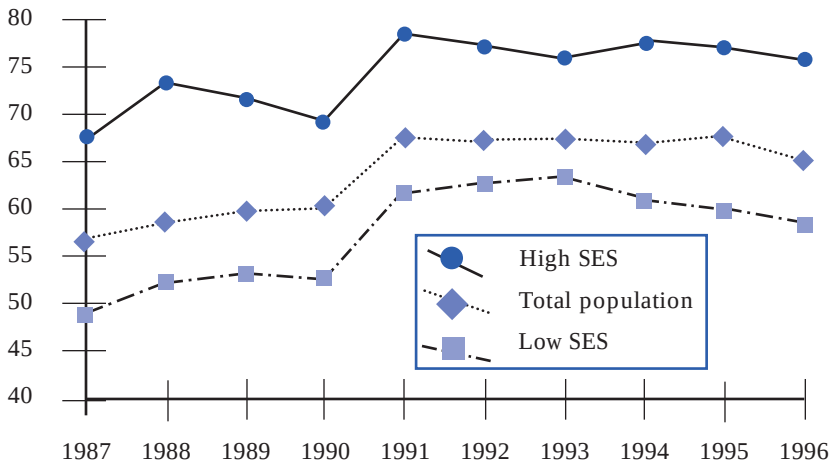
The impact of factors unrelated to higher education

At least some of the determinants of low participation by some groups are outside the immediate control of the higher education system. Analysis suggests that the disproportionate level of students from lower SES backgrounds reflects differences in academic achievement and family attitudes rather than SES-related differences in the accessibility of higher education.³⁸ The Committee recognises that assistance to students for living costs may play a part in this, and comments further below.

³⁶ See HEC, *Equality, Diversity and Excellence: Advancing the National Higher Education Equity Framework*, AGPS, Canberra, 1996.

³⁷ *ibid.*, p. 43.

³⁸ See Williams, Long, Carpenter and Hayden, *Year 12 in the 1980s*, AGPS, Canberra, February 1993; Williams, et al., *Entering Higher Education in the 1980s*, AGPS, Canberra, July 1993; and Long, Carpenter and Hayden, *Graduating from Higher Education*, AGPS, Canberra, June 1995.

Figure 3.9: Year 12 completion rates (1987–96) by SES ³⁹

Imbalances in educational opportunity in the earlier, formative years also affect what can be achieved at the higher education level. Rates of completion of Year 12 remain significantly higher for young people from high SES backgrounds than for those from low SES backgrounds (see figure 3.9). Year 12 retention rates for Indigenous Australians are much lower than those for other Australians. This is a serious national issue which must be addressed.

Recommendation 2

That governments should make every effort to ensure that virtually all young people proceed to the end of secondary education in order to open up possibilities in later life for participation in postsecondary education.

Student income support

Given that living costs make up a substantial proportion of the direct costs of undertaking higher education, student income support arrangements potentially have a large impact on access to higher education. Both in discussions with the Committee and in submissions, individual students and their representatives as well as other groups such as the Australian Vice-Chancellors' Committee (AVCC) expressed concern with current income support arrangements.⁴⁰ The National Union of Students (NUS) stated that 'the existence of an accessible and livable level of student financial assistance is a cornerstone of efforts to create an equitable system of higher education'.⁴¹ It is claimed in a number of submissions that current AUSTUDY arrangements are a major barrier and disincentive to study, both in the level of support offered and in the eligibility rules which apply—particularly the recent increase in the age of independence to 25 years.

³⁹ Schools Division, DEETYA estimates.

⁴⁰ AVCC, Submission No. 227.

⁴¹ NUS, Submission No. 373.

Studies examining the role of AUSTUDY in relation to school and higher education participation rates have tended to conclude that, for most students, AUSTUDY has not been a major determinant of secondary or tertiary education participation rates.⁴² The socioeconomic profile of university students continues to favour those from higher SES backgrounds, and there has been little change in this pattern over the past two decades, despite large increases in overall student numbers. Students' attitudes to post-compulsory education are developed fairly early and are influenced by many factors, including family, school and peer attitudes, personal interest, as well as by access to financial resources.

Williams et al suggest that, while fewer Year 12 graduates from poorer families proceeded to higher education during the 1980s, this difference may be explained by factors such as access to private schooling and psychological support available within families, rather than by wealth directly.⁴³ They conclude that student assistance programs assist young disadvantaged students to access higher education but that a further injection of funds to increase the student coverage would be unlikely to improve significantly the participation rates of young disadvantaged students.

Competition is restricted

The current higher education policy framework has a number of features which impede competition.

Inequality of access to public funds

Only the 40 public institutions listed in tables A and B of the Higher Education Funding Act (HEFA) have access to public funds in the form of operating grants. Restricting public funding to a certain set of 'public' institutions represents one of the greatest impediments to the development of a private higher education sector in Australia. The highly subsidised education at public universities makes it difficult for private institutions to compete for students on price.

The principle that public funding should be provided to non-government education providers in the schools and VET sectors has been readily accepted by the Australian community. The same principle should apply to higher education. From the student's point of view, there are great inequities in arrangements which base eligibility for public funding on definitions of whether an institution is 'public' or 'private'. The 'public' benefits flowing from privately provided higher education are arguably as great as those flowing from public education.

Access to loans with repayment contingent on income is restricted

Under current arrangements, government loans with repayment contingent on income are available only to students at institutions receiving public funding and to students studying through the OLA. This constitutes a major disincentive for students wishing to study at a private institution, in that they must either pay tuition fees up front or, alternatively, finance tuition costs through a loan at commercial interest rates and under commercial repayment arrangements (typically requiring guarantor or asset backing).

The argument for the provision of HECS style, income-contingent loan finance to students, wherever they study, is strong on the grounds of efficiency, equity and the broadening of students' study options. A competitive neutrality argument can also be made. There is no sound reason for denying students studying in private higher education institutions, or for that matter those Australian undergraduates who will pay up-front fees at public universities from 1998, access to HECS style income-contingent loans.

⁴² Bruce Chapman, *Austudy: towards a more flexible approach*, Canberra, AGPS, 1992; Williams, et al., *Entering Higher Education in the 1980s*, op. cit., 1993.

⁴³ Williams et al., *ibid*.

Accreditation processes

Presently the 40 public institutions listed in the HEFA and private institutions such as Notre Dame, Bond and the Melbourne College of Divinity are self-accrediting. All other institutions, including those not presently within the higher education sector, must have individual courses accredited externally. This requirement acts as a barrier to new entrants into the sector.

Hilmer on the key principles underlying competition policy

Democratic societies are continually making choices about where and how competition will apply. Sometimes these choices are influenced by economic thinking ... At other times, the choice will reflect either a like or dislike of the results that competition produces ... If a majority of citizens want these results, or a group is able to win them in a political process, then regulation or intervention in a market is necessary. Nothing in competition policy says such intervention is wrong. To the contrary, governments are elected to see that these choices are made as the electorate would wish, and governments ought to be held accountable for the results of the choices.

Competition policy is thus about the principles and processes that determine choices with respect to the nature and extent of competition ... these choices would be made better if made more openly and explicitly, with a fuller understanding of the consequences. In addition, we argued that the choices should be made by representatives of those who use and fund the services or goods provided, and not by the providers ... This was already seen as unsatisfactory some 20 years ago, when the Swanson Committee, which reviewed the Trade Practices Act in 1976, noted that no group in the community should be entitled to judge in its own cause.⁴⁴

Industry dimension of the higher education sector is neglected

Finally, the present policy and financing framework will not be able to address adequately the industry dimension of higher education over the next 10–20 years. It neglects a range of issues that will be important if the sector is to play its part, not only in meeting Australia's skill needs, but also in generating wealth as a major source of export income.

Access to capital

Australian universities will have difficulty maintaining competitiveness in world markets unless they can access funds to finance investment in new technologies and other infrastructure. The paper prepared for the Review Committee by Global Alliance Ltd argued that Australian universities do not have the capacity to finance substantial infrastructure investments. Compared with prestigious private universities in the USA, Australian universities have limited reserves and endowments. For example, the market value of the endowment assets of Yale University was US\$4.9 billion in 1996. No Australian university has access to such assets.

Australian universities are constrained in their ability to borrow funds. They often require the approval of the relevant State or Territory Government to borrow and are generally unable to use land or buildings as security for commercial loans.

⁴⁴ Professor Frederick G. Hilmer, 'Competition Policy and the Universities', November 1995. Paper provided to the Committee by Professor Hilmer.

Also important in increasing university access to capital is the taxation treatment of philanthropic activity by individuals and corporations. Perpetual Trustees Australia Ltd argued in its submission to the Review Committee that taxation law contains a number of disincentives and anomalies which inhibit private philanthropic activity.⁴⁵ In particular, available incentives and vehicles offer insufficient flexibility for private donors to support institutional foundations.

There has been no large scale private equity investment in higher education in Australia to date. The issue is whether this has resulted from a lack of incentives, a failure of the capital markets or the absence of a philanthropic tradition, or a combination of the three.

Balance sheet problems

Global Alliance Ltd found that the balance sheets of most universities in the sector are 'weak' in comparison to the large cash reserves and capital market standing of potential international competitors. This is in some part due to their difficulties in accessing capital.

Institutions' balance sheets do not value land and buildings at market value. This means that financial decisions concerning the use of property are skewed and that some institutions are advantaged over others. However, the present treatment of physical capital is complicated. Universities are subject to a range of controls over the disposal of assets such as land and buildings. Tenure arrangements for land vary considerably between institutions. In some cases, land is owned freehold and, in others, it is owned by the Crown or vested in the university under its enabling legislation. Put simply, without reducing some of the controls over the ability of institutions to manage their total resources, institutions will not possess the flexibility to compete in global markets.

A better framework is needed

The current essentially centrally planned policy and funding framework has been relatively successful in supporting the evolution of higher education into a mass educational system.

- It has successfully sustained massive growth in student numbers, and in doing so has enhanced the accessibility of higher education for Australians.
- In HECS it incorporates a major innovation for equitable access.
- It has supported the emergence of higher education as a major export earner for Australia.
- It has supported a significant expansion of funding for research.
- Relative to other countries, it accords a high degree of autonomy to institutions.

However, the Review Committee's assessment also identified a number of key weaknesses in the present framework, especially in the context of meeting the needs of higher education over the next 10–20 years.

- It places a range of limits on the ability of institutions to respond to shifting demands.
- The regulatory arrangements are inconsistent, with the mix of Commonwealth and State involvement creating unnecessary administrative complexity and funding anomalies.

- It has not provided an environment that sufficiently encourages innovation or diversity.
- It does not encourage or assist institutions to manage effectively.
- Incentives are skewed toward research.
- Its performance on equity has been only partially successful.
- It restricts competition, reducing student choice and conflicting with competitive neutrality principles.
- It does not adequately recognise the industry dimension of higher education and therefore neglects a range of issues that will be important if the sector is to meet Australia's skill needs as well as generating wealth in its own right.

In essence, our analysis indicates that the present policy and financing framework is too rigid, with historical anomalies and inconsistencies that are already beginning to cause tension within the sector. It is becoming clear that some fundamental industry development issues need to be addressed. The present policy and funding arrangements will not be adequate in supporting Australian higher education into the next century.

The future is never exactly as we imagine it to be, but one can be sure that the flexibility and creativity which has characterised our institutions in their short history is the best assurance that we will meet our future successfully.

Higher Education Council, Response to the Discussion Paper, No. 103.

In the next chapter we discuss the principles that should underlie a more integrated and consistent policy and financing framework for the higher education sector.

Chapter 4

The way forward

The current policy and funding framework for higher education has significant weaknesses, reflecting its genesis in a more stable and less competitive era. Our view is that this framework is too cumbersome to address the opportunities and challenges that Australia will face in the next century.

We advocate a significant change in direction.

In essence, we consider that the allocation of public funds needs to be far more responsive to the needs and preferences of those who use the services that universities provide, and far less dependent on centralised planning and university politics. Our universities also need to be able to change in ways that will assist them to remain relevant in the next century and to become major players in the global knowledge economy. Accordingly, we advocate:

- a student centred funding framework—such a framework would increase the choices available to both students and providers of higher education, while encouraging institutions to be more responsive to the needs and preferences of their students;
- a research funding framework in which funding priorities and decisions are more responsive to national needs; and
- a range of measures to re-engineer the regulatory framework and facilitate the structural change needed to equip Australian higher education to meet the challenges of the next century and to enable us to develop a world-class education industry.

The past is no longer on offer. Forty years ago, universities in England offered a fairly standard package of three-year, full-time degrees in a limited range of subjects for 18-21 years olds, in many ways an appropriate model for a more static and less-technological era. Today, technology requires that more people receive more education and training, and the labour market requires learning to be a lifelong experience. Thus there are more students; the training they require is more diverse; and it is changing and will continue to change. The task has become vastly too complex for central planning.

Nicholas Barr, *Market Forces in Higher Education: The UK experience and the view ahead*. Prepared for a conference on Funding Higher Education: Performance and Diversity, Adelaide, July 1997.

A student centred funding framework for teaching and learning

The Committee considers that public funding for tuition should be tied far more closely to student demand than at present. This would be achieved most effectively by building a direct financial relationship between institutions and students, backed with access to loans for which repayment would be contingent on future income.

A student centred approach would bring significant benefits for students, providers of higher education and the Government. In particular it would:

- give institutions strong financial incentives to respond to student needs, thus helping to redress the current skewing of incentives in favour of research;
- allow student preferences to determine the allocation of public funding among institutions, courses and regions, and thereby restrict the scope for the allocation of government higher education funding to be influenced by short-term priorities; and
- provide incentives for institutions to diversify the services they offer—and how, when, where and for what price they offer them—to reflect the diverse needs and preferences of students (the current framework does little to encourage diversity).

A student centred funding framework would make it easier for new providers to enter the market, by removing the barrier to entry that restricts access to public funds to a legislatively designated list of providers. It would also include incentives to encourage students to choose their studies carefully, while encouraging providers to compete vigorously in terms of the nature, price and quality of their offerings. It would provide a fully transparent means of distributing Commonwealth higher education subsidies to individuals. Under the current system, the amount of public subsidy provided to individuals is hidden and differs widely, depending on whether they gain admission to a course, what course they undertake and how often (or for how long) they enrol.

Special-purpose funding for advancing equity objectives needs to be retained. The Government should provide special-purpose support for disciplines that are of national significance, if it can be established that they would not remain viable under student centred funding and a public-interest case for special support can convincingly be made.

It will take time to implement all aspects of this approach, although some changes could be made almost immediately. We acknowledge that change inevitably entails a degree of risk (as, indeed, does not changing). We therefore advocate a cautious and incremental approach to implementation.

In chapter 5, we propose a staged approach to change and discuss the issues that arise in connection with a student centred funding framework.

A more responsive framework for funding research training and research

Consistent with our approach to teaching and learning, we believe that those who are intended to benefit from the outcomes of the research training and research conducted by higher education institutions should have a greater say in how public funding provided to support these activities is allocated.

For research training, we advocate a student centred funding framework that involves:

- an increased role for student choice in determining institutions' funding;
- encouraging institutions to compete for research students by ensuring that prospective students have access to information that will enable them to compare the quality of research training opportunities, and by providing support to allow students to move more easily between institutions; and

- establishing a code of practice defining the minimum standards of service that universities should provide to research students.

The end users of research are not as easy to identify as the end users of teaching. Although some groups (such as private firms or community interest groups) have a particular interest in some of what researchers do, the more basic university research is done on behalf of the community as a whole. For that reason, grounds exist for continuing to use a central funding mechanism to allocate at least a proportion of public research funding.

It will still be necessary to ration funds to maintain a balance between the research training, research and other teaching activities of universities, and because the level of funding available cannot possibly match the demand in universities to undertake research (nor would public support be justified for all university research). Given the high levels of specialist knowledge involved in judging the quality of competing applications for research funding, we see a strong continuing advisory role for the Australian Research Council (ARC). That said, we see it as critical that the advice provided by the ARC be sensitive both to the criterion of ‘excellence’, as defined by the research community, and also to the needs of the broader community. The allocation of research funding needs to be driven to a greater extent than in the past by broader national priorities, and knowledge and skills transfer and technology diffusion should be identified explicitly as priorities by the ARC.

We detail our recommendations relating to research training and research in chapter 6.

A world-class higher education industry

While many in the higher education sector are uncomfortable about thinking of higher education as an industry, the facts are undeniable. Higher education institutions consume resources, manage assets, produce and export services and have customers at home and abroad. In 1996, higher education institutions’ revenues totalled over \$8 billion, contributed about 1.3 per cent of Australia’s Gross Domestic Product, employed nearly 83,000 people and enrolled 53,200¹ international students in public institutions. As Professor John Niland stated in a recent speech to the National Press Club, universities are now Australia’s sixth largest earner of export dollars, ahead of wool and beef.²

The Government urgently should develop the industry dimension of higher education if the changes that we advocate are to be effective. This is all the more pressing because we detect an unwillingness in the sector to do what is necessary for higher education to realise its potential to become a world-class industry in the next century.

- Urgent action is needed to strengthen universities’ ability to mobilise resources, and in particular to increase their capacity to invest in information and communications technology.
- Action is needed to reduce barriers to entry to the industry and to increase competition. Increased competition will produce a stronger Australian higher education sector while also benefiting Australian students and the community as a whole.
- An increasingly competitive industry structure must be accompanied by better consumer protection mechanisms than exist at present.

¹ This figure rose to 62,974 in 1997.

² John Niland, *The Fate of Australian Science—The Future of Australian Universities*, Address to the National Press Club, 25 February 1998. The speech is available on the AVCC’s Web site at <http://www.avcc.edu.au/avcc/speeches/jn250298.htm>.

In chapter 2 we stated our expectation that competition will accelerate as geography becomes less of a limiting factor in the provision of education. In an increasingly globalised environment, it will not be possible to maintain highly protected domestic markets in the long term. The reforms we advocate here and in chapters 5 and 6 are intended to assist the sector to adjust to the reality of greater competition.

The changes to the regulatory framework of higher education that we wish to see—access to resources, regulation and consumer protection mechanisms—should be developed in parallel with a student centred funding framework. We discuss them here, before discussing in detail our recommendations on student centred funding itself. A number of the changes that we propose would be desirable even if the Government did not open the sector to more competition.

Regulating the industry

A number of commentators suggested that we were inconsistent in our approach to regulation in the Discussion Paper. Some perceived that we were advocating less regulation in the funding of teaching, but more regulation in our options for the funding of research. Others felt that student centred funding would create more, not less, regulation of universities.

These criticisms miss the central thrust of our approach. Our goal is for institutions offering higher education services to become more responsive and accountable to those who use them. Regulation is simply a means to achieving that end. The question that needs to be answered is not ‘Do we have too much or too little regulation?’ but rather ‘What kind of regulatory framework is appropriate to support the development of a more responsive and competitive higher education system, and how should that framework be implemented?’

The Government will need to re-engineer the regulatory framework of higher education to accomplish the following objectives:

- access to resources
 - universities should be enabled to use their existing assets more effectively and be given incentives to do so, together with special-purpose support to implement structural changes in the short and medium terms;
 - universities should be supported to conduct activities that are demonstrated to be in the public interest, but which would not survive in a fully open competitive environment;
- regulation
 - barriers to entry to the market should be reduced by reforming accreditation arrangements, while protecting the interests of students and taxpayers;
 - universities should be placed on an equal footing with private institutions by amending State and Commonwealth legislation and taxing and charging regimes;
- consumer protection
 - the Government should require that students be given access to information that will enable them to make sound choices;

- students should have access to a robust complaints mechanism;
- students and taxpayers must be protected by ensuring that institutions that gain access to public funds satisfy minimum standards relating to financial probity.

These matters are addressed in the following sections, followed by a discussion of governance issues.

Access to resources

We expect the digital revolution to have a major impact in the next century on the ways in which higher education services are produced, distributed and exchanged. Major investments will be required to finance the development of world competitive educational goods and services, and to make other structural changes that will be needed to take full advantage of the power of the new technologies. For example, the paper prepared for the Review Committee by Global Alliance Ltd (GAL) estimated that at least US\$500 million would be required to develop computer assisted learning packages for half the first and second year subjects at a typical Australian university.

GAL argued that Australian universities do not have the capacity to finance substantial infrastructure investments. Many of those who commented on the Discussion Paper contended that the higher education system is already under financial strain and that funds available to finance major investments are limited. The obvious question, therefore, is ‘How will the investments be paid for?’

The publicly funded asset base

There is significant—though not unlimited—potential for the higher education system to fund its own structural change by leveraging its substantial, publicly funded asset base, provided that those assets can be freed up.

The current policy and funding framework limits the freedom of, and incentive for, universities to manage their property assets effectively.

- The status of the land occupied by Australian universities is extremely varied. Numerous types of tenure apply, even within individual institutions. A significant proportion of university land is vested in the Crown (State/Territory or Commonwealth) or, if vested in the university, is subject to restrictions on usage and may be sold or leased only with the approval of the responsible (State/Territory or Commonwealth) Minister.
- Universities often pay less than full market rentals for the land that they occupy, and are not always liable for the government charges, such as land rates, that others are required to bear.

Within universities, the use of assets is generally not charged for in ways which provide incentives for staff to use those assets in the most cost effective way. For example, GAL reported that only some universities have systems for depreciating the value of their capital and internally allocating the resultant charges, while none appears to have a system for charging for use and/or depreciation of property and building-related services.

Because the cost of assets is not factored systematically into assessments of the cost of educational delivery, it is not possible to derive an accurate picture of the relative costs of delivering education in particular modes and locations. This introduces competitive imbalances into the sector and inhibits the adoption of innovative approaches to educational delivery.

- Regional universities are disadvantaged, because they cannot take full advantage of the lower cost of land in their locations to offer less expensive courses.
- The true cost differential between more campus intensive and less campus intensive (eg information technology based) forms of educational provision is understated, reducing incentives for universities to move to less campus intensive forms.
- The subsidies enjoyed by existing universities, especially the older ones, in the form of access to land at less than market rates, deter potential new private sector entrants and disadvantage newer, less well-endowed institutions.

Leveraging the existing publicly funded asset base

Enabling universities to use their existing asset base more effectively presents complex legal problems, as a variety of ownership arrangements and a range of jurisdictions are involved. However, in view of the importance of the issues at stake, we believe that those problems should be addressed as a matter of priority.

We have considered a number of possible approaches. In the Discussion Paper we canvassed the possibility of imposing a capital charge on institutions. Such a charge would create a pool of funds that could be reinvested into the sector and would redress existing competitive imbalances and market distortions.

However, unless institutions were free to dispose of assets, such a charge would have the effect of raising fees (if institutions had the power to do this) or reducing effective funding per student. That is, universities would have no option but to pass on to students responsibility for financing structural change. Accordingly, the first priority must be to free up the ability of institutions to dispose of assets.

Recommendation 3

That the Government should work jointly with State and Territory Governments:

- to develop a process for rationalising the ownership and control of assets used by universities, enabling universities to leverage these assets to finance structural change; and
- once this is complete, to ensure that the capital assets of universities are liable to the same taxes and charges that apply to private higher education providers.

This recommendation gives institutions enhanced power to leverage ‘their’ assets to help the sector finance the investments that it will need to continue to operate at a world competitive level. Because institutions would face taxes and charges on their assets, they also would have an incentive to sell assets that were not being used effectively.

The second element of Recommendation 3 is intended to encourage universities to adopt a more businesslike approach to managing their assets. It would also help reduce barriers to entry into the higher education market resulting from the favourable taxation and charging regimes applying to the capital assets of existing universities. We see no case for treating private universities differently from public universities in whatever taxation regime applies to higher education.

A capital charge?

By itself, Recommendation 3 would not address the market distortion where older (better endowed) institutions are advantaged compared to newer (less well endowed) institutions and new entrants to the market because they are able to draw on the significant investment that the Government has made in their capital assets in the past. Charges would generally be applied only to the unimproved value of land and would not reflect the true market value of land and assets.

These are difficult issues. The Review Committee's proposal that a capital charge be placed on institutions that have benefited from past government capital funding is complicated by the fact that the Commonwealth would be entitled to levy a charge only on capital that it had provided since Federation. Determining the mix of funding that has allowed a university to finance any particular asset would be very complex.³

Confounding effects might also be associated with a capital charge. For example, if institutions' capital were depreciated, a capital charge might have a greater effect on newer regional universities than older established universities, because newer universities have benefited from grants from the Commonwealth's capital programs more recently.

Nonetheless, the Review Committee believes that the idea of a capital charge is worth exploring further.

Recommendation 4

That the Government should establish a working party to undertake a study of how a capital charge might be implemented on public assets in the higher education sector.

Special-purpose support

There are many reasons why freeing up universities' assets and providing incentives to use those assets more effectively will not be sufficient by themselves to generate the investment funds that they will need to remain world competitive.

- Compared with the prestigious private universities in the USA, Australian universities have limited reserves and endowments.
- Investment needs to happen now. Freeing up assets may take some time, which Australia's higher education sector cannot afford.

To address these problems the Government should establish a loan fund to finance major programs of innovation and structural change. We prefer loans to grants, because the loans provide far greater incentives for universities to focus their efforts on projects that will genuinely increase their efficiency. However, the loan conditions should allow flexibility in cases where the investments are unlikely to yield benefits for some years.

³ The Review Committee was advised that a capital charge for universities has been under consideration in New Zealand for some years.

The loan fund could be used for a wide range of purposes; for example, developing high quality computer-based courseware, upgrading and/or rationalising library infrastructure and training staff to adjust to the changes being introduced. The fund could be used to support collaborative endeavours as well as endeavours involving one university only.

The effects of a loan fund would be complementary to those that we wish to achieve with Recommendation 3. To repay loans, universities would have to sell assets, re-engineer processes to cut costs and/or use the funds to develop significant revenue generating assets. While providing loans to universities under special conditions could be seen as contravening the spirit of National Competition Policy, we believe that a public-interest case could be made on the grounds that the loans would be available for a limited time only and that they would assist universities to make the transition to a fully competitive environment. In the long term, the Commonwealth should not underwrite institutions' capital upgrading. Institutions should finance their own investments from their revenue and by leveraging their assets.

In order to finance investment on a scale that will have real effects on the sector, access to substantial funds will be required. One way to establish such a fund with existing resources would be to convert the current Capital Development Pool (CDP) into a loan scheme for a limited period. The CDP currently provides around \$40 million to institutions in the form of grants. If these funds were to be disbursed as loans, the value of the pool of funds for lending would rise quickly without adding to Commonwealth costs.

Recommendation 5

That the Government should establish a loan fund to finance major programs of innovation and structural change, including technological investments associated with such changes.

Regulation

The second major area in which we seek to transform the regulatory framework for higher education concerns the mechanisms which govern entry to the market. There are two areas in which we would like to see action: accreditation arrangements and taxation arrangements.

Accreditation arrangements

In chapter 3 we identified current accreditation arrangements as a significant barrier to entry to the market. As is the case with many of the issues discussed in this report, the Government's approach to accreditation arrangements must achieve a number of competing objectives.

While we believe that the current mechanisms must be reformed to increase access to the market, a student centred funding framework needs to be accompanied by robust, transparent and consistent mechanisms to ensure that postsecondary education providers meet minimum academic standards. Access to public funds should be provided only where robust accreditation requirements have been met. Students need to know what they are paying for and taxpayers need to understand what they are subsidising.

Minimum academic standards—The issue of whether a provider of education services meets minimum academic standards really concerns that provider's entitlement to issue qualifications at specific levels, such as 'bachelor degree' and to use titles such as 'university', 'higher education institution' and 'accredited provider'.

In principle, we could choose to be relaxed about the use of those terms and leave it to the market to assess the value of qualifications from different institutions. In practice, that could unnecessarily confuse students, employers, and overseas students. Indeed, a national system of qualifications is a significant source of competitive advantage for a national education system.

Most State Governments operate a recognition or accreditation process and have some form of legislation which protects the use of the titles 'degree' and 'university'. Since 1995 State/Territory processes have been supported by the Australian Qualifications Framework (AQF), which was introduced by the Ministerial Council on Employment, Education, Training and Youth Affairs (MCEETYA)⁴ to support nationally consistent qualifications and learning pathways across the schools, Vocational Education and Training and higher education sectors.

We have considered whether a single national body to accredit higher education institutions should be created to reform these arrangements but have decided not to make a recommendation to this effect. So long as there is consistency in the use of terms across the States and Territories, and academic accreditation processes are at arm's length from government funding allocation processes, a separate national body is not needed.

State and Commonwealth Ministers for Education have recently sought to improve the degree of common ground across jurisdictions. However, it appears the current State-based processes still result in some inconsistencies and differences in approaches.

The States and Territories need a more consistent approach to accreditation. The AQF should be maintained as the single comprehensive framework within which all registered institutions or accrediting authorities issue qualifications in post-compulsory education and training. The consultative arrangements to ensure consistency in interpretation of AQF qualifications should be retained.

Recommendation 6

That the Government, working with the State and Territory Governments, should ensure that consistent criteria and processes exist for recognising university level qualifications offered by providers of higher education, such as 'bachelor degree', and for using the titles 'university' and 'higher education institution'.

Barriers to entry—Existing accreditation arrangements constitute a barrier to entry because new higher education providers cannot become 'self-accrediting' bodies without a dedicated act of parliament. This is a crucial competitive advantage for universities, which operate under their own acts.

Academic accreditation could be applied to institutions as a whole or to individual courses. Decisions here need to balance the need to protect the interests of students and taxpayers against the need to avoid establishing additional layers of bureaucracy to oversee an accreditation process. Accrediting all courses in the higher education sector would be a very significant administrative task and require external

⁴ The AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training. The Framework was introduced Australia wide on 1 January 1995. It developed in response to a decision by MCEETYA that the overall system of qualifications needed to support the reforms in Vocational Education and Training and is being phased in over five years, with full implementation by the year 2000.

duplication of the existing, internal accrediting processes of established universities.

Our recommendation on this issue is designed to reduce barriers to entry to the industry by giving private institutions that do not operate under their own act the opportunity to accredit their own awards under the AQF. Under this approach, private institutions would have a choice between operating with individual course level accreditation and seeking recognition as a self-accrediting body, with the same powers in this respect as universities which operate under their own acts.

Recommendation 7

That the Government, working with State and Territory Governments, should ensure that accreditation arrangements enable private providers of higher education to become self-accrediting bodies with the same powers in this respect as universities which operate under their own acts of parliament.

Review processes—Once a more institutions are able to accredit their own awards it will be necessary to strengthen review processes.

Processes that enable as many institutions as possible to become self-accrediting bodies depend on robust, rigorous self-accreditation processes within institutions. We are not convinced that existing self-accreditation processes always operate effectively. We therefore consider that, if higher education institutions are to continue to accredit their own courses, and if private providers of higher education are to be allowed to do likewise (as competitive neutrality principles suggest they must), there should be a process to assure students and taxpayers that those self-accreditation mechanisms are rigorous. It is important to note that community support for self-accreditation, and the positive international image of Australian higher education, will continue only while institutions exercise their self-accrediting power responsibly. Accordingly, it is our view that all self-accrediting processes should be subject to external review.

Recommendation 8

That the Government, working with State and Territory Governments, should establish a process to ensure that all self-accrediting higher education institutions have robust and rigorous internal review processes.

Taxation and charging regimes

Recommendations 3 and 4 address, in part, one of the major barriers to entry to the higher education market that we identified in chapter 3—new private providers of higher education may face taxes and charges different from those established public institutions face. They also seek to encourage existing providers to make the best possible use of their assets.

We see these recommendations as consistent with the broad thrust of National Competition Policy. MCEETYA recently dealt with the issue of National Competition Policy in higher education when it considered how the various commercial activities of universities are taxed.

The principle of competitive neutrality requires the elimination of any net competitive advantages that publicly owned or funded organisations enjoy simply as a result of their public sector ownership or support. The prime goal of the policy is to promote competition as a way of effecting greater efficiency.

In June 1997, MCEETYA agreed to advise the Council of Australian Governments that competitive neutrality principles in higher education could be built on the following approaches.

- Those commercial activities that are *intrinsic* to achieving the social, cultural and economic objectives of the higher education program should be subject to simple and appropriate pricing principles to achieve transparency. Such activities would include research and development, consultancies, short courses, continuing education and residential colleges.
- Those activities that compete in a wider market place but are *instrumental* to achieving the objectives of the higher education program (eg catering and bookshops) should be structurally separate and subject to pricing principles to achieve transparency (although these activities should not be required to make a fully commercial return on resources); and
- Those activities that are *purely commercial*, such as property development and manufacturing for retail or wholesale, should be structurally separate and subject to a fully commercial regime.

We have not examined the broader taxation regime currently applying to universities. *Prima facie*, we see no case for treating private universities differently from public universities in whatever taxation regime applies to higher education. However, we recognise that these issues are complex and require further consideration. We have not, therefore, developed a recommendation about them.

Consumer protection

Recommendations 3 to 8 will fundamentally reconfigure the regulatory environment of higher education, making it far more competitive—especially in combination with our recommendations on student centred funding, research training and research outlined in chapters 5 and 6. Robust consumer protection mechanisms will be required in this new, more robust competitive environment.

Information

A more competitive higher education sector will enhance the range of options for students. It also places an increased responsibility upon students—as their decisions about courses, institutions and mode of study become more significant. Students will require ready access to extensive, high quality and accurate information if they are to make the best possible education choices.

Facilitating the provision of information to students will be an important role for Government in a decentralised higher education system. Government does not need necessarily to collate and publish the information itself—universities will have ample incentives to make information about themselves available, and private information providers can produce ‘buyers’ guides’—but it does need to ensure that the information covers all the available choices and is produced in a format that permits students to make comparisons. In the absence of regulation, it is unlikely that the information with the requisite coverage and comparability would be produced.

Accordingly, in the model for the funding of teaching and learning proposed in chapter 5, all universities in receipt of public funding (or whose students can claim an income-contingent loan) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Recommendation 9

That, as a condition of receiving government funding, institutions should be required to make publicly available information about themselves and the services that they offer, in a form that enables students to make informed choices among competing institutions and courses.

Complaints

Students need to be able to assert effectively their rights after they have made their study choices. This is especially important where providers have the right to charge fees. A robust student complaints mechanism is therefore an essential part of any overall consumer protection arrangement.

Recommendation 10

That the Government should establish an independent complaints procedure, possibly in the form of a Higher Education Ombudsman, to support students, before a student centred funding framework is implemented.

Once independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them, the Commonwealth should be able to withdraw access to public funds if consistent failure to deliver is demonstrated.

Financial probity

In a more deregulated environment, we need to protect students and the taxpayer against the risk of financial loss. The Commonwealth should specify minimum standards of financial probity and require all providers to adhere to those standards as a condition of being accredited to offer higher education courses.

GAL recommended establishing a national prudential regulator. In a paper prepared for the Committee, Professor Elizabeth Harman queried whether this would be necessary and suggested that it might be possible to achieve the goal of protecting student and taxpayer funds by modifying existing State legislation. Further examination will be required to determine the most appropriate mechanism.

Recommendation 11

That the Government should implement a suitable mechanism to provide prudential supervision that ensures that students are protected from financial loss.

Making institutional governance more effective

Sooner, rather than later, universities will need to address the essential incompatibility of a view of the world based on collegial decision making and an alternative view based on executive decision making and reflected in the size and style of operation of most business boards. The assertion by some within the university system that collegial decision making is desirable and natural is countered by the fact that decision making is often slow because of the time needed to resolve competing views. The tradition of collegial decision making is reflected too in the insistence of some groups that they be represented on the council or senate of each institution of higher education.

As the Review of Higher Education Management (the Hoare Report) pointed out, most councils or senates of universities are too large to be effective organs of decision making.

The consultations undertaken by the Review Committee indicated that the analysis of the Hoare Report is still relevant. There have been some positive changes in the sector as a result of the Hoare Report, including a reduction in the size of the governing councils of a number of universities.

We have not developed a recommendation on this issue because, ultimately, internal decision making processes can be reformed only by the universities themselves, not the Government. We note, however, that the imperative for universities to review and modify their decision making structures will intensify. Failure by institutions to address the inflexibility of current decision making processes will mean that they will have difficulty operating in a financing framework that gives greater choice to students. Though we have not made a recommendation on this issue, it is our view that those universities that have not done so need to consider the following recommendations of the Hoare Report as soon as possible. We endorse these recommendations.

Review of Higher Education Management: Recommendations

1. The governing body of higher education institutions should have ultimate responsibility for strategic direction and development of the university and external and internal accountability, including monitoring and review of institutional strategic performance. It should also ensure that:
 - a. accountability for implementation is appropriately delegated;
 - b. there is an appropriate academic body to monitor academic policy and standards and protect academic freedom;
 - c. there are adequate and effective separate fora available to determine stakeholders' opinions, particularly for those of staff and students; and
 - d. it reports on progress against strategic directions.
2. The role of the Vice-Chancellor should be to exercise stewardship of the institution on behalf of the governing body, and he or she should be formally accountable to the governing body for performance according to an agreed set of objectives, arrangements and criteria.
3. Governing bodies should, on a regular basis, review their own role and performance, and that of the Vice-Chancellor.

4. The Minister for Employment, Education and Training, through appropriate Commonwealth and State/Territory bodies, should recommend that States amend university enabling legislation, where appropriate, so that:
 - a. the primary responsibilities and roles of governing bodies and their members are explicit;
 - b. members elected or appointed to the governing body have fiduciary responsibility and must disclose interests in matters under consideration;
 - c. the size of the governing body is typically between 10 to 15 members;
 - d. the governing body is able to co-opt members;
 - e. external independent members outnumber internal members;
 - f. the governing body can fill vacancies by appointment on a temporary basis until elections can be held or external appointments are made; and
 - g. the governing body can make ordinances, statutes, by-laws and rules without requiring government approval.
5. Changing the focus and structure of the governing body will require greater attention to the nature of appointments and membership:
 - a. members of governing bodies should be chosen on the basis of their demonstrated ability and preparedness to contribute and the required mix of skills and attributes for the body, taking into account considerations such as gender equity;
 - b. potential external members should be identified through an independent professional process;
 - c. a proportion of members should be replaced regularly and appointments to the body should be made on a three or four year rolling basis with a usual maximum of, say, no more than two or three terms;
 - d. the governing body should ensure that its members and potential members can meet all their responsibilities effectively by having:
 1. clear guidelines on the roles and responsibilities of members;
 2. proper induction; and
 3. continuing skilling and development; and
 - e. in relation to government appointments:
 1. the institution should provide a short-list of names for discussion with the Minister/Governor, and
 2. the Minister/Governor should ensure appointments are timely.⁵

Chapter 5

Funding teaching and learning

While the Commonwealth's existing higher education policy and funding framework has successfully underpinned a significant expansion in student numbers over the past decade, it has significant weaknesses—its incentive structures are perverse and it lacks flexibility.

The Review Committee considers that public funding for tuition should be tied far more closely to students' choices and preferences than at present. This can be effectively achieved only by building a direct financial relationship between higher education providers and students.

Student centred funding for teaching and learning

In our view, a student centred approach to funding—where students' choices direct the flow of resources to institutions—is the best way of creating a meaningful and direct relationship between students and institutions.

The Review Committee favours a financing model in which:

- public funding for tuition would be driven by students' choices;
- institutions would be able to set fees for all students (initially subject to an upper limit on fee levels for students receiving Commonwealth tuition funding); and
- access to public funding and income-contingent loan arrangements would be provided to students at all accredited higher education providers.

In this chapter we examine models and implementation issues for a student centred funding framework.

Vouchers, scholarships and entitlements—what's in a name?

Although our Discussion Paper avoided the term, it engendered renewed debate in the sector about 'vouchers'.

The debate about the differences between vouchers, scholarships and entitlements has concerned funding mechanics. It has been a debate about how funding should be delivered to higher education institutions, and is important in that context.

However, we think that much of the debate about vouchers has been irrelevant to the key policy issue, which concerns the extent to which student choice should determine the amount of funding that a higher education institution receives.

In fact, it could be argued that there has long been bipartisan support for the funding of institutions by mechanisms having much in common with 'vouchers'. The profiles process, where the institutions and DEETYA negotiate the number of subsidised places that an institution is entitled to deliver, effectively results in institutions receiving a set number of vouchers from the Commonwealth that they then allocate to students.

The real discussion should be whether the volume of students for which a university receives government funding ought to be directly determined by student choice, or by negotiations between universities and DEETYA.

We note that Commonwealth policy is already moving, albeit hesitantly, in directions which offer greater recognition of student choice. In 1998, for the first time, the funding that institutions receive for undergraduate students will be adjusted automatically (in part) if institutions under- or over-enrol against Commonwealth determined undergraduate targets.

Trusting students' choices

Some respondents to the Discussion Paper expressed concern that if a student centred funding model were introduced, students would make poor choices regarding courses and institutions and be guided by tradition or fashion rather than an objective understanding of the benefits of different options. In particular, a number of respondents have argued that a move to student centred funding would devalue the role of scholarship in academic life as students would be likely to select less rigorous courses, and/or courses which lead more directly to employment outcomes.

This view underestimates the capacity of students to make appropriate decisions about their education. As a community we accept that young adults should exercise choice as voters, as borrowers of finance and as participants in the labour market, and we accept that they can marry, sign contracts, join the armed forces and even die for their country.

We are confident that students are capable of assuming the responsibility of greater control over their higher education experience, provided they have access to appropriate information to support their choices.

There is no reason to think that students will choose less rigorous courses, thus undermining scholarship in universities. Because scholarship is what makes university teaching special, universities and students alike will continue to regard it as intrinsic to their core business, and therefore a more student centred funding framework will not threaten it. Students will want to challenge themselves through their university experience.

Nor is there any threat to universities from those students who think in a more focused way about employment outcomes. Many employers do not look for discipline related knowledge when selecting graduates, and in fact value the generic attributes that are part and parcel of generalist courses like the arts and sciences.

The need for a staged approach

However, any shift to student centred funding should be implemented progressively to allow institutions time to adjust their planning processes.

Concern was expressed that student centred funding arrangements would not deliver the same level of funding certainty for universities as the current system. Although some see triennial funding as a strength of the current system, in the future operating environment described in chapter 2 it is likely to act more to insulate the sector from student demand and the need to be innovative and competitive than to protect the quality of higher education. Many educational institutions in Australia—schools, training establishments and some universities—rely on income from enrolments and therefore do not have an insulated cash flow. Many of these organisations manage their operations successfully, despite this degree of uncertainty in their operations.

Nonetheless, the Review Committee proposes a four-stage approach to student centred funding of postsecondary education. The stages range from a proposal recommending incremental change to a proposal that funding arrangements across the higher education and Vocational Education and Training (VET) sectors be standardised. In summary, the stages are as follows:

- *Stage 1:*
 - continue to fund institutions for a maximum number of student places;
 - allow institutions to set fees for all students, subject to an upper limit on fee levels for students receiving Commonwealth tuition funding;
 - provide all students, including those attending approved private institutions, with access to a loan, with repayment contingent on future income; and
 - strengthen consumer protection arrangements in the higher education system.
- *Stage 2:*
 - build on Stage 1 by extending access to Commonwealth tuition funding to students attending private universities; and
 - within a system-wide ceiling on Commonwealth funding, allow Commonwealth funding to be redirected between institutions in response to movements in shares of enrolments.
- *Stage 3:*
 - build on Stage 2 by allocating Commonwealth tuition funding to institutions solely on the basis of student choice; and
 - allow private providers to access public funds on equal terms with public providers.
- *Stage 4:*
 - provide an entitlement to Commonwealth tuition funding for all school leavers and mature age students who are seeking access to postsecondary education and training for the first time;
 - funding arrangements to cover all approved courses in the postsecondary education and training system; and
 - provide all students with access to a loan, with repayment contingent on future income, to assist them to meet the costs of any studies or services leading to a postsecondary award from an approved private or public postsecondary education provider.

These stages progressively increase the role of student choice in allocating government funding. Under all stages universities will be able to set fees for all students (initially subject to an upper limit on fee levels for students receiving Commonwealth tuition funding) and more students will have access to a loan, with repayment contingent on future income. These measures give institutions greater flexibility over the total amount of funding that they receive per student, and change the nature of students' contributions. The new funding proposals are more clearly understood if the Higher Education Contribution Scheme (HECS) as we know it is considered to be phased out. But the fundamental principle behind the HECS arrangements—loans on an income contingent basis—is fully retained. The implications of these changes for students, institutions, and the Government are discussed below.

Stage 1: Continue to fund on negotiated targets, allow institutions to set fees, provide some support for private providers and strengthen consumer protection arrangements in the higher education system.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit full fee paying local students who are not allocated a subsidised place.

Higher education institutions continue to receive funding for tuition based on a number of student places agreed in negotiations with the Commonwealth. Where an institution enrolls fewer (or more) equivalent full-time students than the agreed number, the Commonwealth reduces (or increases) the amount of funding provided to the institution, but at a proportion of the equivalent full-time student rate (similar to arrangements which currently apply to undergraduate HECS liable students).

Loans, with repayment contingent on future income, are available to all higher education students, and allow:

- *students at public universities to defer payment of any tuition fees set by institutions over and above the amount of funding provided by the Commonwealth;*
- *students enrolled in approved courses at approved private universities or degree granting institutions to defer payment of all of their tuition fees; and*
- *Australian students who are admitted to public universities to places over and above the number of places for which the universities have been publicly funded to defer the payment of all of their tuition fees.*

To access public tuition funding, a student must enrol at a public university.

Equity funding, based on submissions and/or performance, is provided through targeted grants to institutions.

The higher education and Vocational Education and Training sectors remain separately funded and administered.

Credit transfer and articulation arrangements across the higher education and VET sectors are enhanced.

All universities in receipt of public funding (or whose students can claim an income-contingent loan) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Stage 2: Government funding moves when shares of enrolments change.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit full fee paying local students who are not allocated a subsidised place.

Higher education institutions continue to receive funding for tuition based on a number of student places agreed in negotiations with the Commonwealth. Within a system-wide ceiling on Commonwealth funding, where an institution enrolls fewer (or more) equivalent full-time students than the agreed number, the Commonwealth reduces (or increases) the amount of funding provided to the institution at the full equivalent full-time student rate. Movements in shares of enrolments among institutions are used to determine the base number of student places allocated to the institution. Where private institutions increase their share of total enrolments they are allocated a commensurate level of Commonwealth funding.

Loans, with repayment contingent on future income, are available to all higher education students and allow:

- students at public universities to defer payment of any tuition fees over and above the amount of funding provided by the Commonwealth;
- students enrolled in approved courses at approved private universities or degree granting institutions to defer payment of all of their tuition fees; and
- Australian students who are admitted to public universities to places over and above the number of places for which the universities have been publicly funded to defer the payment of all of their tuition fees.

To access public tuition funding, a student must enrol in an approved course at either a public or an approved private university or degree granting institution.

Equity funding, based on submissions and/or performance, is provided through targeted grants to institutions.

The higher education and Vocational Education and Training sectors remain separately funded and administered.

Credit transfer and articulation arrangements across the higher education and VET sectors are enhanced.

All universities in receipt of public funding (or whose students can claim a loan, with repayment contingent on future income) are required to make publicly available a specified minimum set of information items, in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Stage 3: Government funding is directly driven by student choice and private and public providers are treated equally.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit full fee paying local students who are not allocated a subsidised place.

The Government determines the number of student places that it will fund in total each year and allocates these on the basis of students' choices alone. Under this model, students would apply to an individual institution (as occurs currently), and the Commonwealth would determine the number of funded places the institution receives by reference to the total amount of funding available, and the order of ranking of students who accept an offer from the institution.

Loans, with repayment contingent on future income, are available to all higher education students and allow:

- *students at public universities to defer payment of any tuition fees over and above the funding provided by the Commonwealth; and*
- *Australian students who are not allocated a funded place and who enrol in an approved course at either a public or an approved private university or degree granting institution to defer the payment of all of their tuition fees.*

To access public tuition funding, students must enrol in approved courses at either a public or an approved private university or degree granting institution.

The Government reserves a number of funded student places which include supplementary funding for targeted equity or other identified groups (such as Indigenous students).

The higher education and Vocational Education and Training sectors remain separately funded and administered.

Credit transfer and articulation arrangements across the higher education and VET sectors are enhanced.

All universities in receipt of public funding (or whose students can claim a loan, with repayment contingent on future income) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress should providers not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Special-purpose support is available through competitive tendering mechanisms to support disciplines deemed to be in the national interest, and for which all provider-based options for preserving those disciplines have been exhausted.

Stage 4: A lifelong learning entitlement to postsecondary education and training.

All school leavers receive a lifelong learning entitlement. An entitlement to funding is also provided to all mature age students seeking access to postsecondary education and training for the first time.

Students are able to use their entitlement to meet the costs of approved studies or services leading to a postsecondary award at an approved private or public postsecondary education provider in either the Vocational Education and Training or higher education sectors.

Institutions are free to set tuition fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding) and to admit students who have expended, or do not have access to, funds from an entitlement.

All students have access to a loan, with repayment contingent on future income, to assist them to meet the costs of any studies or services leading to a postsecondary award from an approved private or public postsecondary education provider.

Students may also use their entitlement to purchase tuition from approved overseas providers, where equivalent reciprocal arrangements are in place to enable overseas students to use government support from their countries to purchase tuition from approved Australian providers.

Equity funding is provided through supplementary grants targeted to members of equity groups.

All providers in receipt of public funding (or whose students can claim a loan with repayment contingent on future income) are required to make publicly available a specified minimum set of information items in a format that is comparable across institutions.

Independent complaints procedures are in place to ensure that students are able to gain redress in the event that providers do not satisfactorily deliver studies or services to them. The Commonwealth is empowered to withdraw access to public funds if consistent failure to deliver is demonstrated.

Special-purpose support is available through competitive tendering mechanisms to support disciplines deemed to be in the national interest, and for which all provider-based options for preserving those disciplines have been exhausted.

Stage 1 is broadly similar to model 1 presented in the Discussion Paper and represents the least impact model in terms of change to the current system for financing higher education. Stage 2 introduces additional competitive pressures into the system and provides for a level of student choice and competition similar to that which currently operates at the primary and secondary levels in the schools sector. In that sector, the Commonwealth's funding is adjusted following movements in student numbers between government and private schools. Stages 1 and/or 2 could be implemented in the short to medium terms.

Stage 3 is broadly similar to model 2 in the Discussion Paper. Funding is provided for a set number of student places and students' choices determine the funding that an institution receives. The major difference between Stages 2 and 3 is that funds are not allocated to institutions on the basis of volumes agreed between DEETYA and institutions, but are entirely determined by students' choices (subject to acceptance by their preferred institutions).

Stage 4 is broadly similar to model 3 in the Discussion Paper. In contrast to Stage 3, the number of students who receive funding is not restricted. In addition, funding arrangements are integrated across the whole postsecondary system in order to address biases and distortions which currently exist.

These four stages are self-contained options which also represent a graduated progression towards a decentralised approach to funding postsecondary education and training based on student choice.

The Review Committee's long-term goal

Our long-term goal is Stage 4. We believe that the Government should aim to provide all school leavers, and mature age students who are seeking access to postsecondary education for the first time, with an entitlement to tuition funding. As indicated below, our judgment is that this could be achieved within current funding levels for higher education and Vocational Education and Training. Detailed costings remain to be done, but we believe that the likely benefit from open access to postsecondary education would justify some additional funding if that were necessary.

A lifelong learning entitlement

Achieving Stage 4 will require long-term effort, involving the establishment of different regulatory arrangements and some reconfiguration of existing Commonwealth-State relationships. Further work will be needed to achieve a smooth transition from the current arrangements, and to develop a framework that is workable and administratively efficient.

We emphasise, however, that eventual adoption of Stage 4 is essential to provide students and providers with the flexibility necessary to meet the demands of the next century. That said, the relationship of Stages 1 to 4 to each other is such that any one stage could be adopted by the Government on a discrete basis.

We are therefore recommending that Stage 4 be adopted as a long-term goal, subject to a detailed examination of its funding and administrative implications, that the Government implement Stages 1 or 2 as soon as possible, and that detailed work on funding and implementation issues associated with Stages 3 and 4 commence immediately.

Recommendation 12

That the Government should:

- implement either Stage 1 or Stage 2 of a student centred approach to the funding of higher education teaching and learning as soon as possible;
- commence immediately a detailed examination of the implementation issues associated with Stage 3 of a student centred approach to the funding of higher education teaching and learning;
- in consultation with the States and Territories, undertake a detailed examination of the funding and implementation issues associated with Stage 4 of a student centred approach to the funding of teaching and learning in postsecondary education and training, and report publicly on the outcome of that examination; and
- subject to the outcome of that examination, establish jointly with the States and Territories an approach to the funding of teaching and learning in postsecondary education and training embodying the principles expressed in Stage 4 of a student centred approach.

Right of students to use subsidy and other entitlements at overseas institutions

One of the questions that have been raised in debate about student centred funding arrangements is whether students could redeem their entitlements at overseas institutions.

This would widen the range of choices available to Australian students, benefiting them directly as well as bringing more competitive pressure to bear on Australian providers. On the negative side, it could be seen as contributing to a 'brain drain' by encouraging Australian students who study overseas to remain overseas (thus denying the taxpayer a return on the public funding received by such students). We note though that in Sweden, the United States and some parts of Canada, students are able to use support from their governments to study in Australia.

On balance, we favour allowing Australian students to use their lifelong learning entitlements to study in other countries, provided that agreements regarding equivalent reciprocal access to public funding for their students to study in Australia are negotiated with those countries.

Recommendation 13

That the Government should allow Australian students to use their lifelong learning entitlement to study in other countries, provided that equivalent reciprocal agreements are negotiated with those countries.

The key decisions for the Government

Under all of the Stages outlined above there is a greater role for student choice in distributing public funding among higher education providers. The four stages also incorporate two other essential features: institutions would be able to set fees for all students (initially to an upper limit set by the Commonwealth for students receiving Commonwealth tuition funding); and access to public funding and/or income-contingent loan arrangements would be provided to an increased number of accredited higher education providers.

Regulation by Government is not abandoned in these options. Within the broad approach to student centred funding we favour there are several decision points for the Government. The major change is simply that the number and price of publicly funded student places at an institution are determined by student choice, not DEETYA's negotiations with universities.

In fact, the precise parameters of a funding approach based on student choice will affect the balance of policy objectives achieved by the model. We have identified four key decision points:

- the amount of public funding for individual students;
- the conditions which apply to the setting of fees by institutions;
- the conditions which apply to the loans provided to finance the gap between the Commonwealth's tuition funding and the fees charged by institutions; and
- the controls which apply to government outlays on tuition.

Public funding for tuition

Under student centred funding arrangements, the Government will still have to decide the quantum of resources to be devoted to postsecondary education and training, and the level of funding that each student receives.

Is our expenditure low by international standards?

The absolute level of funding provided by the Government for education and training will always be an issue. Many respondents to the Discussion Paper felt that the Review Committee should have advocated increased levels of public funding for higher education. Some suggested that international comparisons of funding levels would be useful in establishing appropriate levels of public funding in Australia.

In chapter 3 we noted that OECD measures of net enrolment in public and private university education for persons 17–34 years of age show that participation in Australia is higher than in most countries.

OECD data indicate that Australia spends a *higher* percentage of Gross Domestic Product (GDP) per student in the university sector than do other countries of comparable wealth.¹ Annual expenditure per university level student in public and private institutions for 1994 (the latest year for which data are available) shows that Australia has a high level of expenditure per student compared with other countries for which data are available.²

¹ OECD, *Education at a Glance: OECD Indicators 1997*, Table B4.2, OECD, 1997. This expenditure includes private and public funds provided for research and teaching but not expenditure on subsidies for student living expenses.

² *ibid.*, Table B4.1. Measured in terms of US dollars converted using Purchasing Power Parities, Australia, at US\$11,030, is the third highest after Switzerland (US\$18,020) and Canada (US\$11,680).

However, we recognise that the situation is complex.

- The submission from Professor John Niland³ makes the point that Australia's expenditure on education (at the primary, secondary and tertiary levels combined) is lower than what would be expected on the basis of our size, level of GDP per head, and the proportion of the population at school age.
- A recent study which compared the costs of producing a graduate in classroom-based subjects in both a research intensive institution and a teaching institution in a number of countries, suggests that Australian costs are lower than those of the United Kingdom, the United States and the Netherlands, but higher than those of Germany.⁴ The reasons put forward included lower average academic and support staff salaries.

Ultimately, international comparisons can only inform judgment, and they are only as good as the available data. Most current data sources are difficult to use because of classification differences and differences in the structure of tertiary education systems among countries. It is also difficult to apply the benchmarking studies from only one or two institutions to the higher education sector as a whole.⁵

Even accurate international comparisons would not provide a basis for deriving appropriate funding rates or levels of expenditure for Australia. Data from the OECD do not establish a cut and dried case on whether current total funding levels are adequate given the unique circumstances of each country (as was noted in a number of responses to our Discussion Paper).

However, our consultations indicated that the current funding levels are causing tension in the sector. Universities are finding it increasingly difficult to recruit and retain good staff and to maintain their assets. In this context, our judgment is that that existing levels of public funding per student should not be reduced in the medium term. Though any reductions in costs achieved by increased efficiencies should be reflected in the price that both the Government and students pay for higher education, we think that the average level of funding per equivalent full-time student should be at least maintained for five years after the current budget forecast period.

Recommendation 14

That the Government should undertake at least to maintain the current average level of public funding per equivalent full-time undergraduate higher education student in real terms for five years after the current budget forecast period.

It is necessary to allow institutions time to adjust to the changes that we are proposing. The current funding framework has not encouraged universities to adopt a businesslike approach to managing their operating costs, and it will take some time for institutions to adjust to an environment where costs and prices must be set competitively.

³ Professor John Niland, Submission No. 389.

⁴ J M Consulting Ltd, 'International comparison of the cost of teaching in higher education: A bench marking study conducted for the National Committee of Inquiry into Higher Education and the Higher Education Funding Council for England', 1997. The study uses data for 1995 or 1995-96 depending on the financial accounting period for the institution.

⁵ It should also be noted that this study relied on a number of assumptions, the most significant being the ratio of teaching time to research time for academics, estimates of attrition rates and the relative costs of students studying in different years and at different levels.

The level of funding for courses

Once the average level of funding is determined, a rate of subsidy for specific courses must be set.

At present, the amount of public funding that institutions receive varies depending on the mix of disciplines in their profile negotiated with DEETYA. Under Stages 3 and 4, the issue arises as to whether the amount of funding provided to students should be varied in the same way, or whether all students should receive a flat amount of public subsidy, irrespective of the discipline(s) in which they enrol. Arguments can be made for either approach.

One way of setting the amount of public funding for courses would be to vary funding in line with the spillover benefits of supporting students in a course (we argue in chapter 1 that a key rationale for government support of higher education teaching and research is the spillover benefit that is induced by public funding). However, it is likely the spillovers induced by government support for higher education will vary by individual, course and the timing of an individual's participation in a course. Given this uncertainty, we think that it is necessary to compensate students for inherently more expensive courses in order to ensure that students' preferences are not distorted by government funding rates. If some courses are inherently more expensive, a flat amount may distort students' preferences because they would inevitably have to pay more for certain courses.

It could be argued that providing a flat amount for all courses would provide strong incentives for institutions to minimise costs for a given level of quality. However, an incentive to minimise costs for a given level of quality would be created by using flat rates within broad course categories. This approach would also achieve the policy objective of supporting students who undertake inherently more expensive courses. We suggest that three broad categories would be appropriate at the undergraduate level.⁶

Recommendation 15

That, under a student centred approach to funding, the Government should provide public funding as a flat amount within three broad course categories.

Though we have not made a recommendation on the course categories that could be used, we note that three categories, based on 'basic' and 'laboratory-based' and 'clinically-based' courses, would be one way of setting funding rates for courses to achieve these objectives. These three categories are similar to the groupings of courses derived as a part of the Relative Funding Model.

Benchmarking costs

In recommending that the public subsidy to students be provided at flat rates within three broad course categories, and that average funding per student be maintained for at least five years after the current budget forecast period, we would not wish to lock in current cost levels indefinitely. The cost of higher education, particularly the additional costs associated with the more expensive disciplines, needs to be assessed independently and to be subject to periodic review.

It is therefore necessary to undertake periodic reviews of the level of public funding per equivalent full-time undergraduate student to take account of movements in costs. Studies of this kind will provide the Government with an opportunity to assess whether the taxpayer should benefit from any reductions in cost achieved through

⁶ This view is similar to that advanced by the Industry Commission in its submission to the Committee. The Industry Commission argued that differentiating the amount of subsidy according to discipline might be preferable if significant changes in price relativities, and consequent distortion of student preferences, are to be avoided. Industry Commission, Submission No. 376.

efficiencies, or whether it needs to make an additional investment in higher education. As a matter of principle, we see it as important that the Government treat higher education as a critical social investment that will have to be maintained at adequate levels if Australia is to remain competitive in the next century.

Recommendation 16

That the Government should undertake periodic reviews of the level of public funding per equivalent full-time undergraduate higher education student to take account of movements in costs.

These studies would also provide an opportunity to review relativities between course categories.

Allowing institutions to set their own fees

The total price of a course is equal to the subsidy provided by the Government and the price paid by students. Though we think that the fee paid by students should be determined between them and institutions—in the long term it makes no sense for fees to be set centrally by the Government—it is important that the Government continue to monitor the fees paid by students who receive public tuition funding to ensure that its access and equity objectives are met.

In the Discussion Paper we argued that fee flexibility encourages competition between universities and, in particular, creates incentives for universities to provide lower cost study options. Our presentation of student centred models in the Discussion Paper provoked a vigorous and constructive debate on this point. Respondents raised a number of important concerns relating to the effect on access and equity if institutions were allowed to set their own tuition fees. The Review Committee has carefully considered these issues and modified its models in a number of important respects.

We believe that competition between universities will ultimately produce downward pressure on tuition fees, although higher fees would be likely for popular courses at popular institutions. However, some form of transitional arrangement might be needed ahead of the introduction of full price competition because of uncertainties about how institutions will respond if restrictions are relaxed.

Responses to the Discussion Paper

A number of commentators raised concerns about the implications of fee deregulation for access and equity. Larry Leslie and Sheila Slaughter pointed out that fees have been rising over recent years, not falling, in the less regulated USA higher education system. The National Commission on the Cost of Higher Education, which was established to study the rising cost of tuition in the USA, identified a number of actions which colleges and universities themselves could take, as well as an agenda for action for the Congress and the Administration. These included:

- developing a set of standards for reporting costs and prices;
- providing American families with better consumer information about cost and prices to improve public accountability;
- developing well-coordinated, efficient accrediting processes that relate institutional productivity to effectiveness in improving student learning;
- sharing facilities and services; and
- cutting inefficient and redundant programs.

The Review Committee believes that lessons can be learned from the American experience. The recommendations on industry structure in chapter 4 address many of these issues.

The possibility was raised with the Review Committee that some universities were more popular with students because their historically acquired prestige enabled them to ease graduates into preferred economic and social positions. Some respondents to the Discussion Paper argued that because the supply of preferred economic and social positions is inherently limited, institutions trading on their prestige will fare best if they promote their exclusivity. These commentators predicted that some institutions will respond to fee deregulation not by increasing the diversity of their offerings and reducing their prices, but by keeping student numbers down and raising fees. It was their view that the 'prestige' institutions, and the preferred economic and social positions for which they act as feeders, will become the preserve of those able to afford the highest fees.

The Review Committee's view

This argument assumes that the prestige of an institution is unrelated to the underlying quality of the education that it provides. Where information is lacking about the relative quality of competing institutions, this assumption may have some validity because students and employers may use the longevity and 'reputation' of institutions as signals of quality.

In the longer run, we doubt that any institution will be able to trade on reputation unless that reputation is underpinned by actual performance. Growing competitive pressures in the economy will impel employers to focus increasingly on the skills and attributes of graduates rather than institutions attended, influencing over time students' enrolment preferences and, thence, institutional behaviour. This trend in employers' attitudes was starkly apparent to the Review Committee when it met with those responsible for graduate recruitment in several large companies.

An upper limit on fees is necessary initially

We think the arguments for fee deregulation are convincing. Nevertheless, we consider that the extent of any fee deregulation for students who receive government tuition funding should be limited in the first instance, that its effects should be monitored closely, and that further deregulation should be contemplated only if adverse impacts do not arise, especially in relation to access and equity. While increased use of loans with repayment contingent on future income can be used to defray the impact of fees on access and equity, we are conscious that there is a limit on the amount of the payments that students who receive government tuition funding can reasonably be expected to meet.

Therefore, as a transitional step, the capacity of institutions to determine fees for publicly funded students should be constrained within an upper limit set by the Commonwealth. This condition applies to all of the stages outlined above. Further relaxation of the conditions under which universities are able to set fees will depend on a judgment by the Commonwealth that competitive forces in the market are sufficient to prevent institutions from setting excessive prices.

Recommendation 17

That the Government should:

- allow institutions to set fees for all students, in the first instance subject to an upper limit on fee levels for students receiving Commonwealth tuition funding; and
- monitor the impact on access and equity objectives of allowing institutions to set fees for all students within an upper limit for students receiving Commonwealth tuition funding, before further relaxation is contemplated.

Access to loans with repayment contingent on future income

Once the level of government subsidy and the price paid by students are determined, the mechanism for collecting payments from students becomes an issue. We think that the Government has an important role here in providing access to loans where repayment is contingent on future income.

Such loans are a vital tool for enabling universal access to postsecondary education to be achieved within budgetary limits, without compromising equity objectives—provided that students do not have to borrow too much.

Under all the stages, a loan with repayment contingent on future income would be available to all students to assist them to meet the costs of higher education.

Recommendation 18

That the Government should make loans—with repayment contingent on future income—available to all students to cover fees up to the limit of the fees that institutions are able to charge.

Implications for Higher Education Contribution Scheme arrangements

While the arguments for providing loans with repayment contingent on future income are straightforward, the implications of the new financing framework for the provision of these loans are complex.

If such a loan were provided as a component of a student centred funding arrangement where institutions had increased flexibility to set their fees, it would need to differ in some ways from that provided under HECS.

Rather than pay a contribution set by the Commonwealth, as now, students would pay the difference between the public funding amount for their course and the fee set by the institution. A loan facility with income-contingent payments (the same as those presently incorporated in the HECS loan arrangement) would be available for students. Students could pay the amount from their own resources if they chose.

This raises the question of how such loans are to be financed, given that they involve an initial outlay and that the current HECS arrangements embody a significant subsidy to the student because there is no real interest rate on the deferred debts, the Commonwealth funds discounts and the Commonwealth bears the full cost of loans that are never repaid.

We do not think that financing student loans, with repayment contingent on future income, should be an obstacle to implementing a student centred funding framework. Under the arrangements that we propose, the Government would retain a number of mechanisms to control the financial impact of student loans.

The present HECS is both a mechanism for charging students and a loan facility. Students choosing to defer repayment of the charge are provided with a loan by the Commonwealth. Repayments are income contingent, beginning above a taxable income of \$20,700. Repayment rates are stepped according to income. While the amount owing is adjusted for inflation, no real rate of interest is charged. Up-front payment of HECS provides individuals with a 25 per cent discount.

From 1997, HECS contribution rates have been differentiated according to the discipline studied by the student. The Committee is not satisfied that the differentiation between disciplines that was adopted is soundly based. However we have not made a recommendation on this point because the financing model that we propose will alter the way in which students' fees are determined.

Under current arrangements public funding for tuition is delivered to institutions through operating grants, which include students contributions (set by the Government). Were funding to be more student centred, government payments to institutions would no longer include students' contributions, and institutions would set the fees to be paid by students. Student contribution rates would no longer be set by the Commonwealth.

In financing such loans, we note that the Commonwealth treats HECS as an asset (representing repayments that will be recouped in the future), not as expenditure, in its annual budgets. However, we realise that cash flow implications arise for the Government from the extension of access to loans with repayment contingent on income.

The extent to which any expansion of access to such loan arrangements would involve a cost to the budget depends on the detailed design of the program.

- The Government could continue to provide a subsidy through the loan arrangement as it does at present. However, the present discount for up-front payment would probably no longer make sense when the institution, rather than government, is setting the tuition fee.
- Loans would not necessarily have to be provided by the Government. For example, greater private sector involvement could be achieved through the provision of loans or through private ownership of student debt (though the taxation system would remain the most efficient mechanism for collecting students' deferred payments). The AUSTUDY Loan Supplement program, where the Commonwealth has an agreement with the Commonwealth Bank, represents a possible model of private sector involvement (though it operates on a limited scale).
- In order to encourage those with the means to pay their contribution up front to do so, the Government could apply an administration fee for deferment that reflects the average value of providing a loan, adjusted only for movements in inflation, or it could levy a real interest rate on the loan.⁷ The real cost to the taxpayer of providing the loans could be reduced further or eliminated, and access to the loans made more widely accessible, if a real

⁷ We note that under current arrangements the *discounted* HECS amount can be thought of as the tuition fee (presently set by the Government, not institutions). If this is accepted, the difference between this 'fee' and the amount borrowed through HECS (equivalent to 33 per cent of the fee) represents a charge that goes some way to covering the cost of providing the loan (interest costs plus default insurance).

rate of interest were charged on them, rather than a zero real rate of interest as at present.

The Review Committee notes, however, that any levying of a real interest rate should incorporate mechanisms to ensure that it does not disadvantage students who never earn over the income repayment threshold, or who do not make annual repayments at a high enough level to cover the annual interest payable. In these cases, with a real interest rate, a student's debt would increase in real terms and possibly never be repaid.

Outcomes for students—the interaction of subsidies and fees

In making decisions about subsidy rates for courses, the conditions which apply to the setting of fees by institutions, and repayment options, the Government must balance a number of competing policy considerations. The financing framework for higher education must:

- embody incentives to offer low cost options to students and to increase diversity;
- be fair to students who enrol in inherently more expensive courses; and
- be simple to administer.

We think that our model involves the best balance of outcomes.

Private and public contributions

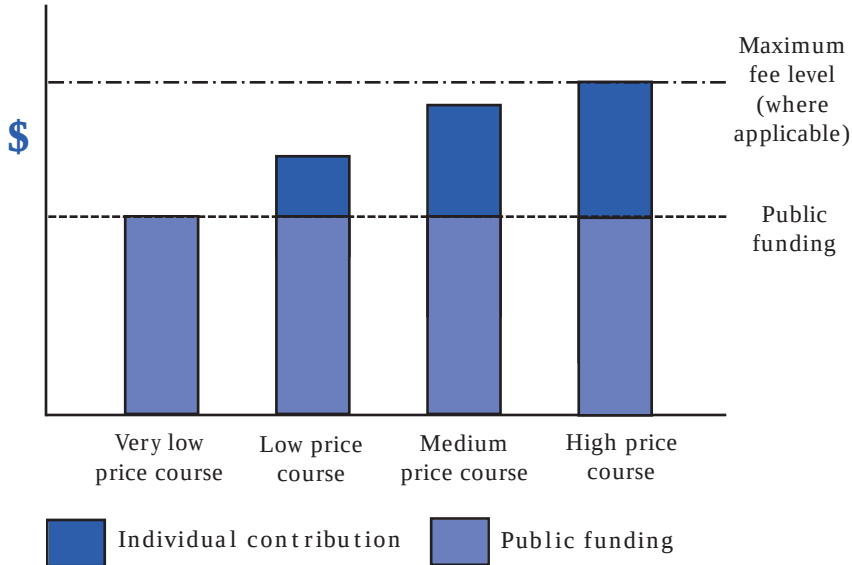
A model which involves a flat rate of funding within categories and institutionally set fees, reduces the potential for distorting choice away from inherently more costly courses, but provides greater incentives to reduce costs than alternatives—such as simply setting government funding as a fixed proportion of total course cost.

Figure 5.1 shows four scenarios for different courses within the same funding category. An important implication of the approach we are advocating, illustrated by the very low price course in figure 5.1, is that the amount of funding provided by the Government might fully cover the cost of some undergraduate courses.

In all stages, where the total price of a course is equal to the public funding level, students pay nothing. This is an important feature of a fully competitive model for student centred funding because it provides students with real incentives to seek low cost options, and therefore it provides a real incentive for universities to develop low cost options.

Figure 5.1: Student contributions within one course category

Tuition fee
charged to
student by
institutions



Because there may be students who make no contribution to their course at all, the rationale for HECS is subtly but importantly changed. The charge associated with HECS has been justified on the basis that the private benefits of higher education mean that there always should be some cost sharing between the community and the student. If the Government no longer sets fees for students, this rationale no longer applies. Students are not required to make a contribution to the Government. In effect, under our model, government funding would become more explicitly a mechanism to buy access to higher education for students on the community's behalf.

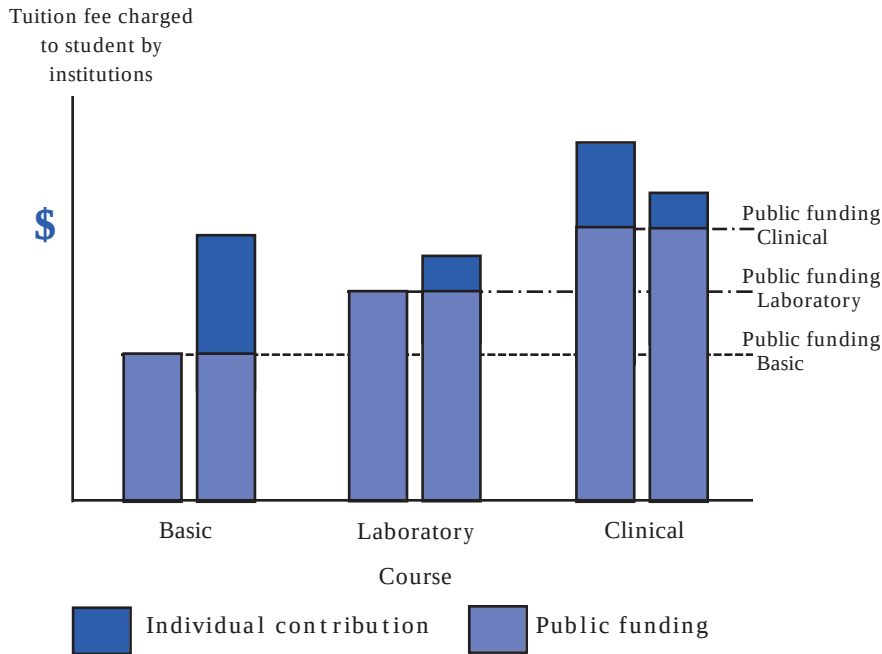
Prices and diversity

Figure 5.1 also shows that the proportion of course costs met by students will vary. The implications of our student centred funding arrangement for the proportion of costs borne by students are further illustrated by figure 5.2.

Prices for students will vary in a deregulated system. This is an essential component of funding arrangements that deliver diverse offerings in response to the wide ranging demands and requirements of students.

A system which involves flat rates within three categories and institutionally set fees embodies the best balance in achieving fairness to students, recognising the costs of more expensive courses and encouraging diversity.

Figure 5.2: Student contributions in different course categories



Depending on the courses that they enrol in, and the level of fee that they pay, students will receive different annual subsidies and pay a differing proportion of the total price of their course. As figure 5.2 shows, students paying similar fees may end up contributing very different proportions to the price of their courses. Our proposed model gives institutions the flexibility to pursue different pricing strategies.

It should be noted that some institutions may be able to operate effectively at a lower level of funding than the government rate for a particular course category. In these cases institutions will be able to cross-subsidise other activities and/or provide additional benefits to students. Funding arrangements for Stage 4 should be designed so that it is possible for students to benefit from any reduction in the price of course offerings at particular institutions (subject to the discipline imposed by the periodic reviews of public funding rates proposed above). As online education becomes more widespread, with the possibility that the price of course offerings will reduce, students should be able to purchase more for any given entitlement than at present, without incurring any additional cost to the current national education budget.

Implications for governments—outlays for tuition

An obvious objection to allowing universal access to public support for postsecondary education, as envisaged in Stage 4, is its potential impact on public finances.

We think that, *prima facie*, the budgetary impact of Stage 4, the lifelong learning entitlement, would be manageable. It should be possible to provide a lifelong learning entitlement that is sufficient to cover the following possibilities, at current prices:

- most undergraduate degrees and double degree combinations; or
- an undergraduate degree and some postgraduate study; or
- a package of study involving, for example, a Vocational Education and Training qualification and a three-year undergraduate degree and possibly some postgraduate study.

Further detailed analysis is needed on the funding implications of universal access to postsecondary education.⁸ It is important to note, however, that the Government would retain a number of means through which it would be able to control outlays under a lifelong learning entitlement.

Limits on the consumption of public funding with a lifelong learning entitlement

The duration of any entitlement is one important mechanism for controlling government outlays. Under a student centred funding arrangement where students are entitled to support for a set period, the total level of subsidy received by an individual student is determined by the length of the entitlement.

If further priority setting needs to be undertaken because of budgetary constraints, a case exists for arguing that public funding should be available for undergraduate and sub-degree awards in the first instance.⁹ We think that funding for research training should be treated outside this context because of the importance of research training to developing knowledge-based industries and the potential for underinvestment in research training by individual students when there is not a significant contribution by government. An implication of the approach that we are adopting here, therefore, is that government funding for postgraduate coursework degrees may come under pressure if further priority setting is needed. Financing postgraduate coursework degrees is discussed in more detail below.

Setting priorities on the classes of students who have access to the lifelong learning entitlement is also an important mechanism for controlling government outlays.

Some of the responses to the Discussion Paper were critical of the Review Committee's assumption that the entitlement should be available to school leavers only. It was seen as contradicting the Review Committee's commitment to lifelong learning and the need for continuing education and regular skill upgrading by mature age people in a knowledge society.

The Review Committee strongly supports the need for learning throughout life. But we see the rationale for a public subsidy in the form of an entitlement being primarily to undertake a first qualification at the degree or sub-degree level. In the Review Committee's view this is the best way to ensure that all Australians become lifelong learners. School leavers and mature age people who are seeking access to postsecondary education and training for the first time therefore should be the Government's highest priority for funding.

⁸ In the Discussion Paper we indicated, for the purposes of illustration, that if we take present expenditure on postsecondary education and training by the Commonwealth Government and State Governments (and exclude all capital, postgraduate and research funding), an estimated 80 per cent of the 1996 school leaver cohort could be provided with a lifetime entitlement, averaging \$26,000, representing the public contribution to the tuition costs of the individual student. Under current arrangements this would provide access to postsecondary education for nearly four and a half years of full-time study if the average value of a tuition grant were \$5,800 per full-time equivalent year of study.

⁹ Includes bachelor pass, honours and graduate entry.

Recommendation 19

That the Government should make first time access to postsecondary education and training by school leavers and mature age people its highest priority in implementing a student centred approach to funding.

The Review Committee is conscious of the fact that making first time access to higher education the highest priority for government support is a major change from the way in which the Government, institutions and students currently manage the distribution of public funding. Under current arrangements, there are no limits on the amount of government tuition funding that an individual student is able to consume so long as institutions are prepared to enrol him or her. The only limit is the cost that the student is prepared to bear through HECS and income forgone.

Under an entitlement-based approach, all school leavers would receive a government subsidy towards their education and training. Approved postsecondary education providers will also receive public funding for mature age students who are seeking access to postsecondary education and training for the first time. Once these students have used their entitlement, access to public tuition funding ceases, so that access to postsecondary education and training can be provided to other students. We think that this approach better meets the criteria of equity, justice and efficiency.

Rationing

If it is not feasible to provide an entitlement to postsecondary education, we believe it is possible to design a student choice based approach to funding which limits administratively the number of individuals gaining access to public funding in higher education, as our discussion of the Stage 3 option indicates. This also provides a mechanism for controlling government outlays under a student choice based funding system.

If a nationally consistent set of criteria for ranking students were available, the Commonwealth would be able to allocate funding to institutions on the basis of students' choices by using the offers made by each institution. Under this model, students would apply to an individual institution (as occurs currently), and the Commonwealth would determine the number of funded places the institution receives by reference to the total amount of funding available, and the order of ranking of students who accept an offer from the institution. In chapter 6 we propose a model very similar to this for research training.

There are difficulties in designing an administrative approach to limiting the number of individuals gaining access to public funding under a student based approach to funding. One of the main challenges is the absence of a common admissions process at the national level. A national approach to comparing State/Territory-based rankings has been developed recently. However, a large proportion of students, particularly mature age students and students in disciplines such as the fine and performing arts, are admitted to higher education on the basis of criteria other than Year 12 results. At Charles Sturt University, for example, the proportion of students entering courses on the basis of having completed Year 12 is only 12 per cent. Consideration could be given to the use of national scholastic aptitude tests, such as those used in the USA, as the basis for determining funding for students, though the desirability of relying on test scores as the primary means of allocating public funding for individuals has been contested on educational grounds and on grounds of institutional autonomy over entry standards.

In our judgment, these difficulties do not preclude the construction of a workable mechanism for allocating limited tuition funding to students in higher education. It is unlikely, though, that such a mechanism could be developed for the VET sector, given the extreme diversity of student entry points.

Postgraduate coursework degrees

Our view that the Government should primarily direct its support to students who have not previously had access to higher education has implications for postgraduate education. As the discussion of the limits on consumption that may be necessary under a lifelong learning entitlement indicates, an entitlement-based approach may further reduce the funding available for postgraduate coursework.

Postgraduate coursework programs are often undertaken for professional development or personal satisfaction and, as such, the Review Committee believes it is reasonable that they be a lesser priority for the Government than other programs of study. This is, however, a complicated issue, given the existence of programs such as Diplomas of Education, postgraduate certificates in nursing and other postgraduate courses that are prerequisites to professional accreditation. The Review Committee recognises that benefits flow to the community from students who undertake postgraduate coursework programs, particularly in the context of the learning society, in which all citizens will need to upgrade their knowledge and qualifications regularly.

Whether or not public funding is available for postgraduate coursework programs, a loan with repayment contingent on future income should be available to students undertaking these programs. In addition, the taxation treatment of educational expenses could be extended to assist these students and to ensure that barriers to participation in lifelong learning are minimised.

The present taxation treatment is based on a limited definition of the required link between the course studied and the income earning activity. To claim education expenses as deductions, a 'direct' connection must be made between the course studied and the employment from which income is earned. That is, the course of study must maintain or improve skills required in the present employment or must lead to an increase in income from the present area of employment. Students cannot claim education expenses as deductions if they are undertaking a course of study to enable them to get a job or employment different from their present jobs.

A broader definition of the required linkage would provide greater incentives for Australians to participate in lifelong learning, particularly for those who must change their area of employment owing to economic imperatives. We recognise, however, that the taxation treatment of education is a complex issue, and we have not made a recommendation on it.

Implementation issues—Commonwealth–State relations

Commonwealth and State/Territory responsibilities in postsecondary education are a major implementation issue for a lifelong learning entitlement.

In Stages 1, 2 and 3, the Commonwealth intervenes to enhance credit transfer and articulation arrangements across the higher education and VET sectors. This is necessary to compensate for artificial restrictions on free movement across the sectoral boundaries imposed by the separate funding arrangements for the two sectors. Realistically, however, this intervention cannot be expected to produce

spectacular results, because incentives for developing credit transfer and articulation arrangements are weaker when the funding received by providers is determined in negotiations with the Government, not by students' choices.

Stage 4 envisages a seamless funding system for postsecondary education and training. Such a system encourages providers in the higher education and VET sectors to develop credit transfer and articulation arrangements, since doing so increases the potential number of students (and hence funding) they are able to attract. We see this feature as a strength of Stage 4.

A number of respondents emphasised the difference in mission between the higher education and VET sectors and stressed the importance of maintaining the distinctiveness of their respective missions. Some expressed fear that a unified funding system might encourage a convergence between the two sectors. Some argued that seamless funding arrangements were unnecessary.

While we accept that TAFE and higher education occupy different roles, student choices are made more complicated, and are actually distorted, by the significantly different arrangements concerning government funding and private contribution presently in place in each sector. Already a significant overlap exists between the two sectors in the area of diploma to degree level courses. We noted in chapter 3 the flow of students between the two sectors is significant. Students should be able to move freely across sectoral boundaries to access the education which suits their particular needs.

As we pointed out in chapter 3, differences in funding arrangements are currently leading to anomalies. We consider that removing funding barriers would:

- encourage further cooperation between the sectors to achieve the best possible educational outcomes for Australia;
- provide greater, not less, incentive for institutions to pursue their own distinctive missions; and
- lead to a better and fairer allocation of resources between the two sectors.

However, while the Commonwealth plays a pivotal role in higher education funding, it has a much smaller role in funding Vocational Education and Training. Since our assessment that sufficient funding is available to make a lifelong learning entitlement feasible involves the aggregation of Commonwealth funding for higher education and Vocational Education and Training and State/Territory funding for Vocational Education and Training, proceeding with the proposed Stage 4 is dependent on funding for the two sectors being brought together.

In its recent report to the Government, the National Commission of Audit argued for a clearer Commonwealth-State delineation of roles across the education sector generally.¹⁰ The Review Committee endorses the Commission's recommendation on this matter, and encourages the Government to pursue the issue through the Council of Australian Governments mechanism.

¹⁰ See *National Commission of Audit: Report to the Commonwealth Government*, AGPS, Canberra, June 1996.

The providers of education, in various organisation guises, appear to have gathered influence at the expense of the consumers—students, parents and industry. The focus of education policy delivery should be less on the providers and more on the consumers ...

Existing funding and other decision making arrangements vary significantly between the higher education and VET sectors. They are based on historical evolution rather than a strategic approach to post compulsory education. This sectoral approach has meant that individuals pursuing similar aims (such as enhancing their employment prospects) have access to very different incentive structures ...

Recommendation 4.17: Delineate funding and roles

The Commonwealth should negotiate the following delineation of roles with the States:

- States—preschool, primary and secondary education, with Commonwealth funding of secondary education transferred by untied grants to the States
- Commonwealth—Vocational Education and Training, and higher education, with State funding of VET transferred to the Commonwealth through a reduction in general purpose grants (ANTA would be redundant in its current form).

National Commission of Audit, *Report to the Commonwealth Government*, June 1996, pp. 57-8.

To support the process envisaged by the National Commission of Audit we make the following recommendation.

Recommendation 20

That the Government should negotiate with the States and Territories that funding for Vocational Education and Training be transferred to the Commonwealth in the context of a broader realignment of funding arrangements.

Risks

We recognise that the changes to the funding of teaching we are advocating go well beyond what has been done before, and therefore may have the potential to generate some unexpected outcomes. We therefore make a series of recommendations aimed at the management of these risks.

Equity

In our vision for Australia's higher education sector, we have stated that no Australians should be denied access to appropriate education at any level because of their social background or financial circumstances. All Australians should have access to postsecondary educational opportunities. In chapter 3, we concluded that one of the strengths of Australia's higher education system is its accessibility. Part-time and external modes of study, particularly in relation to distance education and open learning, are well-established features of our higher education system.

However, our report card on equity is less impressive, particularly in relation to Indigenous students, students from low socioeconomic backgrounds and students from rural and remote areas. Individuals from these backgrounds continue to be under-represented in higher education, especially in certain courses. They are also less likely to complete secondary school, which limits their educational opportunities at postsecondary levels. Recommendation 2 in chapter 3 addresses this important issue.

Equity issues are complex and must be addressed on several levels. The first of these applies to all students. Under the Review Committee's student centred funding arrangements, all students will have access to loans with repayment contingent on income which are designed to ensure that no students will be required to pay up-front fees. Furthermore, while institutions will be able to set fees under student centred funding arrangements for students receiving government funding for tuition, this will initially be within an upper limit set by the Commonwealth while the impact of allowing institutions to set fees for all students on access and equity objectives is monitored.

The remaining equity mechanisms are targeted and designed to overcome specific forms of disadvantage. Examples include assistance to financially disadvantaged students such as the Youth Allowance or AUSTUDY, targeted support funding which is payable to institutions for specific categories of students, and strategies which are designed to achieve a more equitable student or staffing profile.

The Review Committee considers that a fundamental shift in our approach to targeted support funding is desirable under Stages 3 and 4. Public funding for teaching under Stages 3 and 4 is directly driven by students' choices, not negotiations between institutions and DEETYA. This framework provides the opportunity to target support funding directly to individual students. This would be achieved under Stage 3 by reserving a certain number of government funded student places for members of targeted equity groups, with supplementary grants provided as a part of the funding for these places. Under Stage 4, a premium attached to the entitlement would give recipients the capacity to purchase additional services, educational requirements or support designed to address their disadvantage.

These arrangements enable individual students who are members of targeted equity groups to make choices about their own support requirements and preferences. We start to move beyond a focus on equity groups and gross participation rates and concentrate on individuals. Difference need not be the same as inequality. Policies which focus on equal access will make a difference in the end only when individuals traditionally excluded from post-compulsory education are liberated to make an impact. The focus should be on individuality, not disability or handicap; on the need rather than the disability. Grouping people on the basis of disabilities, race, ethnicity or gender may be even further disabling.¹¹

The Review Committee recognises a risk with this approach in that some institutions may reduce their commitment to equity objectives in the absence of direct funding and accountability arrangements with the Commonwealth. To ensure that institutions sustain and improve their equity outcomes, institutions should provide detailed information as part of the more general consumer protection information that is publicly available.

¹¹ Francesco Sofo, *A fair go for everyone in post-compulsory education: A retrospective view of Labor's love lost?*, Unicorn, December 1997, pp. 53-59.

Recommendation 21

That the Government should:

- continue to provide targeted equity funding to institutions under Stages 1 and 2 of a student centred approach to the funding of teaching and learning;
- reserve a set number of Commonwealth funded student places for targeted equity groups under Stage 3 of a student centred approach to the funding of teaching and learning, with supplementary grants provided as a part of the funding for these places; and
- provide supplementary grants targeted to members of equity groups under Stage 4 of a student centred approach to the funding of teaching and learning.

Up to this point, our discussion of equity has centred primarily on equity issues concerning the Review Committee's proposed student centred funding arrangements. We now extend the scope of our discussion more broadly while considering specific equity groups.

Indigenous Australians

Universities are places of healing¹² ...

In the 1988 census, there were 227,645 Aboriginal and Torres Strait Islander peoples in Australia. In 1996, there were 352,197 Indigenous Australians, and it is expected that there will be 400,000 by the turn of the century.

Aboriginal and Torres Strait Islander people are the most disadvantaged group in Australia with respect to housing, employment, education and training. Social indicators show that the circumstances of this group of Australians are characterised by low incomes, poor health, chronic unemployment, high imprisonment rates and a rising incidence of family violence. Many ... Aboriginal and Torres Strait Islander people experience problems with dispossession, social dislocation, inadequate family life, substance abuse, poor education, lack of economic self sufficiency and lack of self esteem. Many of these problems ... are those commonly associated with poverty.

House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs, *Mainly Urban*, Report of the inquiry into the needs of urban dwelling Aboriginal and Torres Strait Islander people, November 1992, p. 2.

Aboriginal Australians were strangers to higher education, or indeed to anything more than basic primary education, until the 1960s.¹³ In 1972 there were 72 Aboriginal students in higher education and 18 years later there were 3,607. It is in the past decade, however, that great strides have been made. Since the late 1980s, the number of Indigenous students in university courses has more than trebled and the proportion of Indigenous students among commencing students is now broadly comparable with the proportion of Indigenous people in the university age population. However, in terms of outcomes, the picture is much less impressive. Almost half of Indigenous students are enrolled in sub-degree courses and their success rate has been disappointing—about 65 per cent, compared with 85 per cent for other students. On this basis alone, the provision of targeted assistance to improve the educational outcomes for Indigenous people could be justified.

¹² Pearl Wymarra of the University of Western Sydney winner of the Prime Minister's teaching award for excellence in the teaching of Indigenous studies.

¹³ Don Anderson, 'Access to university education in Australia 1852 to 1900: changes in the undergraduate social mix; Higher Education Review, Vol. 24, no. 2, 1992, p. 24

However, the comparatively poor higher education outcomes are largely the result of poor schooling outcomes for Indigenous students against measures such as Year 12 retention rates. Much of the targeted support funding provided for Indigenous higher education students is used to redress shortcomings in students' primary and secondary educational experiences. Furthermore, educational disadvantage is compounded by other forms of disadvantage such as poor health, poor housing and poor employment prospects.

Improved educational outcomes at primary, secondary and tertiary levels will be essential to improving the social and economic circumstances of Indigenous Australians. Comprehensive measures designed to improve education and training for Indigenous Australians outlined in *A National Strategy for the Education of Aboriginal and Torres Strait Islander Peoples 1996-2002* have been endorsed by the Commonwealth Government and State Governments. Universities have an important role in implementing many of the strategies in this document.

Australia's universities also have special responsibilities and opportunities to assist in the reconciliation process between Indigenous and non-Indigenous Australians. Universities offer Indigenous students the opportunity to acquire high level skills and knowledge, and in some cases professional qualifications. The Review Committee was delighted to listen to Indigenous students, particularly mature aged women, warmly describing how their higher education experience provided them with the confidence and skills to become actively involved in their communities and in the education of their own children.

In the book *Local Heroes*, Lorraine Liddle [the first Aboriginal female lawyer in the Northern Territory] told the story of how as a high school student she told her career counsellor of her ambition to become a lawyer. The counsellor thought it was a most ridiculous dream, not only because Lorraine was a girl but because she was also Aboriginal. Lorraine herself had never met an Aboriginal lawyer at the time and so she became convinced that an Aboriginal girl could not become one. Consequently, she agreed to the counsellor's suggestion and trained as a teacher but she never enjoyed teaching. Years later, Lorraine visited Papua New Guinea after the country gained independence from Australia, and for the first time she realised that black people were lawyers, doctors and accountants and so she returned home even more determined to become a lawyer.¹⁴

However, Indigenous people are concerned that the university environment, based as it is on the Western tradition, may contribute to the further erosion of Indigenous identity. It is therefore important to ensure that Indigenous students are able to maintain strong contact with their communities. Students who live away from their communities require financial assistance for travel to maintain their family and community ties and to meet their cultural obligations.

Australian universities have a unique responsibility to engage in high level teaching, scholarship and research of Indigenous history, culture and languages. All Australian students should have some exposure to Indigenous issues. The incorporation of Indigenous perspectives into the curriculum should be extended more broadly, but particularly for courses such as teaching, law, nursing, medicine and social work, whose graduates are likely to work with Indigenous people. Universities must improve the way they prepare non-Indigenous teachers and other professionals to work with Indigenous people and to cope with the difficulties of working in remote and stressful environments. The incorporation of Indigenous perspectives into the curriculum should provide opportunities for Indigenous staff within universities.

¹⁴ Komla Tsey, 'Aboriginal Self-Determination, Education and Health: towards a radical change in attitudes to education', Menzies School of Health Research, Alice Springs, *Australian and New Zealand Journal of Public Health*, Vol. 21, no. 1, 1997, p. 81.

Finally, universities have a responsibility to their local communities, including the Indigenous community, to involve them, to respond to their concerns and to work together in partnership. With goodwill and commitment there is considerable scope for universities to work with their communities to promote reconciliation at the local level.

Indigenous research—Professor Colin Bourke, Director of Aboriginal and Torres Strait Islander Studies at the University of South Australia, argues that a culture will survive only if a people has control of its land, a common religion, a common language, or an education system. It is the last of these that ensures the continuation of Indigenous culture. The possibility of a separate, multi-campus Indigenous Peoples' University, therefore, has support from some Indigenous people. The attractiveness of this proposal lies in the development of Indigenous research, where traditional Indigenous belief systems confront Western ideology, and cultural and professional goals can be brought together. However, this may lead to the further separation of Indigenous learning and culture from mainstream universities, in many of which there are thriving Indigenous centres. The tension between equity (the desire for access to education giving equal capacity to compete for employment) and the preservation of a separate cultural and linguistic identity must be resolved in local communities.

The notion of 'both ways' or 'two ways' education¹⁵ emerged as a creative response by Indigenous people to the history of one-way Eurocentric schooling. It is an innovative approach that calls for equal respect for both Indigenous languages, knowledge and ways of organising learning contexts, and English language and knowledge-based learning in educational institutions. It involves the notion of non-Indigenous societies learning from Indigenous societies as well as learning occurring in the opposite direction. These principles allow wide variation of application from pre-schools to tertiary institutions, from cities to the bush.

DEET, *National Review of Education for Aboriginal and Torres Strait Islander Peoples, Final Report*, 1995.

In universities, extensive research is possible in two-ways education. 'One of the great benefits of two-ways education programs is that it is empowering for Aboriginal and Torres Strait Islander peoples. The transmission of culture is appropriately the domain of Indigenous peoples and the system is thereby obliged to recognise their expertise, special knowledge and attributes. Elders and other people with expert knowledge become part of the education system'.¹⁶

However, nothing will change unless societal attitudes change towards Aboriginal Australians, both collectively and as individuals. Acceptance and equality of regard are essential if the self-esteem of Indigenous peoples is to be raised. The contribution of our Indigenous peoples to Australian life should be an integral part of school and university curricula in history, law, medicine, environmental science and much else.

¹⁵ The term 'both ways', or 'two ways', education is falling out of favour in the southern States. Such terms as 'Indigenous studies' or 'Indigenous perspectives' are preferred.

¹⁶ DEET, *National Review of Education for Aboriginal and Torres Strait Islander Peoples, Final Report*, 1995, p. 85.

Recommendation 22

That the Government should examine the feasibility of designating the Australian Institute for Aboriginal and Torres Strait Islander Studies as a national base for research into bi-cultural approaches to Indigenous studies.

The needs of Indigenous peoples are acute and the focus in addressing these needs should be educational, professional and humanitarian. The whole community, irrespective of race or political affiliation, should address these needs.

Women

As discussed in chapter 3, women's participation in higher education has increased rapidly over the past decade. Overall, 54.4 per cent of students in higher education are women. Disciplines in which women have traditionally been under-represented, such as engineering, have shown a marked increase in participation. Furthermore, these gains have not been restricted to younger women. Enrolments by women exceed those of men in all broad age groupings. Women continue to be under-represented at the doctoral postgraduate student level.

Women occupy only 14 per cent of positions above that of lecturer. Under-representation of women may be addressed over time, but it is an issue that should be borne in mind by university leaders. Submissions to the Review Committee suggested that because women continue to be more involved in family responsibilities than men their academic programs and careers are more disrupted. Women often find that travel to further their postgraduate studies or to advance their careers is difficult and costly.

The Review Committee recognises that significant advances are being made at all levels. However, management of industrial relations matters, including equity dimensions, will remain a major challenge for university managers in the future.¹⁷

Students with disabilities

Awareness within universities of the need to offer adequate support mechanisms for students with disabilities is widespread. Obviously, the needs of students with disabilities must be addressed individually. The provision of support funds to students as proposed under Stage 4 of the student centred funding arrangements will enable them to select the specific forms of support or services they require.

Students from low Socio-Economic Status groups and rural and isolated students

Students from low socioeconomic groups and from rural and isolated areas are under-represented in higher education¹⁸ and have shown little improvement or have actually slipped back in participation in recent years. The trick is to ensure that these students finish their senior school studies. Students who persevere to the end of Year 12 continue on to some form of postsecondary education at the same rate as other students. The elimination of disadvantage will come about only when school retention rates have considerably improved. Students from low Socio-Economic Status (SES) and from rural and isolated backgrounds are likely to enrol in agriculture, engineering, nursing and business studies, and very unlikely to enrol in medicine and law. For example, of the 386 students enrolled in university law programs in South Australia in 1995, only nine were from the lowest ranked SES quartile.¹⁹

¹⁷ Clare Burton and others investigate many of these issues in *Gender equity in Australian university staffing*, Evaluations and Investigation Program, Vol. 18, AGPS, Canberra, 1997.

¹⁸ HEC, *Equality, Diversity and Excellence: Advancing the National Higher Education Equity Framework*, AGPS, Canberra, 1996.

¹⁹ Moodie, Gavin and Swift, Lynette 1995, *Participation in higher education in South Australia by people from socioeconomically disadvantaged backgrounds*, Journal of Institutional Research in Australasia, Volume 5, number 2, pp.55-70.

Student centred funding arrangements, particularly those proposed under Stage 4, should markedly improve higher education participation rates for rural students. At present, access to higher education is rationed. With no family experience of university studies and limited access to costly resources and educational opportunities, it is hardly surprising that students from low SES backgrounds and rural and remote areas receive proportionately less of the limited resource higher education than their more wealthy counterparts. Under Stage 4, all students who complete Year 12 would have access to funds to secure a place in an institution and course of their choice. Furthermore, these same students would stand to gain directly from the additional targeted equity funds. The combined effect of these measures should be very significant.

Student assistance programs are another mechanism designed to reduce the impact of financial disadvantage. The Review Committee received submissions from students and others pointing to inadequacies with the current major program, AUSTUDY. The Government's new program, the Youth Allowance, to be implemented in mid-1998, is designed to address some of the financial disadvantage suffered by young people whose personal circumstances are often very fluid.

Most studies of the impact of student assistance on higher education participation suggest that other factors may be more influential in determining whether students opt for university study. On this basis, these studies have been reluctant to recommend that student assistance funding be increased, because participation by students from low SES backgrounds would not be expected to increase markedly.

Regional universities

In the course of preparing this report, the Chairman and various sub-sets of the membership of the Review Committee visited every university in Australia, including every regional university.

The Review Committee became acutely aware of considerable confusion, even within the higher education sector, as to what is meant by a regional university. Some capital city universities lay claim to a 'regional' mission. For example, the University of Western Sydney is rightly proud of its very special commitment to the western and outer south-western metropolitan region of Sydney; and the three South Australian universities, all with headquarters in Adelaide, claim a common commitment to the advancement of a large part of the central southern region of Australia.

If we think of regional Australia as those areas of Australia which are not centred on a capital city, then Australia's 38 universities include 12 regional universities, 11 public universities and one private university (Bond), of which all but two are based in the two most decentralised States of New South Wales and Queensland.

However, the approach taken to the provision of regional university education in Western Australia, South Australia, Tasmania, and for the most part Victoria is in sharp contrast to that in New South Wales and Queensland. Their distinctive approach has been to anchor regional provision in comprehensive regional campuses of capital city based universities.

In addition, there are various open and distance learning centres, multi-point delivery sites, and annexes which have a quasi-campus status (eg La Trobe University's presence in Shepparton and Mildura, and Monash and RMIT in Bairnsdale). It is not clear precisely where the line should be drawn between a campus and a delivery centre. This distinction will become increasingly blurred during the next two decades.

Strengths

The Review Committee was conscious of various press reports to the effect that Australia's regional universities were especially vulnerable to increased deregulation.

While some very significant challenges face regional universities, the Review Committee does not share these pessimistic views. Nor did it receive evidence or support for them from the leaders of regional universities, or their host communities. On the contrary, the Review Committee was impressed by the vitality, sense of purpose, and relative clarity of vision of most of Australia's regional universities. By and large they have survived and even flourished through their adaptability, their willingness to make intelligent use of the new learning technologies, and strong bonding with their host communities—reflected in a continuing commitment to enrich the cultural and social as well as the industrial and economic wellbeing of their communities.

The Review Committee is not of the view that one mode of regional provision is inherently superior to the other. The Review Committee was impressed by the confidence of those regional universities that did not have capital city headquarters that they would gradually work their way up the status hierarchy in their own right. Australia's regional universities are still relatively young, with only two, the University of New England and the University of Newcastle pre-dating the 1960s. The Review Committee's attention was also drawn to the fact that the relatively older regional universities—namely, the University of New England, the University of Newcastle, James Cook University and the University of Wollongong—have research records that are at least comparable with those of capital city universities of similar age and size. We were reminded repeatedly of the alleged Australian vice of 'urbism', the fallacy of thinking that if something is genuinely good it must be based in a capital city!

Distance education—the need to develop a critical mass

There are, however, legitimate concerns for the future. The high degree of dependence of a number of regional universities on publicly funded distance education enrolments needs to be addressed.

Of Australia's 87,000 equivalent full-time students studying externally in 1997, some 57,000, or 66 per cent, were enrolled at regional universities. Distance education has meant the difference between viability and non-viability for many regional universities. There are, however, dangers in too much dependence on this category of enrolment.

The distance mode is significantly exposed to inbound international competition. Our cost structures are very much higher than those of many of our potential international competitors (eg the Open University of the UK, the Indira Gandhi Open University in India and the National Technological University in the United States). Most Australian regional distance education universities advised the Review Committee during visits that the costs per equivalent full-time student unit (EFTSU) for distance education delivery were at least as high as for on-campus delivery.

There are two explanations for this equal or higher cost per EFTSU.

- First, a number of universities reported determining their cost structures on 'equity' grounds (ie the somewhat bizarre principle that a distance education enrolment is 'entitled' to the same quantum of university investment as an on-campus enrolment). This obviously determines what is actually spent. It is therefore hardly surprising that distance delivery is not lower in cost than delivery on campus.
- Secondly, and more fundamentally, no Australian distance education provider has achieved real economies of scale. There appeared to be a consensus that for most subjects very significant economies of scale cut in only past 1,000 enrolments. For numbers fewer than 1,000, economies of scale favour traditional large-group single-campus teaching institutions. But very few distance education subjects delivered in Australia have 1,000 enrolments or more. On the other hand, hundreds of subjects taught by distance education have fewer than 100 enrolments.

The Review Committee notes that unless the economy of scale issue is addressed, the current distance education providers will be poorly placed to survive when subjected to 'cream skimming' by new private providers of distance education capturing the high demand high volume subjects at full fee levels competitive with HECS. The potential for major international operators to enter the Australian market by 'dumping' a product or by introducing attractive loss-leading initiatives to capture market share and build brand loyalty is plainly very real.

This is a future scenario that cannot be regulated out of existence. Even if it were considered desirable to do so to protect domestic institutions, it is difficult to see how it would be technically possible. If regional universities, dependent on publicly funded distance education enrolments, are to survive, they must increase dramatically the proportion of their subjects with 1,000-plus enrolments. Second, they must look to enter the high volume market so that full cost recovery plus is achieved at a fee level less than the prevailing HECS rate.

Fee paying students

At the same time such universities must do more to increase their numbers of on-campus students within existing infrastructure limitations, which generally appear to be less constricting than those at the high demand metropolitan campuses. The Review Committee is impressed by the fact that most regional universities have been recruiting international fee paying students, and that two regional universities—the University of Wollongong and the University of Southern Queensland—are among the most successful Australian universities in attracting these students.

One of the major disadvantages that regional universities suffer in recruiting full fee paying students, international and domestic, is that they cannot reflect in their fee structure their comparatively low land values. If the playing field is to be truly level between institutions, then the significant differentials in current use land valuations should be reflected in the fee structure. The burden of doing this would be heaviest on the large inner city institutions, and significantly lighter on newer, smaller, outer suburban and regional institutions. This would also help level the playing field between public and private providers, and would tend to be price favourable to courses delivered by distance education.

We have made recommendations in chapter 4 on how a level playing field for regional institutions could be achieved.

On balance, we believe that regional universities possess unique characteristics which will place them well in an environment in which there is more open competition between institutions for student places. For example, they will be well placed to recruit students from their local areas, who will benefit from not having to meet the added living costs that they would incur if they attended metropolitan institutions.

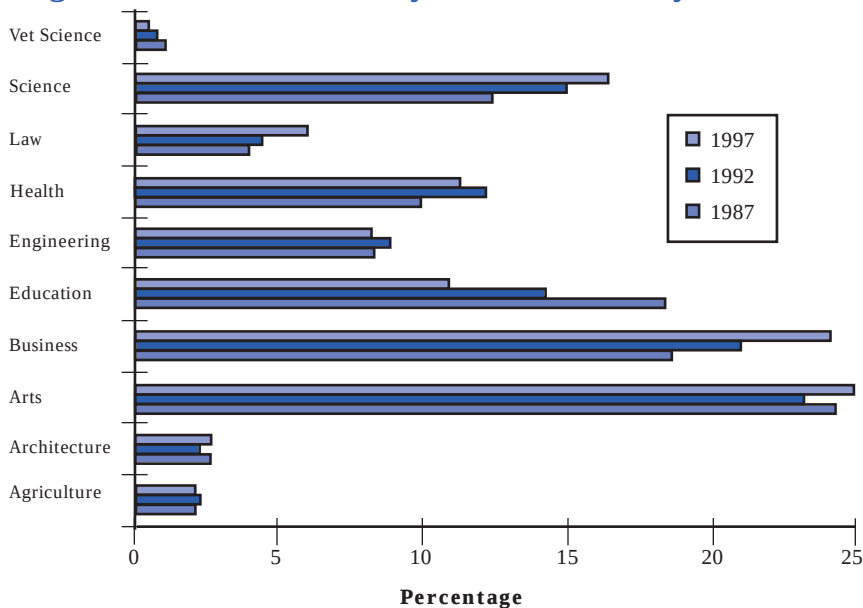
Should the financial viability of a regional institution be threatened, it might be possible to mount a 'public good' argument for special purpose support, such as additional research infrastructure, on the grounds of the institution's broader significance within the local community. However, this is a regional development issue, not a higher education issue per se. Consideration of any support would need to have regard to other support provided to the region and to prevailing regional development policies. It may be that universities seeking support on the grounds of their non-educational significance to their regions should do so via regional development funding.

Significant but low demand disciplines

Throughout the review process the issue of low demand but nationally important courses was raised. It was argued that disciplines of cultural or social significance, but with small enrolments, would have trouble surviving under a model driven by student demand to a greater extent than at present. In particular, concerns were expressed about classics, small enrolment language courses, physics, pure mathematics and archaeology.

Concerns about the effect of student choice are not limited to small enrolment disciplines. For example, the Review Committee heard that enrolments in science are declining. This does not accord with the available facts. Statistics show that science enrolments as a proportion of total enrolments have increased from 13 per cent to 16 per cent over the past decade (see figure 5.3).²⁰

Figure 5.3: Students by field of study



²⁰ DEETYA, *Selected Higher Education Student Statistics*, AGPS, Canberra, 1997.

There has been a decline in applications for science, and it is possible that in some cases enrolments have been sustained by reducing ‘cut-off’ scores for entry. However, research by DEETYA indicates that 1997 admission requirements ‘did not appear to reflect the overall decline in applications for engineering and science’, with only minor changes occurring system wide.²¹ DEETYA also found a tendency towards oversupply for new science graduates, although computer professionals and, in some States, science teachers are in demand.

We do not infer from this that a problem does not exist—rather, if there is a problem, it needs to be analysed to determine accurately the underlying causes and, therefore, appropriate solutions. Students already have considerable freedom to choose the discipline they will study, and it might be beneficial in fact for some courses to shrink as they become less relevant to students or less significant nationally.

Where declines in enrolments in particular disciplines have occurred, the problem may be not that students are inherently unwilling to undertake study in those courses, but that the courses are not being presented in ways that engage their interest. During its consultations, the Review Committee heard many anecdotes suggesting that, at least in some institutions and some disciplines, teaching content and methods have remained virtually unchanged for decades. Whether valid or not, such perceptions underline the point that those who teach in declining disciplines should examine thoroughly what they teach, how they teach it and how these relate to the needs of their students and their future employers.

Universities have the option of collaborating with other institutions to build up the critical mass of numbers necessary to enable small disciplines to continue to be offered, provided that a case can be made that the collaboration is in the public interest. Student centred funding may accelerate this cooperation while also sharpening competition in other areas.²² We also think it likely that some universities may choose to cross-subsidise certain disciplines, where they think these would enhance the reputation of the institution as a centre of high quality scholarship.

Nonetheless, we consider that the funding framework should accommodate the possible need for special-purpose funding to support low demand disciplines in some instances. If there is such a need, we consider that the rationale for support should be clearly articulated and that funding should be allocated on a competitive basis.

Recommendation 23

That the Government should provide special-purpose support for significant but low demand disciplines on a case-by-case basis, using competitive tendering as the vehicle for distributing any funding, and with funding being provided only when it is in the public interest and when all other options for preserving the discipline without special-purpose funding have been exhausted.

We also see merit, in the short term at least, in continuing to support university teaching by providing some additional special-purpose Commonwealth support as a means of enabling the sector to support teaching development in small disciplines.

²¹ DEETYA research paper, Analysis and Evaluation Division (to be published).

²² R. Johnson & B. Rawson, *Alternative Ways of Teaching Languages of Small Enrolment*, AGPS, 1994. This study funded under the DEET, Evaluations and Investigations Program, has excellent recommendations on collaboration across universities to preserve small candidatures in languages such as Classical Greek and Korean.

The need to support teaching

In chapter 3 we indicate that, in the current funding framework, incentives are skewed toward research at the expense of teaching. Given the critical importance of high quality university teaching to Australia's economic, social and cultural future, this is a significant weakness.

Our recommendations for funding will redress this imbalance by tying the allocation of public funds more directly to the needs and preferences of students. However, we are conscious that the reasons for the imbalance are not solely funding related. Within the culture of universities, and not only within Australia, research activity tends to be accorded higher status than teaching. Lord Dearing captured this aptly in an address he gave to the Review Committee, when he noted the tendency within academia to refer to research 'opportunities' and teaching 'load'.

We consider that further action to support teaching is needed to raise its profile and status within the university community to a level that is commensurate with its social importance. In this respect, we commend the Government's initiation in 1997 of the annual Awards for University Teaching. We consider that the awards should be a continuing feature of higher education in Australia. However, these awards reward only a few, and there is an urgent need to recognise both institutionally and nationally excellence in teaching and to provide strong incentives for a raised awareness within the sector of the need for high standards in every place. It is ironic that academics—the professionals who nurture all other professionals in every field of human endeavour—continue to eschew professional qualifications for themselves. The work of the former Committee for the Advancement of University Teaching and, more recently, of the Committee for University Teaching and Staff Development (CUTSD) has also been valuable in raising the status of teaching.

A case can be made, therefore, for providing special-purpose support, at least for a limited time, to assist universities to nurture innovative, high quality scholarly teaching while they come to grips with the challenges to pedagogy, academic organisation and staff development that will be posed by the information and communications revolutions.

Recommendation 24

That the Government should entrust to the Committee for University Teaching and Staff Development (CUTSD) the task of promoting an enhanced teaching culture in higher education institutions to balance the established research culture. With the assistance of additional public funding, in particular CUTSD would:

- commission research into learning and teaching practices in higher education that promote the development of graduates who have a respect for scholarship and learning and an appetite for intellectual growth and development;
- encourage institutions to adopt a code of quality for scholarly teaching and to develop principles for the promotion of academics on the basis of scholarly teaching; and
- encourage institutions generally to appoint new academic staff on probation until they have completed a qualification in teacher training.

Chapter 6

Research and research training

The growing importance of knowledge to economic development is widely recognised—the growth of high technology industries and the growing demand for highly skilled people are evidence of this. Research and development, education and training, and industrial innovation are key inputs to economic growth.

In 1997, the Commonwealth Government contributed close to \$1.5 billion to university research and research training in recognition of the capacity of research to deliver significant social, cultural, and economic benefits to the nation. Public funding for university research has been provided in the past primarily for curiosity driven and strategic research. It is important to ensure that this substantial investment is expended in the most effective and beneficial manner.

We said in chapter 1 that the purpose of research in universities is to:

- train higher degree research students and enable the teaching provided to other students to be informed by research;
- contribute to innovation in Australia through the production and diffusion of knowledge and skills; and
- expand the stock of world knowledge.

In chapter 1 we referred to the nexus between teaching and research and drew attention to Boyer's representation of the research and teaching functions in universities as four interlocking activities of scholarship. In this chapter, we focus on two of those dimensions—the scholarship of discovery and the scholarship of application.

In chapter 3 we identified some of the challenges facing higher education research and research training. In order to respond to these, the Review Committee believes that action is needed in three key areas.

- Research training should facilitate student mobility, provide candidates with a wider choice of topic and supervisor and be more contestable in its funding.
- Our capacity to set priorities for research must be improved.
- Our investment in research infrastructure must be increased in return for greater accountability and transparency in the costing and pricing of research on the part of funders and performers of research.

Issues concerning the size and allocative mechanism for the Research Quantum (RQ) and the structural and administrative arrangements that apply to higher education research funding are also important in any discussion of research and research training. We deal with those issues in this chapter.

Research training

Research training makes a vital contribution to the national economy. Our international competitiveness is linked to our performance in knowledge-based industries, which require increasing numbers of highly trained and skilled personnel. Universities are the major providers of research training for these personnel. The importance that industry attaches to the research training role of

universities is evident in a recent US survey of R&D executives which shows that academic training and skills are more relevant than academic research to the development of industrial technologies.¹ The Review Committee's consultations with employer groups suggest that the situation in Australian industry parallels the US experience.

Research training is the single largest element of the Commonwealth's programs supporting higher education research and research training. The research training component, worth an estimated \$470 million a year, is provided through the operating grant to fund research training places. This supports the equivalent of 22,900 full-time higher degree research students.

In addition, the Commonwealth also provides about 7,100 stipend scholarships (worth about \$130 million). Universities provide approximately another 2,500 scholarships from discretionary funds. Between 80 and 90 per cent of students undertaking full-time or part-time research training at the PhD and masters levels receive Higher Education Contribution Scheme (HECS) exemption scholarships.

Funding provided for research training places and stipend scholarships means that research training constitutes a substantial investment by the Commonwealth in research students. Public funding for the tuition costs of a full-time HECS exempt research degree student, a research training place, averaged across all disciplines, is an estimated \$21,000 per annum. The tuition funding for a PhD student over a three and a half year period is therefore \$73,500. Providing a living allowance, in addition to a funded place, will increase the public subsidy by \$61,500 to a total of \$135,000.²

Research training also depends on the provision of a quality research training environment. It is clear that for universities to be able to offer quality research training environments they require adequate infrastructure and a community of active and accomplished researchers. These vary between institutions. The capacity of universities to devote resources to research training depends on research income, and that varies considerably between universities (especially in the humanities, the natural sciences and engineering).

However, under current arrangements, funding for research training is effectively locked into particular institutions. Funding for research training is part of the operating grants of institutions. Higher education institutions are funded to deliver a total student load target and an undergraduate load target (there is no specific 'target' for postgraduate or research training loads). The difference between the total load target and the undergraduate target is the Commonwealth's core subsidy for postgraduate teaching and research training.

The Review Committee believes that student mobility is especially important at the research training level. As a student progresses through bachelors and masters coursework programs to research training, the degree of choice of courses and research areas and topics narrows within a student's home city and the institution awarding bachelors and masters degrees. Despite this narrowing of choice at the research training level, it appears that our research students are far less mobile than their counterparts in many other advanced countries. Senior academics and administrators have also expressed the view that mobility of research students should be encouraged in the national interest.

¹ Survey conducted by Nelson and Levin (1986) and Nelson (1987), reported in Keith Pavitt, 'What do firms learn from basic research?', *Technology and the Wealth of Nations*, Dominique Foray & Christopher Freeman (eds), Pinter Publishers, 1993.

² These tuition costs are 1997 cost level estimates using the relative teaching costs matrix of the 1990 Relative Funding Model and current actual student loads. Stipend scholarships vary in value between funding agencies and programs. The figure of \$61,500 is an approximate average value on the basis of 3.5 years of support.

Importance of student choice and mobility

Consistent with our view that funding should be provided through arrangements that maximise student choice and mobility at the undergraduate level, the Review Committee believes that the most significant initiative that the Government could adopt in relation to research training is one that enhances student choice and mobility. Such arrangements will also enhance:

- competition between institutions for research students;
- responsiveness to employer needs;
- the research training experience of students; and
- interaction and knowledge transfer between institutions.

If students had comparative information on the quality and range of research training services, and they exercised choices according to that information, institutions would be required to compete for research students on the basis of the quality of the research environment, supervision and outcomes. We acknowledge, however, that institutions will continue to use stipend scholarships, tutorships and other part-time positions provided from discretionary funds as incentives to attract students.

We believe it is important that prospective students be made aware of employers' expectations and employment prospects for research graduates. Providing prospective students with this information would ensure that measures to increase student choice and mobility will also generate research training outcomes that are closer to employer needs.

Greater competition between institutions, resulting from enhanced student choice and mobility, would also lead to improved research training services for candidates. This would change the way in which research students are perceived by institutions. Institutions would no longer perceive them as academic labour but as clients who enhance core activity.

The mobility of researchers is an important mechanism for knowledge transfer and enhanced innovation and competitiveness. Increasing the mobility of research students would also improve knowledge transfer between institutions and enhance innovation and competitiveness.

Funding arrangements to facilitate student choice and mobility

A funding model that is based on student choice and which facilitates the mobility of research students between institutions depends on a number of factors, including:

- students' access to information comparing research training attributes of potential supervisors and host institutions;
- the elimination of financial disincentives to moving between institutions and cities;
- the development of a research training index (for Stage 1 of the development of a student centred funding arrangement for research training);
- the development of a national merit list (for Stage 2 of the development of a student centred funding arrangement for research training);
- administrative simplicity at the national and institutional levels; and
- self-regulation of research training activity.

Comparative information on research training

Effective student choice and student mobility will depend on the availability of information as much as they depend on the administrative and funding arrangements established by government. Students will need to be able to access information on all aspects of the research training environment—in particular, information regarding the focus, style and content of research training programs, quality of supervision and student support services, the level of research and teaching infrastructure, employment outcomes of research graduates, and the achievements of researchers at each institution. Currently, some measures of this kind are available, although, for issues such as the quality of supervision, new measures would need to be developed.³ It is likely that providers of research training will also benefit from the discipline of articulating their programs, strategies and objectives.

Compensating for additional costs and time associated with mobility

The additional costs and time associated with moving between cities are significant disincentives. In order to encourage inter-institutional and inter-city mobility, it is necessary to compensate for these additional costs and, where applicable, an increased maximum period of tuition and stipend support, say up to an additional six months, to allow a settling in period not required by students continuing their research training at the same institution.

Research Training Index and national merit list

In the Discussion Paper we proposed that research training places be allocated on the basis of a national merit list of honours graduates and other candidates developed through institutional and cross-disciplinary quality assurance and moderation processes. Responses to the Discussion Paper were critical of this proposal. The criticisms focused both on the difficulties of quality comparisons and national merit list preparation and the fairness of a system which is based on institutional averages and which might, therefore, discriminate against some good students.

The Review Committee considers that, given the difficulty of moderation and preparation of a national merit list in the short term, a suitable Stage 1 alternative would be to allocate research training places in two funding cycles, with the first cycle of allocations to institutions based on a performance driven Research Training Index (RTI). To introduce an element of student choice, the second cycle of allocations to institutions would be based on students' acceptances of the offers made by institutions after the first funding cycle. The RTI should measure how many research degrees have been completed, research income from all sources, number of publications, employment outcomes for research graduates and the quality of research supervision. There should be an appropriate balance in the weighting of these performance indicators, giving due recognition to the importance of completions and supervision.

It would be necessary to rely on the first four of these measures, three of which are available as part of the current Composite Index (CI) collection, until an acceptable measure of the quality of research supervision is developed. The RTI could also be used to allocate Australian Postgraduate Awards stipend scholarships. We note, however, that there are some difficulties with the publications component of the CI and the relative weighting of government and industry funding in the research income component of the CI. We address this issue below in our discussion of the RQ.

³ For example, the rankings of universities at the discipline level in the British Research Assessment Exercise (RAE) are being provided in the UK by the universities themselves to prospective research students.

We note that criticisms of the national merit list are based on presumptions about the proposed methodology. We believe that a merit list that overcomes these difficulties could be developed. The difficulties in moderating between broad discipline groups could be avoided by allocating resources to groups on the basis of national needs and by developing merit lists within each of the groups. Separate merit lists could be developed covering masters and doctoral candidates for each discipline. We think that it should be possible to design the system so that it is flexible enough to enable student places to be offered to match the demand profile over the course of the academic year.

The key advantage of the national merit list approach is that it alone would enable research training funding to be driven directly by student choice, thus ensuring free and open competition between institutions for students. We consider, therefore, that the Government and the funding agencies should develop a system of moderation and a national merit list to be implemented by 2003 in Stage 2 of the new model. As a trial, the national merit list could be developed for a discipline such as science, with a large student number and a higher proportion of younger students (56 per cent aged under 30 years). Alternatively, the trial could be based on two disciplines with small candidatures, one with a higher proportion of younger students (eg veterinary science with 47 per cent) and a second with a lower proportion of younger students (eg architecture and building with 16 per cent).

Administrative simplicity

An important additional prerequisite to ensuring an adequate level of student choice and mobility is to avoid administrative complexity and delays in assisting students who wish to move between institutions. These issues must be addressed by DEETYA, the Australian Research Council (ARC), other funding agencies and the institutions themselves.

Self-regulation of research training activity

The Review Committee favours self-regulation of research training activity, consistent with the level of autonomy currently enjoyed by Australian higher education institutions. However, the independent complaints procedure to support students, proposed in Recommendation 10, should also be available to research students.

There already exists a degree of self-regulation of research training activity. This is achieved mainly through the Code of Practice for Maintaining and Monitoring Academic Quality and Standards in Higher Degrees of the Australian Vice-Chancellors' Committee (AVCC). This 1990 document specifies the responsibilities of institutions, academic departments, supervisors and candidates. It also provides guidance on admission, topic selection, grievance procedures, examination, appeals and intellectual property. Another significant document is the Joint NHMRC/AVCC Statement and Guidelines on Research Practice. We encourage the widespread use of the Code of Practice and other relevant guidelines, provided they are updated by the AVCC, in consultation with student representatives, DEETYA, the ARC and the National Health and Medical Research Council (NHMRC), to facilitate student choice and mobility and responsiveness to community needs.⁴ The information available to prospective candidates could include the level of compliance of the Code of Practice by institutions, departments and supervisors.

⁴ We understand that the AVCC is in the process of updating the Code of Practice.

A model for allocating research training places

We propose the development of a student centred approach to the funding of research training in two stages.

Stage 1: Research training places are contestable.

Allocations of research training places are consistent with priorities for the balance of disciplines based on industry and community needs.

Research training places are allocated in two funding cycles.

In the first cycle, research training places are allocated to institutions on basis of the Research Training Index (RTI)—a measure of the research and research training performance of institutions.

Students are encouraged to apply to several institutions. Each institution makes a first round of offers to students in December/January for the following academic year, not exceeding in number its RTI based allocation, on the basis of merit criteria and in a manner that does not restrict student choice and mobility.

In order to introduce student choice, the second cycle for the allocation of research training places to institutions is based on the number of first round acceptances at each institution.

Institutions are free to fill the research training places allocated in the second cycle during the course of the academic year on the basis of further rounds of offers and acceptances as they see fit.

In the second and subsequent years of operation, an appropriate mix of weightings for the RTI and the previous year's aggregate student acceptances in first cycle allocations of research training places to institutions is chosen in consultation with stakeholders.

Research students are free to transfer between institutions with funding following them, and up to a limited period of time transferring students would be eligible for full funding.

The duration of research training places varies, depending on whether students are enrolled in masters or PhD degrees. Students moving between institutions are given limited extra time to undertake their research training, provided they are able to justify such extensions on the basis of delays attributable to moving.

The monetary value of research training places:

- varies by broad discipline group; and
- is increased to compensate for the increased costs students incur in moving between institutions.

The Government initiates measures to ensure that comparative information on all aspects of research training, including its institutional environment, is available to prospective students.

Stage 2: Research training funding is driven directly by student choice.

A national merit list is assembled by aggregating merit lists for specific disciplines, developed using procedures for national moderation of the qualifications and experience of candidates. Allocations of numbers of research training places to broad disciplines are consistent with priorities for the balance of disciplines based on industry and community needs.

Research training places for both masters and doctoral programs are allocated to students on the basis of national merit lists. Students are encouraged to apply to several institutions.

Each institution makes first round offers of research training places on the basis of merit criteria and in a manner that does not restrict student choice and mobility. Students who fail to win first round offers or choose not to accept the conditions of offer (eg lack of stipend scholarship support) are free to make applications in additional rounds.

Students are given comparative information on all aspects of the research training environment and compensated for the costs of moving between institutions.

Recommendation 25

That the Government should ensure that the community gets the best value from research training through student centred funding arrangements that:

- allow a significant enhancement of student choice and mobility; and
- provide incentives for institutions to compete for students on the basis of the quality of research supervision, student experience and outcomes.

Recommendation 26

That the Government should:

- implement a student centred approach to the funding of research training in two stages;
- for Stage 1, allocate research training places in two funding cycles, with allocations in the first cycle based on a Research Training Index, and allocations in the second cycle based on students' acceptances of offers made by institutions after the first funding cycle;
- for Stage 2, develop, initially on a trial basis for specific disciplines, procedures for national moderation of the qualifications and experience of candidates with a view to developing by 2003 a national merit list; and
- ensure that the discipline mix of research training places in Stages 1 and 2 is informed by national priorities based on employer needs and the Government's national innovation and industry development strategies.

Recommendation 27

That the Government should:

- establish a program to provide allowances for student mobility within Australia, and extend funding periods of research training places and stipend scholarships to eliminate the financial disincentives associated with students moving between institutions and cities; and
- consider funding this program through additional funds or a small reduction in research training places.

Recommendation 28

That the Government should ask DEETYA and the ARC, in consultation with other appropriate agencies and peak bodies, to develop a strategy to improve the quality and range of information available to students to enable them to make informed choices about research supervisors and host research training institutions.

Recommendation 29

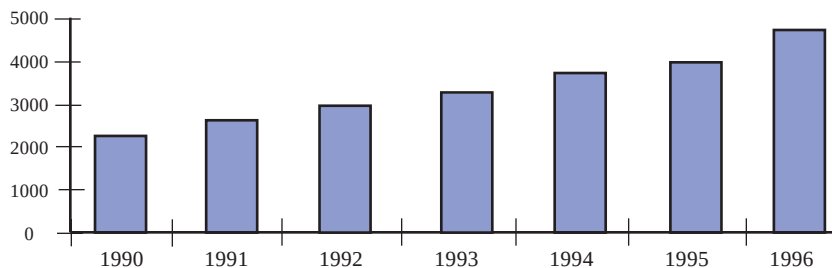
That universities eligible to receive funding for research training adhere to an updated Australian Vice-Chancellors' Committee (AVCC) Code of Practice for Maintaining and Monitoring Academic Quality and Standards in Higher Degrees.

Getting better value from the investment in research training

Research training has expanded rapidly. The research higher degree student load has doubled since 1991 to 26,250 places in 1997, with a funded component of 22,600 and fee paying component of 3,650. A substantial part-time, mostly mature age component, has resulted in a total of 34,070 students in 1997, comprising 23,390 in doctoral programs and 10,680 in masters programs.⁵

The number of higher degree research completions rose steadily from 1990 to 1996 (see figure 6.1). Given the growth in commencements in the early 1990s and the lead time between commencements and completions, the number of higher degree completions is likely to continue to rise.

Figure 6.1: Growth in higher degree research completions



⁵ Student load refers to equivalent full-time units of funding in contrast with actual student numbers which are higher according to the proportion of part-time enrolments. The estimates of load and student numbers are based on those published by DEETYA in *Selected Higher Education Student Statistics, 1997*, adjusted for differences between the second annual submission of statistics and the earlier submission used in the publication.

The 1995 and 1996 Graduate Careers Council of Australia surveys of students completing postgraduate degrees in 1994 and 1995, estimated that only about 44 per cent of 1995 research graduates in full-time employment by April 1996 had found employment directly related to their research training (18.7 per cent of respondents were employed as researchers and 25.4 per cent were employed as university teachers). The estimate for 1994 was 42 per cent.⁶

Given the increasing number of research degree completions, the high cost of providing full tuition funding for research training and the low rates of directly relevant employment, we need to ask what proportion of research training places Australia can afford to subsidise beyond those which cater for careers requiring research training.

The Review Committee is not convinced that the current level of funding for postgraduate research training is appropriate, and believes that the effectiveness of the Commonwealth's higher education research programs might be increased by reallocating some funding currently devoted to postgraduate research training to other programs, such as postdoctoral training. However, in order to ensure that changes to funding mechanisms for research training proceed at a manageable pace, resources devoted to research training should be maintained for at least the next two years, and funds allocated to research training and other research programs should be reviewed after the new research training funding model is established.

Recommendation 30

That the Government should establish a review of the level of funds allocated to research training within one year of implementing Stage 1 of a student centred approach to research training funding in order to determine the most appropriate balance of resources between postgraduate research training and other research programs such as postdoctoral training.

Priority setting for allocating funds for research training and research

Governments around the world are experiencing a rapidly increasing gap between the demand for research funding and the public capacity to fund that research. This gap is increasing pressure on funding agencies and research performers to be more strategic and accountable to the community for the use of public funds. It is also creating a shift away from the notion of grant giving based on the interests of researchers to one of investment in priority linked research and a focus on outcomes and expected returns. The trend in major OECD countries is to develop strategies to link research to innovation and to identify desirable futures—and to adapt policies to achieve them. This approach, however, does not displace curiosity driven or strategic basic research which can flourish within a system of broad national priorities.

These developments demand strategic planning and the ordering of priorities and coordination within the national research effort, and they highlight the fact that funding decisions will involve trade-offs. Priority setting cannot be avoided: if priorities are not set explicitly, they will be implicit in government decisions or they will depend on the personal interests of researchers.

We agree with respondents to the Discussion Paper who suggested that overly prescriptive priority setting could stifle creativity and originality. However, priority setting has an important role in determining the relative levels of support for different broad discipline groups. Whilst such decisions should be responsive to the national innovation and industry development strategies of governments, the

⁶ Graduate Careers Council of Australia, *Postgrad '95: Postgraduate Destination Survey 1995*; and *Postgrad '96: Postgraduate Destination Survey 1996*. It should be noted that only 74.2 per cent of 1995 research graduates and 59.1 per cent of 1994 research graduates were in full-time employment by April the following year.

allocation of research funding should continue to be based on the principles of peer review, competition and diversity. The quality of proposals and the calibre of researchers are an effective filter for deciding between competing proposals in a given discipline.

Priority setting now and in the future

Setting national priorities for research in Australia requires the involvement of all relevant funding agencies and research performing institutions, including the ARC. The restructured coordination and advisory mechanisms that are being put in place following the Government's response to *Priority Matters, the Report on Arrangements for Commonwealth Science and Technology* by Professor John Stocker, the Chief Scientist, provide such an opportunity.

The ARC, which under current legislation is required to advise government on the allocation of funds in programs referred to it, as well as on national research priorities and the coordination of research policy, has developed methodologies for allocating funds across the disciplines in its basic research programs.⁷ These methodologies attempt to take into account international trends, projected changes in Australian research and development (R&D) and broad socioeconomic objectives. We endorse and encourage these efforts to explore ways in which research funding can be more responsive to national needs. However, we note that the balance of funding across disciplines continues to be determined by historical shares, with only a slow response mechanism—a three year moving average—to shift the balance across disciplines according to demand based on excellence.

To enable the ARC to use its funding resources most effectively we believe that its role and responsibilities for priority setting should be strengthened to include the authority to allocate funding through all targeted higher education research programs referred to it, but with the requirement that, through its annual strategic plan, it seek ministerial approval for changes in program structure reflecting shifts in thematic and structural priorities.⁸

Recommendation 31

That the Government should expand the role of the Australian Research Council (ARC) to give it explicit authority to:

- determine priorities within its own programs (on the condition that these priorities are included in its triennial strategic plans, which are reviewed annually and approved by the Minister);
- advise the Government—in consultation with DEETYA and other portfolios and agencies such as DIST and the NHMRC—on priorities for research training that are consistent with the needs of employers, the Government's innovation strategy and the ARC's overall strategic plan; and
- establish linkages between priorities for its programs with those of other portfolios and agencies, such as DIST, CSIRO and the NHMRC, through bilateral negotiations as well as multilateral mechanisms such as the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) and the Coordination Committee on Science and Technology (CCST) and their subcommittees.

⁷ See ARC, *The Likely Profile of Research for Social, Economic Cultural and Environmental Benefits* in 2010, 1995; ARC, *Funding Strategies for Basic Research: Part 2 Balance of ARC Funding Across the Disciplines*, 1996; and M. H. Brennan and R. Johnston, *Foresight and strategy in the management of science and technology in Australia*, in *Managing Technology for Competitive Advantage*, edited by Joe Anderson, et al, Financial Times, 1997.

⁸ The term 'targeted programs' refers to those that are directed to specified purposes, and contrasts with block funding or operating grant programs which allow greater discretion in the expenditure of funds. See chapter C4, 'Competitive funding and the ARC', in the 1995 Industry Commission report on R&D, for a discussion of the role of the ARC in relation to priority setting.

Knowledge and skills transfer and technology diffusion

An essential element of a coherent approach to priority setting will be a focus on knowledge and skills transfer and technology diffusion. As we argued in chapter 2, this will be one of the crucial roles of university research in the future. Given the increasing importance of public sector research to innovation, industry competitiveness and national wealth creation, stronger mechanisms for knowledge and skills transfer and technology diffusion are needed.⁹

A better focused research effort could be a vital way of strengthening the links between performers and users of research. The Industry Commission noted that taking greater account of explicit community preferences when setting priorities and funding public-good research will improve linkages between performers and users of R&D. It also saw merit in the ARC drawing more systematically on the views of outside groups when setting priorities.¹⁰

In encouraging stronger links between universities and industry we do not need to shift the balance of funding support for university research away from basic research and in the direction of applied research. The greatest proportion of applied research is conducted, quite appropriately, in government research organisations and industry. Successive Australian governments have strengthened both university research and industry R&D through programs, encouraging the flow of knowledge and skills between the two sectors. Further shifts in favour of applied research in universities could lead to national underinvestment in basic research and to public sector investment in R&D displacing industry investment (if university research funding were to become a mechanism for cross-subsidising industry R&D).

A sophisticated mechanism for setting priorities for basic research provides a way of enhancing knowledge and skills transfer and technology diffusion without altering the balance between basic and applied research.

Recommendation 32

That the Government should require the ARC to include knowledge and skills transfer and technology diffusion as explicit objectives of its priority setting mechanisms.

Research infrastructure

Adequate national research infrastructure is a key requirement for a competitive national research system. However, the capacity of higher education research infrastructure to support research and research training has been diminished in the past 10 years by the following developments:

- the escalation of research activity since the establishment of the unified national system in 1989;
- the expansion of the research training function in response to the research student load doubling since 1991;
- increases in funding for research infrastructure that since 1987 have not kept pace with those for programs supporting the direct costs of research; and

⁹ It should also be noted that several promising initiatives over recent years have facilitated linkages between universities and industry. These include the Collaborative Research Grants and Australian Postgraduate Awards (Industry) programs within the DEETYA portfolio and the Cooperative Research Centres and Strategic Assistance for Research and Development (R&D Start) programs of the DIST portfolio. Measures to further encourage stronger R&D by Australian business in collaboration with other sectors form a central part of the initiatives in *Investing for Growth*.

¹⁰ Industry Commission report on Research and Development, vol. 2, 1995, p. 816.

- the growing costs and decreasing obsolescence time of research equipment and facilities, including library and information systems.

These developments are broadly similar to experiences in other advanced countries.¹¹ There is a growing sense of urgency about improving research infrastructure within universities and the wider national research system in order to support the national research and innovation effort adequately.

Other recent reports have highlighted the need to provide sufficient infrastructure for university research. The NBEET report on Research Infrastructure and the Boston Consulting Group report to NBEET, 1993, identified a significant decline in the adequacy of university research infrastructure and recommended substantial additional funding.

Key issues in research infrastructure

The Review Committee considers that the following four issues need to be addressed:

- adequacy of overall support for research infrastructure in the context of the growth in the higher education system in the past decade;
- the absence of a system-wide strategic approach to research infrastructure by Australian governments, funding agencies, universities and other research institutions;
- funding arrangements under which support for direct costs of research are disconnected from support for infrastructure funding; and
- transparency in the costing and pricing of research.

Issues relating to university research infrastructure are complex because infrastructure is shared by teaching and research functions which interact closely at many levels, and infrastructure is shared across projects, project teams, departments, schools, faculties, universities and research institutions. While the resources provided to meet the direct costs of a research project are consumed fully by the project, resources provided to meet infrastructure costs are generally shared to varying degrees. Infrastructure closely related to supporting specific research projects is generally referred to as 'project-related infrastructure'. Infrastructure shared between teaching and research also tends to be shared widely within the university for research activities across departments and faculties and is generally referred to as 'deep infrastructure'. This complexity puts a premium on coherent and transparent costing and pricing of research.

Infrastructure funding levels

Responses to the Discussion Paper consistently pointed out that research infrastructure and support are inadequate, and furthermore that they are unstable because the funding provided in recent budgets is for limited periods. In 1995 and 1996 successive governments increased infrastructure support but, on each occasion, for a limited three-year period.

Unless additional funding is provided in future budgets, the ratio of infrastructure support to project grants funding will decline to 12 cents to the dollar by 2000, compared with a ratio of 28 cents to the dollar at present. The Review Committee notes that further erosion of infrastructure support could exacerbate the pressure

¹¹ For example, Canadian universities have not been able to make adequate financial provision for infrastructure renewal and maintenance. The infrastructure to support the technological demands of research in the sciences is costly and humanities and social sciences have an equally high demand for the latest communication technology to be competitive. See Bernard H. Bressler, Vice President (Research), University of British Columbia, quoted in *The Infrastructure of Academic Research*, Ken Davey, York University, <http://homer.ucc.ca/english/publications/research/aug96.htm>; and Allan Tupper, Associate Vice-President, University of Alberta, quoted in the same paper as above.

on teaching funds. Maintaining infrastructure support at the current level would require an additional \$13 million in 1999 and \$55 million per annum from 2000.

In the US, the proportions of infrastructure costs attached to grants are negotiated on a government-wide basis for each university. Project infrastructure costs, on average, exceed 50 per cent of the value of the grant. A Canadian study found infrastructure cost rates varied between 47 per cent and 58 per cent for major subject areas.¹² The 1997 Dearing Committee Report in the UK recommended increasing infrastructure support for Research Council grants from 45 per cent to 60 per cent of staff costs, or up to 100 per cent of staff costs if institutions can justify this.¹³

The Review Committee considers that an increase in the level of project-related infrastructure support is warranted to maintain infrastructure support at its current level and raise the level of support for infrastructure over the next three years

A strategic approach to higher education research infrastructure

Under current funding arrangements, only about \$25 million of the \$325 million that is allocated nationally for research infrastructure and related purposes is available for system level, strategic infrastructure priorities through the Research Infrastructure Equipment and Facilities program.¹⁴ The remainder provides infrastructure support for project-based research and other discretionary purposes.

As a complement to the ARC's role in determining priorities for the funding of university research, we believe that it should also develop a strategy for higher education research infrastructure within the national system. Given the future outlook for academic research, such a strategy will need coordination and collaboration with DEETYA and other departments and agencies concerned with funding and performing R&D.

The Major National Research Facilities program, launched in 1995—worth about \$8 million per annum—is due to end in 2001. Because there is a continuing need for a program to fund national initiatives of high strategic importance which, in some cases, provide access to overseas-based high powered facilities, a national strategic infrastructure program is warranted. The ARC and DEETYA could play a catalytic role in developing advice on such a proposal in collaboration with universities, cooperative research centres and other agencies and departments.

Support for research infrastructure

The Review Committee's view is that project-related infrastructure support should be included in project grants. The key principle involved is the need to fund projects adequately to cover both direct costs and project-related infrastructure costs, even if this means that the number of projects being supported is reduced.

The Higher Education Research Infrastructure Block Grants (RIBG) program funds infrastructure for projects undertaken by *individuals and teams of researchers* who have won project grants. However, RIBGs are allocated by DEETYA to *institutions* in proportion to their share of National Competitive Grants. Consequently, as noted in the Discussion Paper, there is no direct link between project funding and support for project-based research infrastructure.

¹² Reported in *Costing and Pricing of Public Sector Research*, Department of Prime Minister and Cabinet, Office of the Chief Scientist, 1992.

¹³ *Higher Education in the Learning Society*, Report of the National Committee of Inquiry into Higher Education (Sir Ron Dearing, Chairman), 1997, Chapter 11: Supporting Research and Scholarship. Staff costs are the predominant component of direct costs funded through project grants. Strict comparability of ratios of indirect costs/infrastructure costs to direct costs/project grants is not possible owing to international variation in the definitions of these terms. However, there is a level of broad comparability.

¹⁴ This is the sum of the allocations to the Research Infrastructure program and the Research Quantum.

In responses to the Discussion Paper there was both support for and opposition to the proposal that project-related infrastructure should be attached to individual project grants. Such a change to the allocation process would entail transferring relevant shares of RIBG funding to the portfolios providing Commonwealth competitive grants to allow infrastructure funds to be attached to project grants.

This proposal was opposed mainly on the grounds that it would reduce the flexibility of institutions and their capacity strategically to allocate infrastructure resources. Attaching project-related infrastructure to individual project grants would focus the relationship between infrastructure capacity and overall levels of research activity funded by granting agencies, and would improve accountability. Each portfolio would be directly responsible for arguing for the infrastructure costs of its project grant programs, rather than relying on DEETYA to argue for infrastructure support on a catch-up basis.

Transparent costing and pricing

Whether or not additional infrastructure funding is provided, there are questions about how research infrastructure funding should be distributed.

It is important that research grant panels within funding agencies ensure that grants are adequate to meet direct and project-related infrastructure costs. Appropriate levels of support will vary by project. Granting panels therefore should provide adequate levels of project-related infrastructure support on a project-by-project basis, rather than provide a flat rate of supplementation for all projects. Responsibility for sound costing and pricing practices rests not only with the institutions but also with the granting agencies.

The additional pressure on funding agencies and granting panels from current and projected shortfalls in the forward estimates of government infrastructure funding further highlights the need for priority setting in higher education research funding. In our view, it is preferable to fund fewer research projects and to do so adequately than to attempt to maintain grants application success rates by providing inadequate levels of infrastructure support.

Much of the infrastructure in universities, such as laboratories, libraries and computing facilities, is shared by teaching and research functions. Inadequate project-related infrastructure compels institutions to use discretionary resources to meet shortfalls. Consequently, shortfalls are likely to affect the capacity of institutions to maintain adequate levels of general infrastructure needed for both teaching and research purposes.

These inadequacies put a premium on sound, transparent costing and pricing practices in research. We note that if institutions adopt accurate accounting practices and identify all costs and price research services appropriately, research activity will be less likely to be cross-subsidised from teaching funds.

Sustained underpricing of research projects, owing to inadequate costing or to pricing that is inconsistent with the sharing of benefits of research between funders and performers, could result in a disproportionate share of the total resources available to research being consumed in meeting direct costs and infrastructure needs being neglected. The Review Committee is of the view that funding agencies and university research managers should ensure the balanced deployment of resources between direct costs and infrastructure costs of research despite the intense pressure from researchers for support to undertake more research.

Recommendation 33

That the Government should:

- provide additional funds to maintain infrastructure support at its current level and raise the level of support for infrastructure over the next three years; and
- disperse the Higher Education Research Infrastructure Block Grants program to portfolios administering Commonwealth Competitive Grants programs in proportion to the relative size of programs in each portfolio, for the purpose of including infrastructure support with project grants.

Recommendation 34

That the Government should require the ARC to develop a strategy for higher education research infrastructure, in collaboration with DEETYA, DIST, NHMRC, other agencies providing competitive funding for university research, and major research performing organisations such as the CSIRO, to address the need for major national and international facilities to be shared between universities, other public research institutions and industry.

Recommendation 35

That funding agencies and granting panels should:

- provide project-related infrastructure support for each project according to need; and
- if necessary, reduce the number of project grants in order to ensure adequate infrastructure support for all funded projects.

Recommendation 36

That the universities and university-based researchers should ensure that grant applications document all costs of research projects, including direct and project-related infrastructure costs, and adopt pricing policies consistent with the sharing of benefits of research between funders and performers.

Research Quantum

The RQ supports internally provided research grants, scholarships and fellowships, deep infrastructure, and project-related infrastructure where this is not adequately supported through the Research Infrastructure Block Grants.

Allocation of the RQ

Since 1995, the RQ has been allocated on the basis of how institutions perform against a composite index comprising measures of research income, publications and research degree completions. The evidence suggests that current arrangements for allocating the RQ are questionable and that other mechanisms for allocating block research funding should be examined with a view to achieving greater efficiency and effectiveness.

First, audits of data provided for the publications component of the index continue to show high error rates. Secondly, the weighting accorded to Commonwealth competitive grants relative to industry funding in the CI (currently 2 to 1) has implications for a number of policy objectives. Although changing the ratio in favour of industry funding will strengthen industry links in academic research, it is possible that increasing the weighting for industry funding will allow universities to cross-subsidise research for industry with government provided funds, in a context where universities are in competition with other providers of research services. It could also mean less efficient resource allocation.

Size of the RQ

In the Discussion Paper, the Review Committee suggested three alternative levels at which the RQ could be set as a proportion of the operating grant: 4.9 per cent, 6 per cent, and 10 per cent. Submissions and responses were divided on the issue of whether or not the RQ should be increased from the current level of 4.9 per cent.

The Review Committee acknowledges that the issue of an appropriate level for the RQ is complex and one that makes an impact on a number of policy objectives. The argument for increasing the RQ is that a far greater proportion of the operating grant is being used for research-related purposes and the allocation of the greater proportion should therefore be competitive.¹⁵ The argument against increasing the RQ is that increasing it would create difficulties for new universities trying to develop their research capacity. The effect of an increase in the system level total RQ as a proportion of the system level total operating grant would be to favour 'research intensive' institutions; that is, those that currently have a high ratio of RQ to operating grant.

The operating grant currently provides undergraduate and postgraduate tuition funds as well as the RQ. The Review Committee notes, therefore, that an appropriate size for the RQ would need to be considered in the context of our recommendations regarding undergraduate student entitlements and research training places. These issues should be resolved before any changes to the RQ are determined by the Government.

Recommendation 37

That the Government should review the size and the basis for allocating the Research Quantum in light of the Review Committee's recommendations on the funding of undergraduate and postgraduate tuition.

The structure and administration of research funding programs

Under the current research funding arrangements, approximately \$200 million is allocated annually through a range of peer reviewed programs and a further \$425 million is allocated through competitive block grant programs. The Committee's recommendations will change the balance of research funding in important respects.

¹⁵ This is supported by ABS surveys and data gathered by DEETYA suggesting that discretionary operating grant resources used for research purposes, excluding research training tuition costs, is closer to 15 per cent than the current RQ level of 4.9 per cent.

The Discussion Paper suggested that the national research effort could benefit if project grant programs were rationalised to provide fewer but larger and more flexible programs and if a greater proportion of funds were allocated through competitive block grants. However, we noted the costs associated with the current grant giving processes need to be viewed in the context of the benefits from participating in the peer review process.

The ARC in its response argued that the administrative costs of peer review cannot be viewed simply as an opportunity cost and that benefits include sharing ideas and information, improving research through professional scrutiny and adding credibility to the allocative process. Other responses generally expressed support for the peer review process. A shift in the balance from project grants to block grants was opposed by the majority of respondents who commented on the issue.

The Review Committee considers that in designing the program structure, the ARC should balance administrative cost considerations, which would favour more block funding, with other considerations such as the benefits of peer review, structural priorities and program objectives, which would favour more project funding, leading to an appropriate mix of block and project funding. We consider that the ARC will need to address program design as part of its strategic planning process, giving due consideration to future directions for research.

In developing a strategic design for its research programs the ARC should explore all options consistent with preserving plurality, competition and peer review. These options should include a system without project proposals, where assessments are made of the quality of researchers only, for the purpose of project funding. Such a system was proposed by Professor Mary O'Kane.¹⁶ The experience of the Foundation for Research and Development in South Africa, which has in place such a system, and the British Research Assessment Exercise, which ranks the quality of researchers and university departments, could be drawn on in the design of such a scheme.¹⁷

Under current arrangements, the ARC is a council within the umbrella of the National Board of Employment Education and Training. The ARC provides advice on policy through the Board and advises the Minister directly on the allocation of funds in its programs.

The 1995 Industry Commission Inquiry into R&D concluded that the ARC should assume a broader role than at present and should be given statutory independence and report directly to the Government. The Government has indicated its intention to restructure the ARC as an independent body and give it a wider range of functions, including responsibility for allocating competitive research grants and developing close links between universities, public research institutions and the private sector.

In this chapter, the Review Committee argues for an enhanced role for the ARC in priority setting, knowledge and skills transfer mechanisms, research infrastructure, research training, and the development of a strategic plan, as well as a redesign of the higher education research program to include the funding trade-offs necessary to achieve its strategic objectives.

¹⁶ Professor Mary O'Kane, Vice-Chancellor, University of Adelaide, Submission No. 390.

¹⁷ An important assessment of the British RAE from an Australian perspective is the July 1997 report to Australian Research Council and Higher Education Council, by Professor Paul Bourke of Research Evaluation and Policy Project, Research School of Social Sciences, ANU, *Evaluating University Research: The British Research Assessment Exercise and Australian Practice*, NBEET commissioned report no. 56.

The Review Committee favours a change in the ARC's structural arrangements to give it greater independence and an enhanced role in managing and developing a strategic plan for the higher education research program in consultation with DEETYA. We note that the ARC has recognised the need for a greater level of accountability in keeping with an expanded role and a greater degree of independence. We believe that an independent and strengthened ARC will be in a better position to assist the higher education research and research training system to realise its full potential in the national interest. However, it is important that the ARC be accountable to the Government and Parliament for the efficacy and transparency of its processes, activities and decisions.

Recommendation 38

That the Government should establish the ARC as an independent body and give it a wider range of functions, and require increased accountability and transparency of its processes and decisions commensurate with such independence and wider responsibilities.

Chapter 7

Making the transition

Taking the long view

In the preceding chapters we have identified a vision for higher education and developed broad principles which we consider should underpin a financing and policy framework. We have examined the future operating environment and reviewed our current policy and funding framework in this context. Our current policy framework is incapable of responding to the challenges it will face and we have argued for its incremental replacement by a framework which supports the complementary objectives of being more student centred and better supporting the higher education industry. We have proposed high level Recommendations relating to learning, teaching and research and the development of the higher education industry. It remains for the Review Committee to outline in broad terms the sequence in which we believe our reform agenda should be implemented.

We recognise that, if adopted, our recommendations would have major implications for students, higher education staff, employers, the VET and schools sectors, the research community as well as the Commonwealth Government and State Governments. Our Recommendations propose fundamental changes in the relationships between funding bodies and the providers and consumers of higher education. We recognise that the changes to the funding of teaching we are advocating go well beyond what has been done before, and therefore may have the potential to generate some unexpected outcomes. Therefore, the transition to the new arrangements should be gradual and modified in the light of experience and changing circumstances.

The Discussion Paper suggested that the nation should make a commitment to a 'decade of managed reform'. This process would involve extensive consultation, planning, adjustment, consolidation and the strengthening of the postsecondary education industry as a whole. Institutions would require considerable time to prepare to manage their operations in a more open and competitive environment. They would require access to mechanisms traditionally used in freeing up industry sectors. Staff would need to acquire new skills and develop new procedures. Depending upon the extent and the speed with which the Government wishes to pursue a student centred policy framework, and how it chooses to support major investment in the sector, it is quite possible that a decade would be insufficient time in which to implement these Recommendations fully.

Impact on students

Students would be the primary beneficiaries of the recommendations in our report. We have developed a framework that is designed to provide access for all Australians to a lifelong learning entitlement to postsecondary education. The framework would encourage institutions to become increasingly responsive to the preferences and needs of individual students. It would allow students to receive public tuition funding for study at a much greater range of institutions than is presently the case. It would progressively extend student access to income-contingent loans to meet the cost of fees.

We have made a number of Recommendations that are intended to protect the interests of students in a more competitive environment. While existing constraints on institutions to charge fees will be relaxed under student centred funding arrangements, fee levels will be capped and the impact of fee charging on access and equity objectives monitored before further restrictions are removed. Other mechanisms to protect students' interests include a requirement that institutions satisfy minimum standards of financial probity, the provision of publicly available information about institutions' activities and performance, grievance provisions for dissatisfied students and enhanced equity arrangements.

This framework cannot be introduced overnight. All of the changes we propose would represent a significant shift in government policy, require changes to legislation, as well as to the relationships between governments and public and private institutions. For example, to introduce Stage 1 of the student centred approach for the funding of teaching and learning, a new form of income-contingent loan would have to be developed to replace the Higher Education Contribution Scheme (HECS) and fee charging procedures would need to be amended.

The implementation process itself would be phased so that new students would be subject to the new arrangements, but the conditions under which existing students have access to HECS liable places would not be changed.

Impact on institutions

The vision we outline for Australia's higher education sector, and the policy and financing framework that we propose, should provide institutions with additional incentives to build a healthy, world-class higher education system for the benefit of all Australians. The framework would reinforce teaching and learning as the core business of universities. Universities would be freed from many of the cumbersome and inflexible public funding arrangements that currently exist. The average level of public funding provided for each full-time undergraduate student would be maintained in real terms for at least five years beyond the current budget forecast. But institutions would also have access to new sources of funds through the relaxation of constraints on the charging of fees and by an increased capacity to leverage assets. Private higher education providers could access public subsidies that are presently restricted to public universities.

Teaching and learning

Chapter 5 provides a detailed account of the impact of student centred approaches upon the funding of teaching and learning. This account includes our views on areas of specific concern raised by individuals and groups following the release of the Discussion Paper. These concerns relate to equity, regional universities, culturally important but low demand courses, and institutions' capacity to plan effectively.

Research

The Committee believes that action is needed in the way that research training is conducted in universities; and in the setting of priorities for research and knowledge diffusion and research infrastructure, in return for greater accountability on the part of funders and researchers. Chapter 6 provides a detailed account and Recommendations on these issues.

Developing the industry components of higher education

Liberalising the environment in which our existing higher education institutions operate would undoubtedly increase competitive pressures. Our existing institutions would need time to adjust to this new environment so that they can acquire the necessary skills and position themselves to take advantage of the new operating environment. Chapter 4 outlines the regulatory and administrative changes which should be developed and implemented in order to promote a more efficient and businesslike approach to university operations. These include:

- measures designed to provide institutions with improved access to financial resources so that they are better able to face competition (including rationalising the ownership and control of universities' assets and establishing a loan fund to finance innovation and structural change);
- arrangements to protect the interests of students in the event of institutional failure; and
- measures to reduce barriers to market entry (achieved by changing accreditation arrangements, progressively extending access to public subsidies to private providers and subjecting public institutions to the same charges that apply to other educational institutions).

Implementing the Review Committee's Recommendations

In considering the process of implementing our recommendations, it is helpful to distinguish between tasks that relate to issues of broad principle, matters associated with supporting the higher education industry and approaches to funding teaching and learning and to conducting research and research training. Within each of these categories, some tasks could best be implemented within the short term (that is, within the next three years), the medium term (four to six years) or over the long term (seven to ten years). Tasks which could be implemented in the short term relate to matters that require urgent attention, are relatively straightforward or which must be undertaken before a more substantial change can be implemented. Medium and long term tasks are more complex and may require other steps to be completed before implementation. For example, intergovernmental issues concerning the financing of postsecondary education in a fully developed student centred funding arrangement are significant and not easily resolved.

The following tables (see figure 7.1) summarise the steps involved in implementing our recommendations. In developing these tables, the Review Committee fully recognises the Government's right to accept or reject its Recommendations in whole or in part, and to decide on the most appropriate implementation timetable. However, the Review Committee believes that presenting its recommendations in this form enables the logical sequence and, to some extent, the linked nature of the tasks, to be clearly evident. For ease of reference, the tasks have been sorted on the basis of broad area of concern and timeframe for implementation (short, medium and long term). Recommendation numbers are listed and linkages between items have been identified where appropriate.

Figure 7.1: Implementing the Review Committee's Recommendations

Establish broad principles

Number	Issue (Rec No.)	Task	Contingent on Number
Tasks to be implemented or commenced in the short term			
1	Articulate vision for sector (Rec 1)	The Government to declare commitment to a learning society in which all Australians have access to postsecondary education.	
2	Secondary schooling (Rec 2)	Governments to take steps to ensure that virtually all young people complete secondary school to open up opportunities in later life for participation in postsecondary education.	
3	Funding levels for undergraduate students (Recs 14 and 16)	The Government to undertake at least to maintain current average funding levels per full-time undergraduate higher education student in real terms for five years after current budget forecast period. Undertake periodic reviews of the level of public funding for undergraduate students to take account of movements in costs.	
4	Allocation of research training funds (Rec 25)	The Government to ensure the community gets value from research training through student centred funding arrangements that enhance student choice and mobility and that provide incentives for institutions to compete for students.	

Develop industry components of higher education

Number	Issue (Rec No.)	Task	Contingent on Number
Tasks to be implemented or commenced in the short term			
5	Access to resources (may not be complete until medium term) (Rec 3)	Governments to develop a process to rationalise the ownership and control of assets used by universities, enabling universities to leverage these assets to finance structural change.	
6	Encourage effective use of assets (may not be complete until medium term) (Rec 4)	Undertake a study of how a capital charge might be implemented. Subject to the outcome of the study, implement a charge on capital assets	

Number	Issue (Rec No.)	Task	Contingent on Number
7	Access to resources (Rec 5)	Establish a loan fund to finance major programs of information and communications technology innovation and structural change.	
8	Accreditation —ensuring standards maintained (Rec 6)	Ensure consistent criteria and processes for recognising university level qualifications offered by private providers and use of specific titles.	
Tasks to be implemented or commenced in the short term			
9	Accreditation —reducing barriers to (Rec 7) new entrants	Ensure accreditation arrangements enable private higher education providers to become self-accrediting bodies with same powers, in this respect, as universities.	
10	Accreditation —ensuring standards maintained (Rec 8)	Establish a process to ensure all self-accrediting institutions have rigorous internal review processes.	
11	Empowering and protecting students (Recs 9 and 10)	Institutions to provide publicly available information in standardised format to assist students to make informed choices. Establish an independent complaints mechanism.	
12	Protecting students (Rec 11)	Implement a mechanism to ensure that institutions satisfy minimum standards of financial probity to protect students against financial loss.	
Tasks to be implemented in the medium term			
13	Adopting a businesslike approach to assets management (Rec 3)	Subject universities' capital assets to the same taxes and charges that apply to private higher education providers.	5

Implementing a student centred approach to the funding of teaching and learning

Number	Issue (Rec No.)	Task	Contingent on Number
Tasks to be implemented or commenced in the short term			
14	Establish priority target group (Rec 19)	Government to make first time access to postsecondary education and training by school leavers and mature age people its priority in implementing a student centred approach to funding.	

Number	Issue (Rec No.)	Task	Contingent on Number
15	Develop mechanisms to implement Stages 1 and 2 (Recs 12, 15, 17 and 18)	Before implementing Stage 1, develop: • a new form of income contingent loan to cover fees charged at public universities and private degree granting institutions under all stages of student centred funding; • an approach to allow universities to set fees for all students, initially with an upper limit for publicly funded students, and establish a mechanism to monitor the impact on access and equity; and • arrangements to provide public funding for students as a flat amount in three broad course categories. Before implementing Stage 2, in addition to the above, develop: • arrangements to enable student tuition funding to respond to movements between institutions; and • arrangements to extend access to public tuition funding to higher education students enrolled in approved private degree granting institutions.	8, 9, 10, 11, 12 and 15
16	Implement Stage 1 or 2 (Rec 12)	Implement Stage 1 or 2 of student centred approach to the funding of teaching and learning for new students.	
17	Implementation issues for Stages 3 and 4 (Rec 12)	Examine implementation issues associated with Stage 3 and funding and implementation issues associated with Stage 4.	
18	Indigenous education (Rec 22)	Examine feasibility of designating the Australian Institute for Aboriginal and Torres Strait Islander Studies as a national base for research into bi-cultural approaches to Indigenous studies.	
19	Significant, but low demand disciplines (Rec 23)	Provide special-purpose support funding for significant but low demand disciplines on a competitive tendering basis, when funding is in the public interest and other preservation options exhausted.	
20	Promoting an enhanced teaching culture (Rec 24)	Expand the role of CUTSD to promote an enhanced teaching culture within universities.	

Number	Issue (Rec No.)	Task	Contingent on Number
Tasks to be implemented in medium term			
21	Develop mechanism to implement Stage 3 (Recs 12 and 21)	Before implementing Stage 3, develop a mechanism to allocate tuition subsidies to institutions entirely on the basis of student choice, while reserving Commonwealth funded places for targeted equity groups. (Assumes that the framework for Stages 1 and 2 has been implemented.)	16 and 17
22	Implement Stage 3	Implement Stage 3 of student centred approach to the funding of teaching and learning for new students.	21
23	Work with State/ Territory Governments towards framework for Stage 4 (Recs 12 and 20)	Subject to the outcomes of the report on funding implications and implementation issues associated with Stage 4, establish with State/Territory Governments an approach to the funding of postsecondary education and training that embodies the principles expressed in Stage 4. Governments to agree that funding for Vocational Education and Training should be transferred to the Commonwealth within the context of a broader realignment of funding arrangements.	17
24	Develop mechanisms required for implementation of Stage 4 (Recs 12, 13, 20 and 21)	Develop mechanisms required for implementation of Stage 4, covering: • the administration of the lifelong learning entitlement; • extension of the public tuition subsidy and income contingent loan arrangements for all students undertaking a postsecondary award from a public or approved postsecondary education and training provider; • the extension of access to students studying at overseas institutions through reciprocal agreements; and • provision of equity support to individual students. (Assumes the framework for Stages 1-3 has been implemented.)	21, 22 and 23
Tasks to be implemented in long term			
25	Implement Stage 4. (Recs 12, 13, 20 and 21)	Implement Stage 4 of student centred approach to the funding of teaching and learning for new students.	24

Improving the effectiveness of our investment in research and research training

Number	Issue (Rec No.)	Task	Contingent on Number
Tasks to be implemented in short term			
26	Mechanism to allocate research training funds—Stage 1 (Rec 26)	Develop and implement a mechanism to allocate postgraduate research places to institutions in two cycles via a Research Training Index and student choice (Stage 1). Discipline mix to be informed by national priorities based on employer needs and the Government's industry development strategy.	4
27	Student mobility (Recs 27 and 28)	Introduce measures designed to encourage mobility by postgraduate research students. Student mobility to be informed by publicly available information concerning researchers and institutions.	26
28	Funding levels for research training (Rec 30)	Review the level of funds for postgraduate research training to ensure an appropriate balance with postdoctoral and other research programs.	
29	Mechanism to allocate research training funds—Stage 2 (Rec 26)	Develop a mechanism and trial procedures to allocate postgraduate research training funds on the basis of a national merit list (Stage 2).	4 and 26
30	Role of ARC (Recs 31 and 38)	The ARC to be established as an independent statutory body and given authority in specific areas concerning priority setting, advising Government and interaction with other agencies/ portfolios.	
31	Knowledge and skills transfer (Rec 32)	Knowledge and skills transfer and technology diffusion to be explicit objectives of the ARC's priority setting mechanisms.	

Number	Issue (Rec No.)	Task	Contingent on Number
Tasks to be implemented in short term			
32	Achieving balance between funding for infrastructure and project grants (Recs 33, 34, 35 and 36)	Provide additional funds to maintain research infrastructure funding at current levels and raise the level of support over the next three years. Disperse infrastructure block grants to relevant portfolios to facilitate incorporation of infrastructure funding with project grants. Funding agencies and granting panels to provide adequate levels of infrastructure support with project grants, reducing if necessary, the number of project grants to ensure adequate support for infrastructure. Adopt transparent costs and pricing mechanisms.	3 and 4
33	Major infrastructure facilities (Rec 34)	Develop strategy to address the need for major national and international research facilities.	
34	Research Quantum (Rec 37)	Review the size and basis for allocating the Research Quantum in light of Review Committee's Recommendations on the funding of undergraduate and postgraduate tuition.	
Tasks to be implemented in medium term			
35	Mechanism to allocate research training funds—Stage 2 (Rec 26)	Implement Stage 2 of a student centred approach to the funding of research training via a national merit list.	29

Appendix 1

Terms of Reference

Background

The last decade has been a period of sustained and far-reaching change for Australia's higher education sector. Increases in access and participation have completed its transformation from an elite to a mass higher education system. At the same time, there has been pressure both to restrain expenditure and to address the issues arising from the rapid expansion of the system, such as the need for quality assurance processes. Associated with this transformation have been other changes, including the removal of the binary divide in higher education, increased use of targeted research funding, and the increased use of advanced communications technology by institutions.

The next two decades are likely to bring additional change to the sector. Higher education will increasingly become an international enterprise, where services are delivered to a global market place and international links are vital to the creation and advancement of knowledge. Developments in communications technology will reinforce these trends. These developments will also continue to change the delivery of higher education and the management of information, with profound effects on the nature of teaching and learning and the provision of teaching and research infrastructure.

At the same time, higher education will become an increasingly vital component of the economic and social fabric of advanced industrial societies. A diverse, high quality higher education sector will be one of Australia's most important comparative competitive advantages as manufacturing processes and capital become more mobile.

It is timely, therefore, to examine the fundamental processes that are shaping the future of higher education in Australia, and to consider the policy frameworks and financing arrangements that are necessary to ensure that universities meet Australia's economic and social needs in the long term, and are able to respond to the challenges and opportunities posed by their increasingly competitive environment.

Terms of Reference

The Committee will undertake a broad ranging review of the state of Australia's higher education sector, the effectiveness of the sector in meeting Australia's social, economic, scientific and cultural needs, and the developments which are likely to shape the provision of higher education in the next two decades.

The Review Committee will develop a comprehensive policy framework for higher education that will allow universities to respond creatively and flexibly to change, and will ensure that the sector meets the needs of students, industry and society in general as these are likely to develop over the next two decades.

Within this framework, the Review Committee will identify options for the financing of higher education teaching and research, and for providing Commonwealth funding to higher education institutions for these purposes.

Scope of the review

The Government does not wish to limit the scope of the Review Committee's work in any way, though it expects that the Review Committee will examine long term developments in the following areas, and the implications of these developments for higher education teaching and research:

- the internationalisation of higher education;
- sources of finance for higher education;
- historical trends and likely future directions in the level and nature of demand for higher education;
- the equality of opportunity to participate in higher education;
- the level and nature of industry demand for higher education graduates and higher education research, and the contribution that graduates and research conducted within higher education institutions make to the competitiveness of Australian industry;
- the role of research conducted in higher education institutions in the national research and innovation system, and the increasing importance of international links for research conducted in higher education institutions in Australia;
- teaching practice and course content in the context of changing undergraduate and postgraduate students' needs and developments in the knowledge base of disciplines;
- the use of advanced communications technologies in teaching, and in libraries and other teaching and research infrastructure;
- pressures on higher education quality assurance and accreditation processes arising from the development of a more diverse higher education sector;
- policy and practice in public sector financing and management, including the increased emphasis on competition, contestability and competitive neutrality principles; and
- the Review Committee will take account of the requirements of the Commonwealth's legislation review programme.

The Review Committee's report

In developing its recommendations, the Government expects that the Review Committee will pay particular attention to the need to ensure that:

- public funds for higher education teaching and research are used efficiently and effectively, and appropriate accountability arrangements are in place;
- Government funding mechanisms and processes encourage diversity between higher education institutions and excellence in teaching and research;
- programme and advisory structures for research and development in the higher education sector:
 - maximise the development of high level skills,
 - maximise the contribution of higher education research to the broader research and innovation system,
 - strengthen Australia's research base and its contribution to Australia's long term sustainable industry competitiveness, and

- facilitate the communication of research results to end users in industry and the community;
- Government funding mechanisms support a national system of higher education, in which it is recognised that universities play a vital role in regional economies;
- there is an appropriate balance between private and public funding for higher education;
- financial, social and geographic factors do not act as a barrier to higher education for appropriately qualified students within Australia;
- higher education institutions are committed to achieving high quality outcomes and to continuous quality improvement;
- the structure and range of higher education courses meet the needs of students and industry;
- the interfaces between the higher education sector and the vocational education and schools sectors operate efficiently and effectively; and
- commercial activities comply with the principles of competitive neutrality.

Timeline

The Review Committee will provide a final report to the Minister by December 1997*.

January 1997

*NB: The deadline was subsequently extended to 17 April 1998.

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Appendix 4

Visits and Consultations

At all times, the Review Committee adopted an open and transparent approach to its deliberations. To this end we:

- visited all Australian public higher education institutions and private universities and met with academic leaders, managers, staff and students;
- met with other key stakeholders, including the Australian Vice-Chancellors' Committee, representatives of staff and student unions, employer bodies such as the Australian Chamber of Commerce and Industry, employers, other education and training sectors, the Commonwealth Government and State Governments, the research community and statutory bodies such as the Australian Research and Higher Education Councils, the scholarly academies, other bodies with a professional interest in higher education and the Department of Employment, Education, Training and Youth Affairs;
- travelled overseas and met with relevant individuals and bodies;
- addressed conferences and public forums; and
- hosted round table forums on key issues.

1997

January

Professor Max Brennan, Chairman, Australian Research Council

Professor Gordon Stanley, Chairman, Higher Education Council

John Carey, President, National Union of Students

Jackie Lynch

Simon Kent

Dr Carolyn Allport, President, National Tertiary Education Union

Jane Nichols

Julie Wells

Dani Brown, President, CAPA

Mark Frankland

Dr Warren Osmond, Editor, Campus Review

Dr Brian Scott

Helen Adam

Professor Leonie Kramer, Chancellor, University of Sydney

His Excellency The Governor of NSW

Professor Roy Webb, Vice-Chancellor, Griffith University and
Chancellor The Hon. Mr Justice John MacRossin AO

February

Dr Keith Tognetti, University of Wollongong

Quentin Thomson, Consultant to the Dearing Committee

Sharan Burrow, Australian Education Union

Professor Gibson, David Gardener, Mark Ferguson of QUT

Professor Conyngham, Vice-Chancellor of Southern Cross University

Executive of AVCC

Victoria University of Technology

University of Melbourne

Royal Melbourne Institute of Technology

Deakin University

Marcus Oldham College

Professor Richard Johnson

Professor Ingrid Moses, Chair CUTSD

Neil Inall, President, Australian Institute of Agriculture, Science and Technology

Professor John Chudleigh, Principal, Orange Agricultural College

March

La Trobe University

Australian Maritime College

Dr Carolyn Allport - President, NTEU

Dr Charles Glassick, Carnegie Foundation

John Carey - President, NUS

Australian National University

University of Newcastle

Monash University

Swinburne University of Technology

University of Ballarat

Professor Peter Karmel

Professor John Stocker, Chief Scientist

Paul Twomey, AUSTRADE

Batchelor College

Northern Territory University

James Cook University of North Queensland

Central Queensland University

Open Learning Australia, A.L. Pritchard

Griffith University

Bond University

Queensland University of Technology

University of Southern Queensland

April

University of Sydney

University of Wollongong

University of Canberra

Australian Academy of the Humanities

Charles Sturt University

Professor Sir David Williams, Vice-Chancellor Emeritus of University of
Cambridge, Special Consultant to the Committee

Edith Cowan University

Murdoch University

University of Notre Dame

University of Western Australia

Curtin University

Macquarie University

Australian Catholic University

University of New England

Southern Cross University

University of Technology, Sydney

University of Western Sydney

University of New South Wales

University of Adelaide

Flinders University

University of Queensland

Sunshine Coast University College

ACCI Mark Paterson

May

New Zealand Ministry of Education

New Zealand Treasury

New Zealand Qualifications Authority

New Zealand Ministry of Research, Science and Technology

New Zealand Vice-Chancellors' Committee

New Zealand Business Round Table

Professor Tony van Zijl

Korea Technocomplex, Korea University

Seoul National University

Korea Council for University Education

Korea Institute of Science and Technology

Korea Science and Engineering Foundation

Taiwan Academia Sinica

Taiwan National Science Council

Taiwan Ministry of Education

Taiwan Association of Private Universities

Ian Watt, Director, Australian International Education Foundation

Nanyang Technological University

National University of Singapore

Singapore National Science and Technology Board

Australian High Commissioner to Singapore

Singapore Ministry of Education

East Asian Institute, University of Singapore

Pro Vice-Chancellors Research

Sunraysia Institute of TAFE

Visy Industries

Business Council of Australia

Dr Nieuwenhuysen, Committee for Economic Development of Australia

Victorian Department of Education

Australian Coalition of Service Industries

Gerry Ellis, Chair of BHP

Ford Motor Company

Graduate Careers Council of Australia

Australian Chamber of Commerce and Industry, Mark Paterson

Pro Vice-Chancellors Academic

Centre of Indigenous Studies

Professor Tony Blake, UTS

Student representatives from UTS

Business/ Education Round Table

Natascha MacNamara

Margaret Valadian

Professor Don Markwell, Master Elect, Trinity College, Melbourne

Dr Damian Powell, Director of Studies, Trinity College

Dr Paul Monk, Head of Research, International Business Institute

Dr Van Gelder, Elizabeth II Research Fellow, Philosophy, University of Melbourne

Victoria Employers CCI: Janita Karagiannis, Michael Tancredi

Colin Tyson

June

Christian Heritage College

Allen, Allen and Hemsley

Higher Education Research and Development Society of Australasia

Australian Council for Private Education and Training

Westpac

Association for Tertiary Education Management

SA Higher Education Steering Committee

University of South Australia

UNESCO, Paris - Professor Colin Power, Dr Mary-Louise Kearney

Professor Malcolm Skilbeck, OECD, Paris

Department of Education, Employment, Labour and Social Affairs, OECD

Pierre Laderriere, Dr Kari Hypponen, Dr Thomas Alexander

Sweden National Agency for Higher Education - Dr Ola Roman, Dr Agnita Bladh,
Dr Lena Wallenstein

Sweden Council for the Renewal of Postsecondary Education

University of Uppsala - Dr Einar Lauritzen

University of Stockholm - Dr Leif Linfors

UK Department for Employment and Education - Tony Clark CB

Sir Christopher Ball, Royal Society for Arts, Manufactures and Commerce

Learning for Life: Review of Higher Education Financing and Policy

Sir Ronald Dearing, Chair of the National Committee of Inquiry into
Higher Education

Sir Robert May, Chief Scientific Adviser

Cambridge University:

Professor Sir David Williams

The Rt. Hon. The Baroness Perry of Southwark.

Sir Roger Tomkys

Sir David Harrison

United States Federal Department of Education, Office of Postsecondary
Education

United States Federal Department of Education, Office of Educational Research
and Improvement

American Council on Education

National Institute on Postsecondary Education

Council for Advancement and Support of Education

University of California

California Postsecondary Education Commission

California State University

California Department of Finance

California Community College Network, Central Administration

Professor Peter Karmel

Royal Australian Planning Institute - Professor Sandra Vigar, President

Canberra Institute of Technology, Chief Executive and Director, Peter Veenker

July

South African Higher Education Delegation

Western Australia Department of Education and Training

Western Australia Office of Higher Education

Professors Jonathon Pincus and Paul Miller

Professor Lance Twomey, Vice-Chancellor, Curtin University

South Australia Department for Employment, Training and Further Education

Greater Green Triangle Consortium

Professor Jan Pincombe, Dean, Faculty of Nursing, University of South Australia

Nurses Board of South Australia - Helen Tolstoshev, CEO /Registrar
Professor Kim Adey, Chair of Deans of Education Committee

Australian Defence Forces Academy
ACT Department of Education and Training
National Scholarly Communications Forum
Australian Research Council
Institute of Engineers, Australia
Queensland Office of Higher Education, Ms Leigh Tabrett
Australian National Training Authority, Terry Moran, CEO
Associate Professor Gage
Vocational Education, Training and Employment Commission (VETEC)
Business/Higher Education Round Table
Australian International Education Foundation
Association of Independent Schools of Victoria Inc.
Minerals Council of Australia
AMP
Boral Ltd
National Catholic Commission
NSW Department of Education and Training
NSW TAFE Commission
Goodman Fielder Ltd
Morgan & Banks
TELSTRA
Australian Industrial Research Group
ICPA (Isolated Children's Parents' Association)

August

NTEU
Avondale College
AVCC
Australian College of Theology
Hon Peter Baldwin MP
Dr Keith Tognetti, University of Wollongong
Australian Council of Engineering Deans
University of Tasmania
ANZAM

September

Institute for Aboriginal Development - Donna Ah Chee

Batchelor College communities and Alice Springs campus - Yuendumu, Arlparra, Nyirripi

Professor Marcia Langton, Wali Wunungmurra, Mandawuy Yunupingu
Centre for Indigenous Natural and Cultural Resource Management
Yirrkala community

Dr Judy Forsyth, EO of Australian Qualifications Framework
NUS

Steve Sedgwick, Secretary DEETYA

Michael Gallagher, First Assistant Secretary, Higher Education Division

The Hon. Dr David Kemp MP

The Hon. Kim Beazley MP

Dr Ken Boston, NSW Department of Education

Academy of Sciences, Sir Gustav Nossal, Dr John White

Stephen O'Doherty MP

ATEM Conference, Darling Harbour

October

AVCC

NTEU Executive

Mark Latham MP, Shadow Minister for Education and Training

Annual Dinner, University of Sydney Association of Professors

AAGE Annual Conference

Australian Council of Education

November

UNSW Education Conference

PVC Academic meeting (Ballarat).

Professor Don Aitkin, University of Canberra

Gatjil Djerrkura

AVCC

The Hon. Dr David Kemp, MP

National Teaching Forum, Parliament House

Dr Brendan Nelson, Parliament House

December

National Academies Forum

CAPA Annual Conference, UWS

Participants of the Longer Term Challenges to University Research Round Table:

Professor Don Aitkin, University of Canberra

Professor Mark Armstrong, RMIT

Professor Lawrence Cram, University of Sydney

Christine Currey, NSW TAFE

Professor Ian Davey, University of South Australia

Professor Mark Dodgson, Australian National University

Dr Paul Donaghue, ICI Australia

Professor Elizabeth Jacka, University of Technology, Sydney

Professor Lance Leslie, University of New South Wales

Professor Mary O’Kane, University of Adelaide

Professor Peter Robinson, University of Wollongong

Professor Marilyn Sleigh, University of New South Wales

Dr Paul Wellings, DIST.

Deans of Theological Consortia

CAUL at UNSW

1998

January

11th International Meeting of University Administrators, New Zealand

Sir Ronald Dearing

Tony Pritchard, OLA

Professor Vicki Sara, Professor Marilyn Sleigh, Professor Peter Robinson,
Simon Sedgley

James Dalziel

Participants of the Market-Based Approaches to Financing and Policy for
Postsecondary Education Round Table:

Bruce Milligan, Facilitator

Dr Nicholas Barr, London School of Economics and Political Science, UK

Professor Bruce Chapman, Australian National University

Professor Ian Chubb, Vice-Chancellor, Flinders University of South Australia

Dr Mark Harrison, Australian National University

Norman LaRoque, New Zealand Treasury, Wellington

Dr Simon Marginson, University of Melbourne

Bruce McKenzie, Holmesglen Institute of TAFE

Professor Ingrid Moses, Vice-Chancellor, The University of New England

Kathleen Newcombe, Lorraine Martin Colleges

Professor Ross Williams, University of Melbourne

Participants of the Information Economy Roundtable:

Professor Mark Armstrong, Facilitator

Professor Shirley Alexander, University of Technology, Sydney

Professor Paul Bourke, Australian National University

Professor Stuart Cunningham, Queensland University of Technology

Professor Elizabeth Harman, Murdoch University

Terry Hilsberg, Global Alliance Ltd

Professor Belinda Probert, Royal Melbourne University of Technology

Professor Jan Reid, University of Western Sydney, Vice-Chancellor-Elect

John Rimmer, Australia Council

Professor Jim Taylor, University of Southern Queensland

Professor Phillip Yetton, University of New South Wales

AUSTUDY Seminar - Dallas Simpson, Quentin Perks, Petah Windzar

NSCF - Professor Angus Martin, Dianne Costello, Warren Horton, Professor
Neville Fletcher

Professor Ingrid Moses, Chair, CUTSD

Professor Gordon Stanley, Chair, HEC

February

Melbourne College of Divinity

Association of Independent Schools of Victoria

Gavin Moodie, Victoria University of Technology

Dr Francesco Sofo, University of Canberra

AISV - Fiona Ogilvy-O'Donnell

Participants of the Indigenous Issues Round Table:

Peter Buckskin, DEETYA

Margaret Valadian, University of Wollongong

Natascha MacNamara, University of Wollongong

Pearl Wymarra, University of Western Sydney

Professor Colin Bourke, Aboriginal and Islander Studies, University of South
Australia

Professor Komla Tsey, Menzies School of Medical Research, Alice Springs

Yvette Devlin, DEETYA

Jill Milroy, Centre for Aboriginal Programs, UWA

A / Professor Paul Hughes, Yunggorendi, Flinders University of SA

Lana Quall, The Institute for Aboriginal Development, NT

Australian Qualifications Framework - Warren Grimshaw, Dr Judy Forsyth

March

Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS):

Russell Taylor, Principal

Dr Mary Edmunds, Director of Research

Margaret Cranny, Consultant, Research

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