SUBMISSION TO THE HIGHER EDUCATION REVIEW
FROM

ROUND TABLE
BUSINESS/HIGHER EDUCATION

HIGHER EDUCATION IN AUSTRALIA
THE GLOBAL IMPERATIVE

PEOPLE MAKE THE DIFFERENCE

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“Higher education exists to serve the public interest and is not a “commodity”……The mission of higher education is to contribute to the sustainable development and improvement of society as a whole: by educating highly qualified graduates able to meet the needs of all sectors of human activity; advancing, creating and disseminating knowledge through research; interpreting, preserving and promoting cultures in the context of cultural pluralism and diversity; providing opportunities for higher learning throughout life; contributing to the development and improvement of education at all levels; and protecting and enhancing civil society by training young people in the values which form the basis of democratic citizenship and by providing critical and detached perspectives in the discussion of strategic choices facing societies.”

UNESCO

The Business/Higher Education Round Table (B-HERT) comprises the chief executives of many of Australia’s leading corporations, professional firms, the vice-chancellors of Australia’s universities, and the CEO’s of the major public research organisations. Its mission is to advance the goals and improve the performance of both business and higher education for the benefit of Australian society.
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HIGHER EDUCATION IN AUSTRALIA - THE GLOBAL IMPERATIVE

OUR VISION

A nation without peer for its commitment to education, training and research, where a high proportion (over 90%) of the population had the confidence, competence and access to learn, to continue learning, and to apply their learning in ways that made Australia a world leader in the knowledge economy.

Introduction

The status quo in higher education in Australia is not sustainable if we as a nation want to be at the forefront of a knowledge-based society. The most important single determinant of success for national and regional economies and corporations in the emerging global knowledge economy will be the “knowledge workers”- people educated and trained to use up-to-date knowledge in highly sophisticated ways.

Universities of global excellence will emerge from a framework of diversity and flexibility that can only be built on a coherent policy and a funds base that recognizes a new priority for higher education in this country. The fundamental reality is that Australia’s universities are under-resourced in international terms.

Education and training are key ingredients in growing and developing the Australian economy. The industries of tomorrow are going to be increasingly knowledge-based. Higher education therefore is critical to the future of this country; in creating a “learning society” in which all Australians, of whatever social, cultural and economic background, have access to a post-secondary education of excellent value.

The “bottom line” is better university graduates. Australia must either compete internationally in higher education or fail as a knowledge nation. We have to attract the best teachers, the best researchers, and the best students. We have to have infrastructure equal to the best to provide learning environments that constantly add value.

Freedom and flexibility are key ingredients in building this infrastructure. There is not and cannot be just one “best” way to meet these goals. Institutions must have the freedom to pursue their own goals and the funding and regulatory systems must be flexible enough allow this.

Quality

Quality must be a given. There is absolutely no benefit to have ready access to mediocre universities. The sector must be able to demonstrate that it has the processes in place to ensure consistency and quality of outcomes throughout the sector.
Without a national vision and sufficient investment in our higher education system, Australia and today’s young Australians are likely to be marginalised as the region moves towards higher living standards and more advanced social and political structures. Australia must develop the expertise of its human resources so that it is a significant regional leader in professional, service, education and technological fields.

Investment in Higher Education

We should not speak of “investment” without at the same time acknowledging the parallel concept of “return”. The higher education sector has a responsibility to optimise the “return” on its assets, both physical and human, most of which have been contributed by the public purse. It is undeniable that physical assets are under-utilised, but this cannot be resolved in isolation from the human resources issue. We need to develop new delivery models that better utilise the resources we already have. This will entail new and innovative approaches to engender more extensive and continuous use of physical resources, more flexibility in timetabling, and more modular approaches to curriculum design and delivery.
In today's environment in Australia there is a certain tension which universities and their staff feel in attempting to maintain the traditions of high quality research, scholarship and teaching.

Increasingly, reduced resources, coupled with a greater emphasis on revenue raising and entrepreneurial activities as well as inter-institutional competition, have led universities and their staff to question their capacity to maintain the quality of the learning experience that they provide and the values of the research they undertake.
Figure 3

Knowledge Investment (% of GDP) - Australia compared with US and OECD Average

Source: AVCC

Figure 4: Proportion of GDP on Higher Education

Source: AVCC
Graduates

The graduates from our universities, to be truly internationally competitive, should have gained skills and attributes which compare well, in quality and level, with those from the world’s best universities.

Graduates should have gained skills and attitudes which prepare them well for subsequent careers in business and industry. These skills include:

- An emphasis on communication, interpersonal and team skills, applied in diverse cultural settings.
- A broad range of abilities including numerical, economic and information technology literacy.
- Well-developed decision-making and problem solving skills.
- A highly developed capacity for critical analytical judgement.
- A high level of professional skill, able to be applied responsibly.
- An understanding of global issues from a socio-economic perspective.
- An ability to work competitively in the changing global environment.
- Responsible citizenship
- Leadership.

Student Mix

Universities will cater for different demands and different community expectations according to their location and, to some extent at least, their history and orientation. To meet the demands in their particular environment, they should be able to set their own course profile by level of award.

The number of funded places available to graduate coursework students has been reduced. In the past it was argued that such programs were largely the domain of employed individuals securing personal benefit from further study subsidised by employers. In recent years this has changed somewhat.

Local judgement is likely to lead to better outcomes than the present blanket prohibition now that governments have adopted “Lifelong Learning” as a key strategy in a knowledge-based society; graduate programs are used as a re-entry path into the workforce; and more professions are moving to require graduate qualifications for admission or for advancement.

Lifelong Education

If universities wish to become Lifelong Universities, in other words an integral part of lifelong learning, they need to extend the provision of a broader spectrum of specialised learning opportunities to individuals throughout the community. These opportunities should range from short courses to high-level postgraduate course work programs. This means a set of institutional arrangements that do not see the student’s engagement with the university as ending with graduation, but rather an ongoing relationship in which the student (and mature learners) can re-engage continually as their career requirements demand.
If universities are to reach their potential in supporting lifelong learning, they must move beyond traditional operating assumptions and mental models. This includes adopting a broader definition of lifelong learning, reconsidering program structures, sequences and portability, models and modes of learning, reconsidering the balance of capital between technology and development (“clicks versus bricks”), and the appropriate resources and processes for supporting students with varying levels of preparedness.

Universities will face increasing competition from a variety of providers in the arena of lifelong learning.

The topic of lifelong learning has assumed immense importance in the policies and practices of a number of international agencies, national governments and institutions of learning in recent years. An increasing number of governments, policy makers and decision-makers has concluded that a lifelong approach to learning should be instituted and deployed as one of the main lines of attack on some of the major economic and social problems needing to be addressed as we approach the twenty-first century.

The deliberations of OECD, UNESCO, the European Parliament, the Nordic Council of Ministers, the Japanese Parliament, APEC and the Australian Commonwealth Government reveal a commitment to the institution and extension of policies of learning across the lifespan.

A number of themes run through the deliberations of these agencies:

- the emergence of an awareness of the importance of the notions of the knowledge economy and the learning society and the consequent educational imperatives;
- an acceptance of the need for a new philosophy of education and training, with institutions of all kinds - formal and informal, traditional and alternative, public and private - having new roles and responsibilities for learning;
- the necessity of ensuring that the foundations for lifelong learning are set in place for all citizens during the compulsory years of schooling;
- the need to promote a multiple and coherent set of links, pathways and articulations between schooling, work, further education and other agencies offering opportunities for learning across the lifespan;
- the importance of governments providing incentives for individuals, educational providers, employers, and the range of social partners with a commitment to learning, to invest in lifelong learning;
- the need to ensure that emphasis upon lifelong learning does not re-inforce existing patterns of privilege and widen the existing gap between the advantaged and the disadvantaged, simply on the basis of access to education.

A variety of factors influence participation in learning beyond the years of compulsory schooling:

- the existence of financial and other incentives
- the modes of delivery
- the context in which learning is provided
- the constraints of time and place
- the recognition of credit transfer from providers not traditionally recognized by universities eg firms and industrial enterprises, trade unions, professional associations.
In addition, the direct quantification of the level of this sometimes latent demand is made difficult, due to the diversity of the potential learning groups, with their varied needs, learning objectives and propensities to different learning modes and styles.

The diversity of the demand for higher education clearly needs to be matched by diversity of supply. It is important to look closely at the dynamic of demand and supply. This is particularly important at a time when a new financial framework is evolving and key questions are being asked regarding "who pays?"

At a time when the present and future development of higher education is being considered in the context of shared funding responsibilities, employers and individuals who benefit from an investment in learning are increasingly expected, and in some cases required, to contribute. Joint investment can enhance the effectiveness of learning by giving several partners a stake in the outcomes. But there is the danger that financial arrangements will inhibit participation by some groups in society and hence be socially divisive.

It is clear that we must move towards the development for each individual of a portable portfolio of qualifications and credits which they can carry with them throughout life, to different institutions and places of learning with Australia and overseas. The transportable portfolio of qualifications and credits will be an essential part of any genuine lifelong learning scheme. The security of the databases used to construct and maintain these portfolios, and the validity of the information in them, however, must be well funded, carefully planned, and meticulously managed.

Continued access to education and training for all a country's citizens is seen as an investment in the future, a pre-condition for economic advance, democracy, social cohesion, and personal growth.

**Policy Priorities:** The following priorities should be considered. They attempt to provide a starting point for policy orientated discussion and should be considered by all stakeholders, including federal and state governments, business, universities, and other providers of education. Policy must also address the fundamental, political and social issues that underpin these priorities.

The adoption of a multi-faceted approach to policy development – to address the complex interplay of the three major aims of lifelong learning:

- lifelong learning for a more highly skilled workforce
- lifelong learning for a stronger democracy and more inclusive society
- lifelong learning for a more personally rewarding life.

The acceptance of the concept of co-investment – to ensure that the separate, complementary and mutually supportive contributions of the wide range of providers and beneficiaries of lifelong learning are recognized.

The development and extension of articulated pathways and partnerships – to achieve better integration of effort and balance among universities, enterprises and other providers of learning in the design and delivery of learning programs, the cross appointment of academic and professional staff, the transfer of credit.

The promotion of the idea of the learning workforce – to respond to the reality that changing forms of paid employment and changes in skills and competences required to perform in it will necessitate a commitment to continual periods of updating of existing knowledge, redirecting old skills and learning new ones.

The re-assessment of the role of universities in the provision of lifelong learning – to reconsider funding arrangements so as to facilitate opportunities for those returning to study after periods in the workforce or after fulfilling other important roles in society.
The consideration of the demand and supply of lifelong learning – to include its implications for funding equity and participation.

The development of infrastructures for learning – to respond to recent developments in our understanding of the learning process, the conditions needed for successful learning, and advances in the technologies of learning, which are creating the potential for a new kind of learner and new kinds of learning that transcend traditional constraints of age, time and place.

*Teaching*

One of the primary purposes of a university is to teach. The advancement of knowledge cannot occur without its dissemination. It is generally accepted that one of the key factors in maintaining quality in teaching is the ratio of students to teachers and the processes by which they interact. In the past decade there has been a continuous increase in this ratio. Across disciplines they vary (in 2000) from a low of 13.3 in Health Sciences to a high of 28.3 in Administration, Business, Economics, Law.

**Figure 5: UNIVERSITY STUDENT STAFF RATIOS: 1990 TO 2000**

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<tr>
<td>Ratio</td>
<td>12.9</td>
<td>13.9</td>
<td>14.3</td>
<td>14.2</td>
<td>14.2</td>
<td>14.6</td>
<td>15.6</td>
<td>17.2</td>
<td>17.9</td>
<td>18.3</td>
<td>18.8</td>
</tr>
</tbody>
</table>

*Source: AVCC*

Table 1 shows that in a period of seven years the funding of teaching, taking into account both government funding and HECS receipts, remained relatively static in real terms (an increase of 4.4%), whereas in the same period the number of students increased substantially (an increase of almost 20%).

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The fundamental aspect of quality in teaching goes much deeper than just numbers. The issue of the relative importance of teaching versus research, and the attendant emphasis on publications, must be addressed. It is assumed university academics can teach. How well, if at all, is an important consideration that needs more attention. Academic promotional criteria place great significance on publications, and for the more senior positions doctoral qualifications are generally de rigueur. Research is but one aspect of scholarship. There are many sound arguments why this has been so in the past, but the question to be addressed today is whether it should be so in the future. Should all academics be subject to the one set of criteria, and if so how do we deal with teaching, or should teaching be seen as a different and distinct (but equal?) stream? In today’s system of mass higher education, these are questions of increasing importance.

**Research**

The research carried out in our universities should be of internationally significant quality. This means we should aim to have world class research centres in major fields of study. There should be a blend of basic research in the pursuit of knowledge and also a strong emphasis on the application of knowledge, innovation and applied research based upon interaction with industry. Funding for universities’ research activities by all levels of government and the private sector has grown as universities increasingly contribute to Australia’s research and development needs. These funding streams are earmarked for specific research projects and research infrastructure. Universities cannot simply take the money they earn through these sources and use it to underwrite the provision of university courses for Australian students. Just as the Government requires that funding it provides for research and for teaching be used for those purposes, income from industry must be used in those specific areas of research for which the funds have been provided by the corporate sponsor, with usually little scope for subsidising 'blue sky' research.

### Table 1: 1992 1995 1999 Funding Source Table

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>1992</th>
<th>%</th>
<th>1995</th>
<th>%</th>
<th>1999</th>
<th>%</th>
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<tr>
<td><strong>Federal Teaching Funding</strong></td>
<td>3926</td>
<td>56</td>
<td>4383</td>
<td>52</td>
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<td><strong>Federal Research Funding</strong></td>
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<td>10</td>
<td>761</td>
<td>9</td>
<td>923</td>
<td>10</td>
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<td><strong>State and Local Government Research Funding</strong></td>
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<td>60</td>
<td>1</td>
<td>80</td>
<td>1</td>
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<td><strong>HECS Receipts</strong></td>
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<td>13</td>
<td>1011</td>
<td>12</td>
<td>1728</td>
<td>19</td>
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<td><strong>Fee-Paying Students</strong></td>
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<td>5</td>
<td>577</td>
<td>7</td>
<td>1045</td>
<td>12</td>
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<tr>
<td><strong>Industry and Other Research Funding</strong></td>
<td>141</td>
<td>2</td>
<td>240</td>
<td>3</td>
<td>307</td>
<td>3</td>
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<tr>
<td><strong>Other Fees and Charges</strong></td>
<td>358</td>
<td>5</td>
<td>418</td>
<td>5</td>
<td>498</td>
<td>5</td>
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<tr>
<td><strong>Other Income</strong></td>
<td>570</td>
<td>8</td>
<td>996</td>
<td>12</td>
<td>1155</td>
<td>13</td>
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<tr>
<td><strong>Total</strong></td>
<td>7008</td>
<td>100</td>
<td>8447</td>
<td>100</td>
<td>9077</td>
<td>100</td>
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</table>

**Sources:** Higher Education Funding Reports, Department of Education, Training & Youth Affairs (DETYA); Selected Higher Education Finance Statistics, DETYA, and DETYA Higher Education Research Data Collection.
Figure 6

Basic research as a percentage of GDP by sector of performance 1999

Source: OECD

Research Training

A significant feature of university research should be the research training provided to postgraduate higher degree (by research) students. Their training and research must be at the highest international standards and encourage national and international networking. Research also must be conducted within an adequate infrastructure.

Internationalisation

Apart from the need to operate at the forefront of international standards, our universities should also be international in their own right. They must attract overseas students and scholars, encourage their own Australian students to include international studies and experiences in their degree courses, and the curricula should be international in their orientation. Students should be encouraged to include semesters of overseas study. Australian universities should operate internationally.

Interaction

To gain the greatest possible economic and cultural advantage for the nation, we need stronger interaction and co-operation between universities and business and industry and as appropriate, national and state government organisations. This applies to graduate preparation, research and staff interaction.
**Business Involvement**

Australian business has for many years maintained a keen interest in the development and health of tertiary education and in particular, university education. The tertiary education sector provides the majority of Australia's future business leaders, and creates the possibility of a highly productive workforce.

In recent times, Australian business has remained a strong supporter of the tertiary education sector, while at the same time questioning some recent developments. For example, business understands that universities have a key role in the development of generic 'thinking' in students, while at the same time, preparing students for a career. However, the balance between vocational training and university education needs to be carefully and sensitively managed. There needs to be a clear and distinct understanding of the respective roles of universities and TAFE colleges. Both have an important role to play, but they should not be confused.

In addition, the desire, some may argue the need, of universities to become businesses in their own right particularly as providers of exports of education services, raises questions in the mind of business as to what business can expect of universities in the future. The business sector sees these issues, coupled with fierce debates around funding, governance, educational performance and the efficiency of the university sector as having the potential, unless judiciously managed, of adversely impacting on the long term future of universities as reliable suppliers of high quality graduates.

There is a significant and urgent challenge in Australia to set the scene for a steady transformation in industry/business-university relationship and interaction. This interaction needs to occur across the broad spectrum of industries and should not be restricted to 'big business' or major industry sectors.

With all industries and businesses increasingly dependent on human resources in a knowledge-based economy, business will need to rely increasingly on universities which are world class and diverse. Universities and business will need to cultivate mutually beneficial and lasting relationships with one another.

In this emerging framework, robust high-quality, long-term relationships, based on two-way investments of time and resources, are becoming essential to understand, influence and improve interactions between both sectors.

To forge ahead with this transformation universities will need to leave the campus and engage more with industry. At the same time, industry and government can facilitate the development of close links with universities by venturing onto campus for regular discussion and exchange of views on matters related to the preparedness of graduates for the workforce, and for collaborative research.

A particular area of partnerships for universities and business lies in the joint work by universities and business in building competitive regional economies. Regional communities will be increasingly looking to their universities to provide them with skills knowledge, research and development activities, intellectual argument and analysis.

Universities are attempting to accept this enhanced role in their regions more widely by:

- university membership of key groups and cross membership of industry business, and government representatives on university course accreditation committees;
- specific programs that provide student involvement in industry based projects;
- co-location of universities with other training providers (public and private) as part of education precincts;
• the creation of innovation and technology precincts designed to link university researchers with technology based industry;

• university involvement in efforts to obtain key infrastructure of importance to industry development and competitiveness; and

• joint training appointments with local industry, business and government departments.

Business and higher education will also need to “harmonise their decision time constraints”. Universities have traditionally been long term thinkers and actors, business has all too frequently appeared very short term in its perspective. A closer relationship between industry and universities requires recognition of the customary timeframes within each sector when appropriate, with universities accepting the value of a shorter-term orientation and industry a longer-term orientation. Such changes in the rhythm of sectoral life are likely to prove challenging for all concerned.

A critical factor is to increase and enhance the involvement of business in higher education in this country. To do this there are a number of aspects which need to be canvassed.

• How to expand the range of ways they (business and higher education and training) engage each other to enhance capacity for growth and development at regional, state and national levels.

• The need to develop new strategic partnerships and forms of involvement.

• The need for universities to embrace more fully their “third role” of community engagement and leadership, in terms of their role in a region’s social, economic, and cultural development.

• The need for new forms of university governance.

• Staff and students within universities need to be encouraged in their efforts to engage with industry, and there needs to be an increased acceptance and rewarding of such efforts.

• Establish more large-scale research centres through research partnerships (US- private funding; Irish and Finnish- targeted state funding).

• Better commercialisation.

• Enhanced R&D allowances for university/business linkages.
Access

The economic and social development and progress of the country is dependent upon having a high percentage of the population with university education and advanced level skills. We require wide access to higher education so that every person who wishes to pursue study in a university, and who has the necessary ability, should be able to do so.

Diversity

It is most important within a system of mass higher education that our universities be allowed to specialise and diversify, so that each university can realise its own distinctive mission and characteristics relevant to its communities. The ability of universities to realise their aspirations, and work best within their setting, should be recognised and supported by governments and by the private sector, and should not be pre-judged or arbitrarily constrained by government policies and agencies.

The Model of a University

We are on the threshold of major change and need to question whether the traditional British model, on which our universities have been based, is the most appropriate.
• Should we adopt more of the North American model of generic undergraduate degrees to provide a broad based first degree, and a broader base of scholarship, and only enter professional education in law, medicine, engineering etc. as a postgraduate degree?

• Is the proliferation of more and more specialised undergraduate degrees the best strategy? Are we creating “cul-de-sac” degrees of too narrow a scholarship?

• Does our tertiary education concentrate too much on providing answers and solutions to our students rather than getting them to focus on what questions need to be asked and what problems need to be solved?

• Do we need Research led and Teaching led institutions which are globally competitive?

• What is the role of “Regional Universities” compared with “Universities in Regions”?

• Is there a role for liberal arts colleges as tertiary institutions?

• What is the appropriate distribution of functions among institutions of higher education and training?

• How best can programs be rationalised?

• What are the limits to growth?

• How do we promote more effective collaboration rather than competition.

• How do we handle the issue of generic skills?

• Where might outsourcing be effective and efficient?

• A need to concentrate on performance based outcomes without diminishing quality?

Such decisions have a major impact not only on the higher education system but on the whole economy as students spend more time in higher education and enter the workforce at a later age.

**Sectoral Issues**

The nation needs both vocational education and training and higher education. Each sector should have its own distinctive mission and characteristics. It is essential that there be adequate pathways and effective co-operation between the two sectors so that it appears as a coherent system for the students. Each year thousands of students move between the two sectors.
The changing nature of students

Today's university students are increasingly falling into two categories: those facing significant difficulty in surviving on student income support or alternatively those who are struggling to find time for proper study as the price required to earn an adequate income from part or full-time work. Not only are more students in paid employment during the semester, those who are employed are working longer hours.

In 1984 full-time undergraduate university students worked an average of five hours every week during semester. By 2000, full-time students worked an average of 14.4 hours a week, or about two days every week -and nearly three times the hours worked by students in 1984. The proportion of full-time students who are in paid employment during semester has increased in the last two decades as shown in Figure 8. In 1984 about 5 in 10 undergraduates were employed during the semester. In 2000, more than 7 in every 10 students were employed during the semester. Part-time students are even more likely to be in paid employment with almost 9 in 10 working during semester.
For many students the financial imperative to undertake employment is a problem for their studies. Nearly 1 in every 10 students who are employed (or about 33,900 students), “frequently” miss classes because of their paid work. Nearly 2 in every 10 students in paid employment (or about 70,600 students) say that the work adversely effects their study “a great deal” - Australia-wide. Oftentimes financial circumstances influence the choices students make in respect to courses of study, of university, and of mode of study. Studies have indicated that:

- Financial circumstances influence the choice of course of over 10% of all students. The percentage is similar for full- and part-time students.
- The choice of university is influenced by financial circumstances for some 17% of students. The percentages are slightly higher for full-time rather than part-time students.
- Financial circumstances influence the choice of mode of study of 23% of students. The percentages for part-time students are substantially higher than for full-time.

**Technological Change**

Our universities should operate at the cutting edge of the latest technologies. Students require adequate exposure to the latest technologies in each teaching discipline, and staff and researchers need access to the most advanced technologies in their respective fields of research. There is an ongoing need for universities to make the most appropriate usage of digital and communications technologies in teaching, research and administration.

**Community Service**

As well as their education, research and research training activities, universities now provide an extensive range of community services to, and in partnership with, the communities in which they are located. There is a need to preserve and enhance the capacity of universities to provide such services, and for them to be effective in delivering them.
In the same context the diverse contributions by universities to the broader community must be recognised and supported. This includes the support of scholarship and research over the whole spectrum of pure and applied fields, as well as giving greater depth to many vocational fields.

For the health of society at large, and universities in particular, we must recognise that a knowledge-based society must transcend workskills and that some significant fields of knowledge deserve to be maintained, even if it may appear that this cannot be done cost-effectively.

By these means universities have entrenched their position as the essential foundation for a knowledge-based society in the broadest sense of the term.

**Accountability**

If universities are to be held accountable for their performance and what they do, they must have the freedom as individual institutions to control their own industrial relations.

A world-class higher education system is only possible if appropriate accountability mechanisms are in place; to assess performance of institutions, faculties and staff, and to reward excellence. These mechanisms must not become ends in themselves or divert resources from core academic activities. Government and bureaucratic involvement in these activities must be kept to a minimum.

In the same way, intervention by unions must be confined to their legitimate role of helping to resolve issues and differences, or negotiating on behalf of staff who want that assistance, and not extended to determining outcomes at individual institutions. Accountability requires minimum outside interference, otherwise responsibility is abrogated. Unions should have no right to overturn a local agreement that has been approved by a majority of those involved or affected. That is the antithesis of democracy.

**Performance Based Outcomes**

Performance must become the predominant criterion for evaluation and assessment of individuals and organizations. Both academic and administrative staff should be remunerated and rewarded on the basis of performance against established goals. Funding for universities should comprise a component based on performance in both teaching and research. And performance measures must be output or outcome based not input based. Industrial agreements should be performance related.

Care needs to be taken that performance and productivity measures do not subjugate quality to quantity.

**A Major Export Earner**

Over recent years the export of education services has grown to be our 8th largest export earner. There are opportunities to grow this even further in the future. In doing so, however, care needs to be taken to ensure that administrative and immigration procedures do not place Australia at a disadvantage compared with our major competitors. In the same vein there needs to be carefully targeted markets that will return added benefits in the long run, as the Colombo Plan did so successfully over a number of years.
**Funding**

A strong, internationally competitive higher education system must be well funded and the sources of this funding should reflect both the public good and private benefit. The funding mechanisms should provide incentives, rather than disincentives, to encourage the realisation of all the features described above. Incentives for industry funding should be considered.

Australia needs, and should strive to develop, world-class universities. To do so funding must increase substantially, to come anywhere near the levels of funding for leading universities overseas. This additional funding must come from all sources, public, private and business. Realistically, however, it must be recognised that businesses will normally only contribute significantly where they can see a direct benefit to them, and not for purely altruistic reasons.

**Figure 9: International Comparisons**

![Revenue per Student (Adjusted for purchasing parity)](image)

*Source: Paper delivered by Professor Barber, Australian Academy of Science at B-HERT Seminar, Sydney, 31 October 01*

It is extremely difficult to get accurate and reliable international comparative data on costs in higher education. Nevertheless, the message from the data that is available is clear. Australian universities are generally funded at a level much lower than comparable institutions in comparable overseas countries.

In recent years there has been a continuing decrease in the reliance of Australian Universities upon Government funding. This trend is such that already some of our Universities gain less than 50% of their funding from Government.
Figure 10: The Sources of University Income—Smillions

Funding should be arranged in such a way that universities can set strategies to fulfill diverse missions. Those missions vary not only as between regional and metropolitan, applied research and pure research, old and new, research-led and teaching-led, but also due to unique histories, and the students and communities for which they cater.

Source: AVCC
Figure 11: University Income by Source, 1993-2000 - percentages

Source: Higher Education at the Crossroads, DEST, p. 52
It is not reasonable, given our limited population and funding base, to expect all Australian universities to attain leading international status. It is, however, reasonable to expect that some, perhaps many, will maintain or achieve this status in relation to a range of their research functions, or their teaching and learning programmes, or both, and others will build up more specialised international profiles. It is important that government funding principles and mechanisms be responsive to the quality of individual and institutional performance, and changes in these over time, as universities pursue their own pathways towards greater international recognition.

Questions that need to be asked include:

- How efficient is the provision of education and training?
- How effective is the provision of education and training?
- How equitable is the provision of education and training and who should pay?
- How adequate is the provision of education and training?
- What is the level of portability?
- Have we tapped all appropriate sources of income?
• What is the role of the States in funding higher education?

• Do alumni represent an untapped source of philanthropy? (tax incentives; $ for $).

• Are there equity/debt funding initiatives we have not tapped into?

The funding system should –

• Recognise that collaboration is a more productive option than competition, and as far as possible reflect the distinction in funding arrangements.

• Eliminate the capping of university places.

• Abolish up-front fees in favour of the use of student loans to domestic students at both the undergraduate and postgraduate level, repayable on an income-contingent basis (with payout provisions).

• Provide adequate financial support to assist those who are in genuine need.

• A strong system of scholarship support based on student ability.

• Allow those universities that so desire to set their own fees, with public funding capped, and student loans (if needed) funding the gap.

• Recognise the desirability of allowing students choice in their selection of institution and program.

• Ensure that institutions are equipped and encouraged to invest in new and more productive teaching and research methods.

• Recognise and support the concept of diversity.

• Promote closer partnerships between universities, business and other community sectors.

• Encourage universities to be more client focused.

• Reflect, where appropriate, a “beneficiary-pays” component. Who is the “beneficiary” is currently subject to some debate in business. There is little doubt that higher education endows considerable benefits on the individual, and in many instances these benefits flow through to the employing organisation and society generally. To date many businesses have been paying employee’s fees (predominantly in higher education courses such as an MBA) because of those perceived benefits. Business is increasingly taking the view that the majority of benefits not only flow to the individual but follow the individual through their career. Why therefore should business pay and not the individual? On the other hand there are some areas where the benefits very clearly attach to the employer and very few benefits follow the employee on leaving that employer. This is particularly with courses developed in conjunction with an employer with high relevance to that employer’s business. In those instances business can be expected to pay.
Population Growth

One aspect that will have a critical impact on future funding is the population shifts that are forecast to occur over the next 20 years. As the following graph illustrates, Australia’s current and projected age structures are not regionally uniform. Future growth in 19-20 year olds over the next 20 years is likely to range from some 17% in the Northern Territory, 12% in Queensland, 7% in Western Australia, down to minus 26% in Tasmania, minus 13% in South Australia, and negative growth in both Victoria and the ACT. New South Wales remains fairly static.

The variations will place quite different demands on educational services in different areas and there will need to be a mechanism to factor this in to funding decisions.

Figure 13: Index of estimated population growth, 15 to 19 year olds by state, 2000-2019

Priorities

Recognising that it is unlikely that all issues can be addressed simultaneously, there needs to be a targeted sense of priority in respect of actions to be taken with clear milestones set for achievement.

The issue of adequate funding is of primary importance. Unless this issue is resolved, other aspects of higher education are going to be continually adversely affected.

It is no exaggeration to say that the future of this nation depends heavily upon a world-class higher education system, and this cannot be achieved without adequate investment by the nation.