

LIFELONG LEARNING IN THE NEW MILLENNIUM

**As futurist
Robert Theobald
has observed,
“information is not
the problem – lack
of knowledge is.”**

PRESIDENT'S MESSAGE

Theobald reflects what is now largely conventional wisdom – there is too much of the former and too little of the latter. Information technology has ensured there is nothing we cannot know. This is at once exciting and problematic. But Theobald argues of more importance is how we, as a society, become knowledge driven rather than information driven.

The acquisition of knowledge throughout life, the acceptance that we must never stop learning and the appreciation that institutions must now adapt to these realities is the subject of this edition of BHERT NEWS.

In business, as in the government and tertiary sectors, unlocking mechanisms for 'life-long' learning is without question one of the major challenges of today. Each of these sectors must recognise the criticality of preparing people for the world as it is and it is likely to be as opposed to that which is rapidly vanishing. Institutions which fail to grasp this reality have what is surely a brief life expectancy. Governments and employers need to rapidly identify ways in which their people can feel engaged in the learning process of the organisation and the society in which they work.

There are encouraging signals already that parts of society are at least thinking carefully about their approaches to "life-long" learning and the advent of open learning mechanisms and creative employee development opportunities all give cause for optimism.

Identifying innovative approaches and pursuing collaboration on these issues between and within the private and public sector and between institutions is now one of the central leadership challenges of our time. This fits neatly with BHERT's own agenda and I trust you find the articles which follow relevant and thought provoking.



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EDITORIAL

In the knowledge-based or learning society, which has come to the forefront in recent years, there has been a growing focus on lifelong learning. This is a worldwide phenomenon and Australia is no exception. There are a number of factors which are driving this growing interest in lifelong learning. There has been a huge increase in post secondary education worldwide, and in Australia there has been a doubling since 1984. The rapid and constant developments in technology not only drive the need for continuing education and upgrading of skills, but also provide a mechanism for extending the reach and flexibility of education and training.

The economic imperatives of employment and the changing nature of work have long since replaced the school/university/job for life scenario that existed in past years. We can now expect to have several careers in our lifetime, not just one. We can also expect to retire earlier and to have a much higher proportion of part-time workers in the workforce.

Society as a whole has become more interested in availing itself of the opportunities to learn, not only through new developments such as information technology and telecommunications, but also through the availability of more affordable travel and greater leisure time for people to pursue their interests. We have become a learning society.

Changing demographics have also reinforced this trend. Most developed nations are experiencing an aging of their populations. In Australia the proportion

of the population aged 45 years and over will rise from 34% today to some 44% by 2020. This means that over this period the number of people in Australia aged 45-64 years is forecast to grow from some 4 million today to some 5.8 million by the year 2020.

At the same time, the number of 15-24 year olds in Australia is likely to remain around 2.7 million, even though the total population is likely to grow by nearly 20%, or some 3 million, over the same period.

The focus of post-secondary education and training in recent decades in Australia has been on young people. This clearly will have to give way to a new emphasis on lifelong learning to take account of the sorts of factors I have mentioned.

Another focus that will need very careful and insightful analysis is the content of all this learning, this non-stop education and training. What we will teach is even more important than how or whom we teach. In as little as 10 years time jobs will exist that are not even dreamed of today. How long ago did we envisage a webmaster? In the skills formation area it would seem that more emphasis on imparting generic and multi-disciplinary skills is becoming an imperative.

All of this means we need new skills, new learning pathways and new learning options. Lifelong learning becomes the *sine qua non* of economic security, health and happiness.

As key providers of post-compulsory education and

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training, universities are clearly in the thick of this issue. They are going to face a number of challenges in meeting these demands. The concept of going to university to do a degree (or two) and then leave it forever to spend the rest of one's life relying on that platform of knowledge is already out of date. Universities will have to see themselves, and be seen to be, sources of continuing education and training. Alma Mater will become more anthropomorphically correct. Whilst there will be many internal challenges of curriculum, structure, delivery, cost, staff and so on to be met, I have little doubt that the major challenges will be external to the universities.

**“...we need new skills,
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These external pressures will not only arise from more intense competition from other universities both in Australia and from overseas, but from the emergence of many other providers.

Pressures will appear from other directions. For example, industry will demand a much more seamless transition from workplace learning to formal education. It will demand much more formal recognition for a variety of workplace and private providers' training. It will certainly demand much more responsiveness from universities in meeting their needs. Students will demand much more flexibility in content, structures and processes (such as assessment).

A key question obviously is whether our current level of investment in education and training is adequate to cater for these emerging demands. It would have to be a very brave (or foolish) person to answer Yes to that question. A concomitant question that immediately arises and requires some lateral thinking is how do we finance the additional funding so obviously required?

Satisfactory answers to these questions and the most effective solutions to the challenges are going to require many things. One essential ingredient, an absolute imperative, is a change in attitude by ALL the major players – universities, government, and industry.

In this volume of BHERT NEWS, with the theme of *Lifelong Learning in the New Millennium*, we have a number of excellent contributions which highlight the issues being grappled with and the initiatives being pursued to meet what are seen to be the needs of the coming decades.

NEW SKILLS, NEW PATHWAYS: LIFELONG LEARNING IS THE KEY

The 20th century has seen universal basic education (ie. compulsory schooling) become a reality in economically advanced countries. The focus on education policies to eliminate illiteracy through policies to bring schooling to all has also been the key thrust in education policies across the whole world during this century.

The second half of the century has seen universal education and training being extended across the teenage years and into early adulthood in many countries. The focus has been on preparing young people for entry to the workforce, and on retaining young people in the formal education and training system for longer periods of time.

The unparalleled changes that have occurred in recent years mean that a continuing focus mainly on the preparation of young people for entry to the workforce as the keystone of post-compulsory education and training will no longer be sufficient. There are two reasons for this:

- First, on the *demand side*, technological change and other changes stemming from globalisation of economies around the world are now having a profound impact on the nature of work, the way it is organised and skills it requires. These changes are now so rapid that people cannot expect to be working in the same areas even for a part of their working lifetimes. Many specific skills now have a very short “half life”;
- Second on the *supply side*, the workforces of most countries including Australia are aging. There will be relatively fewer young people entering the workforce than in the past. Skill formation policies will therefore need to be more heavily focussed than in the past on the adult workforce, including on re-skilling older workers. Continuous learning is required.

Policies to further promote lifelong learning are the key direction for the future, if Australia is to maximise its economic potential. The onset of the information

Total expenditure on education as a proportion of Gross Domestic Product, 1995 (a)			
Country	Proportion of GDP (%)	Country	Proportion of GDP (%)
Very high levels of investment (6% or more)			
Israel	8.3	Sweden	6.7
Denmark	7.1	United States	6.7
Canada	7.0	Finland	6.6
Norway (b)	6.8	France	6.3
South Korea	6.2		
High levels of investment (5-6%)			
Germany	5.8	Portugal	5.4
Czech Republic	5.7	Ireland	5.3
Spain	5.6	New Zealand (b)	5.3
Australia	5.6	Iceland	5.2
Chile	5.6	Poland (b)	5.2
Mexico	5.6	Malaysia	5.1
Austria	5.5	Belgium (b)	5.0
Hungary	5.5	Brazil (b)	5.0
Moderate levels of investment (4-5%)			
Netherlands	4.9	United Kingdom (b)	4.6
Italy	4.7	Thailand (b)	4.3
Japan	4.7	Argentina	4.1
Lower levels of investment (less than 4%)			
Greece	3.7	Vietnam (b)	2.7
Russian Federation	3.4	India	2.6
Paraguay (b)	3.1	Turkey	2.4
Philippines (b)	3.0	China (b)	2.3
Singapore (b)	3.0	Indonesia (b)	1.3
Uruguay (b)	2.7		
(a) Total expenditure from public and private sources on education institutions (schools, vocational education institutions, universities and other tertiary education institutions) except where otherwise stated.			
(b) Direct public expenditure on educational institutions only.			
Sources: OECD (1999) and Lenahan et al (1998)			

The above Table is from a Paper given by Chris Robinson at a Conference on “Post-compulsory Education and Training: Looking to the Future”, at the University of Canberra, 27 August 1999, organised by the Lifelong Learning Network.



MOIRA SCOLLAY
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LIFELONG LEARNING – WHAT DOES IT MEAN?

Lifelong learning has come to be one of those terms that easily roll off the lips of those of us who are keen to promote education and training in Australia.

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age and the knowledge-based economy requires countries to become learning societies. The education of the population and the skilling of the workforce are the factors which are going to determine a nation's fortunes in the 21st century much more than they have in the 20th century. The skillsbase of a nation, and the speed with which skilling can adjust to meet new requirements will be as important, if not more important, in determining economic success than a nation's natural resources and financial capital base. These changes will not be achieved without further significant reform to our education and training systems.

This is not to say that Australia has not already made substantial progress. Some 1.5 million people (or some 12% of the 15-64 year old population) enrol in a publicly funded vocational education and training program each year. A further 670,000 people are enrolled in higher education (ie 5.4% of the population aged 15-64 years). Some 80% of wage and salary earners report having undertaken some kind of employer provided training. A total of around 77% of the "economically active" population aged 15-64 years, undertook some kind of education or training during 1997 in Australia.

Impressive as this looks, much of this education and training activity is unstructured, informal, spasmodic and minor. A more comprehensive system of lifelong learning in Australia is required. Future directions will need to focus on:

- the development of *new learning pathways* for adults as well as young people so that lifelong learning for all can become a reality. This will require a substantial reform to the post-compulsory education and training system to ensure a wider range of appropriate learning options are available;
- an *increased national investment* in skill and knowledge. Even though successive governments in Australia have ensured that we have a comparatively sound level of national investment in education and training, it is difficult to see how we can become a world leading skills nation, as we must, without raising national investment further, not just public sources, but from private sources also.

The above is the Executive Summary of a Paper given by Chris Robinson at a Conference on "Post-compulsory Education and Training: Looking to the Future", at the University of Canberra, 27 August 1999, organised by the Lifelong Learning Network.

However, unpacking just what it means and how it changes our approach to education is not so easy to articulate. As one Director of a TAFE institution asked me at a recent conference: 'How is lifelong learning a change in our practice? Currently more than 50% of our student population is mature aged. Isn't that promoting lifelong learning?'

The answer is yes, in part, but lifelong learning needs to carry a much heavier policy burden than attending to the needs of groups already involved in education and training; it needs to capture the population as a whole. To do this requires new understandings for policy action at local, state and national levels and new levels of co-operation and discussion between the various sectors of education and training.

For me lifelong learning is about breaking down barriers and replacing them with building blocks. For too long in Australian education we have set up learning as a series of high jumps with the bar being raised at every level. This is nowhere more evident than at Year 12. For those who don't make it over this particular bar, the consequences can be severe. Chances of long-term unemployment are far higher for those without a Year 12 qualification than for those who complete Year 12¹. We must ask ourselves to what end? What do we as a country achieve by setting the bar at a level where almost a quarter of all students in Year 11 in 1997 did not go on to complete Year 12²? Do we increase our sense of security and position? As societies and social status become increasingly measured by knowledge, there is no gain in creating an underclass that has little access to continued learning. As Colin Power³ from UNESCO noted the greatest future threat for nations is not from outside their boundaries but from within. Promoting inequality in access and achievements in education will only lead us to a less, not more, secure future.

And so to return to my building block idea. Creating building blocks is not about lowering the standard of our education, but about creating viable steps towards realising various qualifications and levels of attainment which can be built on in a number of ways. It is also about ensuring that lots of different coloured, shaped and sized blocks fit together. Education and training has to get beyond the myth that 'one size fits all'. As anyone who has tried on these outfits knows, this is simply a euphemism for 'no fit at all'. Education and training needs to shift its focus to customise and develop a range of programs and opportunities so that everyone has the opportunity to select their own particular blocks and pattern for lifelong learning. At no time in the history of education and training has this been more possible.

Over the past few years the vocational education and training sector has been undergoing major reform. VET of the late 1990s has changed significantly from the VET of the early 1980s. At the heart of that reform has been the imperative for VET to respond to the needs of industry, to be relevant to the workforce, to be flexible and to provide choice.

Last year, 'A Bridge to the Future – Australia's National Strategy for Vocational Education and Training 1998 - 2003' was launched. The vision for VET in the National Strategy states: 'Our over-arching challenge is to create the world's most innovative and best regarded vocational education and training sector'. This includes:

- ensuring the skills of the Australian labour force are sufficient to support internationally competitive commerce and industry, and
- providing individuals with opportunities to optimise their potential.

Put simply, our vision is to make Australian vocational education and training the envy of the world.

If Australian vocational education and training is to become the envy of the world, the acquisition of skills and lifelong learning has to become the number one national priority.

There is still much to do to realise this goal.

Currently, for those Australians who are 25 and older fewer than 20% are participating in any form of education and 52% of the Australian workforce does not have a post-school qualification (Australian Bureau of Statistics, 1997). This contrasts sharply with our OECD competitors among whom we are currently ranked 18th, having slipped from 15th position. Moreover, we are in danger of falling further behind as a nation unless we do something about our performance.

We are also witnessing the exponential growth of information technology¹, and, disturbingly, a widening gap between the information rich and the information poor. Bridging both gaps – our international participation / qualifications position and the gap in access to information technology – will necessitate a fundamental change in the way people view education. We need to make everyone in the country enthusiastic and committed to learning at every stage of their career and their lives. This is not only necessary to achieve the goal of making Australia internationally competitive, but it is also vital for our long-term social cohesion and democratic way of life.

Furthermore, to cope with the major changes to the world of work, globalisation and the introduction of new technologies, we need to not only ensure people access education and training throughout their lives, but also ensure that they can build on their learning, transfer their skills to new areas and get national recognition for the training they do.

ANTA is absolutely committed to engaging with industry and the Australian community to reach these critical objectives. To date, collaboration between employers, employees, students, and teachers has resulted in a major expansion of the types of learning available for a greater range of occupations, along with much more variety in the ways in which learning and skill development can occur.

The National Training Framework is the best chance to position vocational education and training to deliver our mission and vision into the next

millennium through:

- the flexibility of Training Packages, and
- the interface between relevant training and industry application through New Apprenticeships.

Flexible delivery in these terms means that training can be structured in an enormous variety of ways:

- on-the-job, off-the-job or anything in between;
- provided any time of the day or night, over 365 days of the year;
- on-line and off-line; and
- self paced or classroom based.

Training Packages provide the basic building blocks for vocational education and training courses. Training Packages consist of competency standards – industry or enterprise based – linked to national qualifications and assessment guidelines. As at 30 June 1999, 38 Training Packages have been endorsed. Every major industry will have its own industry package by next year, covering about 85-90% of the workforce.

Flexible delivery, Training Packages, on-line learning, workplace learning and VET in schools are just some ways in which customisation is being developed in vocational education and training.

To establish these building blocks throughout all sectors of education and training will take leadership and vision. In the March issue of BHERT NEWS on leadership, Professor Goldsworthy wrote: 'Leaders initiate change, they challenge the status quo, they constantly question and seek new answers. Leaders keep society focussed on the fundamentals of the common good, on the values inherent in a civil society'. This statement succinctly encapsulates the road ahead for post-compulsory education and training as it seeks to address the challenge of lifelong learning. Breaking down some of our traditional barriers to access and continued participation will contest the status quo and will require a goal that goes beyond the vested interests of particular sectors to a wider view of the 'public good'.

While the challenges are many, the benefits are also great. Creating a system conducive to lifelong learning means that the barriers between the sectors will be broken down with students able to move freely between sectors and have their qualifications recognised. This is not to advocate one system. Diversity and difference are vital elements in working towards a system capable of catering to the individual needs of students. Each sector of education and training in Australia has unique strengths that could not be adequately or appropriately replicated by the other. These differences, however, should be seen as strengths and not barriers or blockades to lifelong learning.

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¹ ABS (1998) *Transition from Education to Work, Australia*; Marks, G and Fleming, N (1998) *Factors affecting youth unemployment in Australia, 1980-1994*, ACER.

² ABS (1997, 1998) *Schools Australia*

³ Continuous Learning Series presentation to ANTA, 19/1/1999 by Professor Colin Power, Assistant Director-General, UNESCO, Paris.

⁴ Nearly 23% of Australia's population accessed the internet in the twelve month period to August, 1998 (Australian Bureau of Statistics).

THE ROCKY WAY TO LIFELONG LEARNING

Introduction:

The necessity of lifelong learning is one of the few characteristics of life in the new millennium on which there is universal agreement among politicians, social commentators, industry, business and educationalists. Its causes are, also, non-controversial. They comprise the impact of the information technology revolution, emergence of the knowledge economy and globalisation and liberalisation of the World economic and financial systems. The summative influence of these changes demands unparalleled flexibility over time from enterprises and the individuals within them. It, also, requires the educational and social infrastructure to make this versatility possible. This brief discussion will focus on a few of the major issues that must be resolved if lifelong learning is to move from rhetoric to reality in our society. The particular perspective is the view from an intersectoral university engaged in both higher and vocational education and offering a range of qualifications from apprenticeships to PhD's.

Barriers and Challenges:

Currently, implementation of lifelong learning is far from straightforward. A scan of a typical career progression from the viewpoint of an individual highlights a number of the imponderable difficulties.

A recent study by the Dusseldorp Skills Forum reveals the problem Australia's young people have in acquiring a first job. The results indicate that 37 percent of unemployed people in Australia are in the 15-24 years age group. This is the third highest figure among 19 OECD countries. Australian youth clearly fare poorly, particularly in comparison with their counterparts in Germany, Switzerland, Austria and The Netherlands where there is a much tighter linkage between school and work. The problem is compounded by the insistence of employers on a previous experience requirement in recruitment.

The well-known, high positive correlation between attained level of education and employment has been reconfirmed in a recent survey by Andrews and Wu (1998). This makes more disturbing the Dusseldorp finding that Australia ranks 18th out of 26 countries in the proportion of the population who complete Year 12 or a post-school qualification. Nearly 80 percent of all university and TAFE graduates enter initial employment. As anticipated, unemployment affects TAFE graduates more than university graduates. This is partly attributed to the shift of the occupational workforce towards professional occupations which have traditionally been the chief group of occupations in which university graduates are employed. It is, also, due to university graduates gaining employment in occupations, such as sales workers, not usually viewed as requiring degree level qualifications.

The same picture of an inexact match between educational preparedness and type of employment is presented by post-experience data. A report recently prepared for the Victorian Department of Education

reflects the experience of university and TAFE graduates three years after graduation. At this career point nearly one third of all graduates are working outside their field of training. The reasons for this have not yet been determined. They may include insufficient career education leading to the selection of the wrong courses or the wrong jobs to apply for. In some areas it is likely that there is a disparity between the number of graduates being produced and the available jobs.

The adverse effects of this situation are clearly depicted in the report. Graduates employed outside of their area of education and training are much more likely to be dissatisfied with their job, frustrated and fearful that their qualifications will become obsolete and render their course a waste of time. Prevalence of these attitudes is neither good for the individual nor for industry, business and the community at large. The need for tertiary courses to be more attuned to industry and business requirements was raised by graduates and reinforced by a mismatch between employer demands and graduate preparation highlighted in responses from both employees and employers. The report concludes by posing the question whether there would be less 'out-of-field' employment and better adjustment between education, training and employment if there was greater industry input.

Although, necessarily, lying beyond the scope of this brief discussion, a comprehensive scan of individual career progression should include unemployment experienced in the 50 to 60 years age range and the educational requirements of those who retire with a 25 year life expectancy. Retraining of the long term unemployed and the operations of the University of the Third Age must be subsumed by the concept of lifelong learning.

A Way Forward:

In rendering lifelong learning real rather than conjectural, three requirements for success stand out. The first, and most difficult to achieve, is a fundamental change in attitude on the part of each of the major players. The acceptance of overarching responsibility and the need for a much more proactive role by government is a necessary but not sufficient condition for attitudinal change in the other stakeholders. Tertiary institutions must view their students as potential life long clients rather than recipients of single qualifications. Industry and business must, also, change their ways. The recent IT and T Skills Taskforce's survey found that faced with a chronic skills shortage most firms intend to reduce their training effort and meet their staffing requirements by recruitment from their competitors. A dramatic change in recruitment and training practices is essential. Last, but by no means least, individuals must view their learning path as the critical life determinant which it is and pursue it with purpose and determination. The desirable changes are clear. Making progress towards their achievement requires appropriate communication structures and financial arrangements.

It is in the interests of all concerned that at any point in time there should be a broad correspondence between the profile of educational preparedness of the workforce and the needs of industry and business. Governmental manpower planning has a poor, international track record. A more attainable goal would be a massive improvement in mutual awareness and information exchange between the stakeholders. At present, attempts lack effectiveness since they are typically confined

to single industries, particular employment situations or individual educational institutions. Advances in information technology render eminently feasible the construction of a single, integrated data base covering all aspects of employment and education. Industry and business would display their current and future recruitment and training requirements. Universities would present the educational opportunities on offer and individuals would record their current education and experience and future aspirations. Mutual availability of this information would enormously facilitate the negotiation and decision making on all sides required to implement life long learning. Only government could preside over the creation of such an information exchange.

Appropriate communication structures would be of limited value without restructured financial arrangements. Two main changes are necessary. The first is at the level of institutional finance. At present public funding of post-compulsory education is unco-ordinated and involves a mixture of federal, state and inter-governmental agencies. This complicates and discourages the working relationships between educational institutions critical for the implementation of life long learning. The problems are particularly evident in institutions engaging in both school and TAFE or TAFE and University activities. Rationalisation of the current situation is a joint challenge for the commonwealth and state governments.

Improvement in the institutional financial framework will be of limited value without complementary change at the individual level. A mechanism is required that enables the individual, a prospective or current employer and governments to easily discharge their respective financial responsibilities for the individual's education and training. The establishment of a learning account for each member of the community is a suitable strategy which is currently being discussed in political circles. Implementation of this approach would be an immense step forward in achieving the flexibility for all of the stakeholders which will make lifelong learning a reality.



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The Labour Market Experience of Higher Education Graduates over the Last Decade, Les Andrews and Tiemin Wu, Higher Education Division, Department of Employment, Education, Training and Youth Affairs, Occasional Papers series, June, 1998

LEADERSHIP IN INNOVATION COURSE

One of the most exciting initiatives BHERT is involved in is the unique Leadership in Innovation program.

The program is an intensive three-module live-in training course for prospective R&D managers developed by the CSIRO and the Business/Higher Education Round Table (a forum of business leaders and university vice-chancellors) with significant input into the program from BHP, F H Faulding, and the University of Melbourne.

The Achievement Through Teams – Leadership in Innovation program involves three residential periods of five days duration (commencing on a Sunday afternoon and finishing Friday lunch time). Module 1 is about Self-Management; Module 2, Team Building and Module 3, Organisation Culture and the Future of R&D.

The residential courses are held at small, quality conference centres close to capital cities.

The course design is specific to the needs of R&D technical project leaders; brings together participants from across organisations and functions; encourages integration of professional behaviour with personal goals; and encourages leadership through trust, respect for others and generating enthusiasm for a project.

The program is highly responsive to individual and group needs and provides an environment where participants form a strong learning community and ongoing networks.

The cost of the course is \$10,000, which includes accommodation and meals, all training, course materials and coaching between modules.

The Federal Minister for Education, Training and Youth Affairs has provided a 50% subsidy, amounting to \$240,000, for 48 university participants to attend the program over the next two financial years.

Dates for Achievement Through Teams Courses for 2000 are as follows:

ATT 11	
Module 1	6 - 11 February 2000
Module 2	19 - 24 March 2000
Module 3	30 April - 5 May 2000
ATT 12	
Module 1	5 - 10 March 2000
Module 2	9 - 14 April 2000
Module 3	21 - 26 May 2000
ATT 13	
Module 1	4 - 9 June 2000
Module 2	16 - 21 July 2000
Module 3	20 - 25 August 2000
ATT 14	
Module 1	15 - 20 October 2000
Module 2	3 - 8 December 2000
Module 3	4 - 9 February 2001

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The recent research Green Paper having set vice-chancellors at each others' throats, I was unsurprised to read in a national magazine that I belong to a group which is looking backwards, freezing the university in ancient tradition and missing the opportunities of the future. We are content, my attacker might have continued, to aspire to be Harvard, Oxford, MIT, so we are blind to the path of Humberstone, Western Colorado or to institutions serving a single industry or firm, Motorola University or Petronas.

Sunning under a jacaranda tree ringed by golden sandstone, what do I know of the three L's of lifelong learning? The E3 of early Elysian experience is presumably my stock in trade.

We all know that times are changing. Jobs change faster and people change jobs more often. Technical vocational training becomes irrelevant more quickly and updating needs to be delivered to a range of clients in the workforce. Developments in information technology enable us to be more flexible and to use a combination of home, workplace and institutional delivery. As always custom design is desirable but cost of individuation is a limiting factor. Should a time-honoured university like mine enter what could be a market for specialist providers?

In fact I argue that the large comprehensive research-intensive university is particularly well placed to resolve the issues that challenge modern higher education provision.

What I have dubbed the early Elysian experience is modern campus-based learning of a liberal kind. It is no accident that we have moved medicine to postgraduate entry, that other professions are taking notice, or that new liberal arts programs for high achievers are over-subscribed. The acute awareness of the ephemeral nature of strictly vocational training emphasises the value of generic skills acquisition. The capacity to communicate and the capacity to learn can be more important than knowledge itself. I predict that, despite internet, employers will increasingly prize the graduates of an all-round campus experience which encompasses sport, debating, parties – political and merry – in addition to classroom learning.

In that classroom the teacher must embody active learning if the message is to be that learning never stops. Sometimes the self-absorbed researcher teaches poorly but the non-researcher cannot teach at all.

A powerful base of research activity, provided that an appropriate proportion is directed to industry concerns, provides the ideal substrate for refresher programs of various kinds. Here there are exciting developments in flexible delivery where inter alia the whole definition of distance learning is changing. Currently there are experiments in interactive joint programs taught cooperatively between Japanese and American universities, possibilities denied to us until our international telecommunications improve. A global market is forming and alliances amongst major research universities crossing national boundaries are essential for our future.

It has never been easy to analyse higher education delivery in provider/client terms. Some academics fall at the first hurdle by refusing to accept that the very language is other than insulting. For E3, which is where most current university activity occurs, there is a prodigious reliance on the notion that the provider knows best. There is some input from the student as client from exit surveys and loose input from the employer as client from advisory committees and meetings with recruiters. In L3 there is a healthy shift from provider to client and a useful clarification that, for the most part, it is the employer as client who pays and therefore can call the tune.

In many different disciplines the L3 dialogue between provider and client has scarcely begun and I freely admit that universities like my own, despite their enormous capacity, have much to learn from others such as Deakin who have blazed a trail.

Watch us move.

Professor

GAVIN BROWN

Vice-Chancellor

The University

of Sydney



UNIVERSITIES ALSO LEARN FOR LIFE

Learning is the key to not only surviving, but also riding the current waves of change as we cross centuries. 'Front end' or 'early-in-life' learning that largely finishes with matriculation from secondary school, is no longer seen as adequate.

In fact, the creation of a 'learning society' in which people enter and re-enter education markets more frequently and in greater numbers throughout life as they top up and/or reframe knowledge, is seen as fundamental to future global economic, social and cultural well-being. This message resonates in major reports of the last five years, emanating from the OECD (1996), UNESCO (Delors *et al* 1998) and the Commonwealth of Australia (1997).

Learning is the core business of a University. It is a fundamental catalyst firstly in the generation of knowledge by research and innovation, and secondly in the transmission of knowledge by publication and teaching. In his recent book, *Ideas For A New Millennium*, Peter Ellyard threw down the gauntlet by saying 'the education sector is almost always out of date and in catch-up mode' (Ellyard, 1998:62).

Trends in the lifelong education market suggest that there is some truth in this. Employers and individuals are, according to recent British research, endorsing private, for-profit providers ahead of traditional universities and institutions not just in the UK, but also in Commonwealth countries, continental Europe and in the US (Goddard, 1999).

Most, if not all Australian universities are under no illusion that they need to be very clear and strategic in carving out a new future for themselves if they are to survive and thrive in the new environment. They must become 'learning organisations' in ways that challenge some of the more conservative and enduring traditions of academe. The words are easy; the task is far from trivial. The structure and practices of the whole of the organisation need to be retooled.

The ECU Mission and life long learning

At Edith Cowan University (ECU), the governing Council and staff have adopted a mission that will set the University apart from others. The goal is to 'brand' the university and its products, in a way that will allow the university to grow, even as education markets continue to evolve. Rather than conducting research and offering courses across the board, ECU has chosen to focus on the knowledge-based services and professions. This mission embraces the history of the institution in education and cultural services. ECU was based on an amalgamation of colleges of education, and included the pre-eminent WA Academy of Performing Arts. With the creation of the University barely a decade ago, a wide suite of courses flourished.

These are now being honed back to focus on services including education, nursing, hospitality and tourism and knowledge-based areas such as communications, IT, multimedia, computer science and finance.

The growth of the service and information economy is a current phenomena and ECU will be part of this growth. Our challenge, however, is that the activities that we have targeted, are themselves undergoing radical transformation. As Ellyard says, 'organisations will need to turn their backs on some of their old cultures and learn new ways' (1998:62).

His illustrations include, for example, pharmacists who are concerned that:

'the appearance of dispensing robots would make much of their current professional practice redundant. Pharmacists will need to reinvent their profession or it will cease to be one. Lawyers will need to come to grips with the implications of the emergence of mission-directed law (mediation and conflict resolution) in their current problem-centred litigation-based profession. Medical specialists will need to understand the implications of mission-directed health creation.' (Ellyard 1998:61-62).

ECU is anticipating these changes. Government rhetoric is encouraging a more diverse sector, but public funding is a falling proportion of operating funds (now 51% at ECU). The University needs to raise other funds to underwrite the costs of transition, while at the same time, reducing costs to be price-competitive with other providers. Other trends are in our favour.

The cost of knowledge-intensive products and services on which universities greatly rely (eg archived research findings, teaching materials, local and global communication channels) are falling with the digital revolution. At the same time, some of the knowledge-intensive services that we provide to graduates and the community, and the price of qualifications for employment in these areas, is trending upwards (Chipman, 1999).

ECU graduates

We agree with the recent Senate Committee Report (1997) that found that Australian tendency to promote a vocational/nonvocational divide to be unhelpful, if not counter-productive in addressing the needs of life long learning.

Also as Judith King said in a recent BHERT NEWS 'Knowledge workers do not come neatly labelled medicine, science, tax, audit, legal, technology or management... They are savvy, street smart individuals, able to work in multi disciplinary and multi cultural teams and are sensitive to international environments.' (1999:7).

Graduates who were educated in more than the narrow technical or professional tenets of their degree are more likely to display skills that are supported by business; such as having 'an understanding of global issues from a socio-economic perspective' (BHERT 1998). Lives are lived and jobs operate in a social and cultural context.

In a fast-changing environment, it is vital that universities equip their students with strong independent learning skills. Every graduate must know how to:

- Figure out what s/he does not know, but needs to know for professional success.
- Find and evaluate information on the Web as well as in libraries, books, and journals.

- Integrate new information with prior knowledge in order to solve new problems.
- Reflect on his or her own learning style and on the quality of his or her own thinking about a situation.

Current projections suggest that our students will have up to five distinctly different careers in their working lifetimes. In many instances, they will transition successfully by using the lifelong independent learning skills they acquire from us. Many of our graduates will also, at some point, seek further formal education. When working professionals turn to us seeking education for career advancement, we must be ready with just-in-time, multi-model learning services: mixtures of short, intensive sessions with on-line delivery; programs that build local, national and international peer networks; small modules that can be studied during lunch breaks at the office; credit for life experience; and work-based learning projects. We must make enrolment quick and easy, technologies user-friendly, and resources and support services available around the clock.

ECU is building these features into both its courses and its services today. Already, mature working adults make up by far the largest segment of our student body. If they are to complete their courses in the face of other life demands, a professional focus and flexible delivery are essential. And if we expect to earn their repeat business, then today's experience must be positive.

The learning challenges for academic staff

The best academics are inherently and intrinsically, life long learners. Their inbuilt intellectual curiosity and thirst for knowledge blur the boundaries between their work and home life, and make research and teaching, both productive and deeply satisfying activities. These fundamentals of good scholarship are enduring.

Academics are, however, also having to adapt their traditional on-campus, 'talk and chalk' teaching practices to meet to serve a range of new breeds of students. They must:

- Acquire and teach new knowledge navigation and communication skills
- Move from teacher-based pedagogy, to learner-centred approaches (at a time when adult learning theory is still only partially developed and some staff and students both resist learner-centred techniques)
- Be prepared to repackage their courses to provide just-in-time education in manageable 'bites', at times and at sites to suit the student, many of whom are working part-time
- Internationalise their curricula and delivery, while satisfying a diverse and multicultural student group
- Expand links with other providers to offer students new seamless pathways, joint courses and enhanced course offerings
- Expand links with industry and the professions, to stay abreast of recent developments, earn consultancy income, work in staff rotations on industry projects or collaborative research activities, provide students with work-based learning experience, and
- Meet the quality expectations of a more demanding student group, many of whom pay fees for first, second or third awards.

At ECU, we are creating a new Teaching and Learning Centre to support staff in all of these endeavours and are investing more in staff development at a time when some universities are winding back their commitment, often as a cost cutting strategy.

The University has not forgotten its administrative staff. Some 450 people are learning new ways of working. Instead of working with old-style functional groupings (eg, finance, human resources), the administration is being reconfigured along service lines around key customers with the Student Service Centre as the centrepiece with the co-location of all non-faculty services, including the Library and technology services, around a central call and helpdesk. Internal staff customers are supported by two service centres and on-site 'account managers', following good business practice.

At the end of the day, we would like a lifelong relationship with all of our students and staff. A university that has 'mindshare' with its alumni and former employees will have a steady stream of repeat customers. Developing the university as a life long learner is not business as usual – it is an imperative for surviving and thriving.

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LIFELONG LEARNING IN THE NEW MILLENNIUM:

*Can Universities do the job –
and do they know what it is?*

Fireworks and the millennium bug. The dawn of the twenty-first century should be a breathtakingly interesting moment. It is also a good time to look forward and to ask some questions about where we are going. For universities and industry some important questions have to do with fashioning a stronger basis for partnership, such that networking, alliances, interdependencies and the shared production and application of knowledge become entirely normal. These are essential to Australia's prosperity and competitiveness in the coming knowledge-based century. They are no less necessary to our capacity to live in harmony with ourselves and with others: to build a society characterised by civic participation and what the Europeans call social inclusion, rather than the inter-generational and inter-communal conflict which makes the streets unsafe and produces unenviably high youth suicide rates.

Why does it still seem such a struggle for universities and business to work together? Are our purposes, our language and our values so very different that suspicion and incomprehension must always characterise most such relationships? Or do we adhere to familiar stances and stereotypes out of sloth, and the insecurity of not being at all clear what we want and where we are each going anyway?

There is an awkward legacy, going back to hostility to the 'military-industrial complex' of the fifties and sixties and the funding of university research for purposes deemed unacceptable. In the late sixties and early seventies a wave of radicalism and hedonism led to the labelling of universities and their students as arrogant, self-indulgent and unproductive. The reappearance of high unemployment and economic uncertainty was held to show that universities and their education were inimical to progress and development. Political, press and public scepticism have persisted since. Academics can be caricatured as self-seeking, inward-looking, unpractical, more interested in esoteric research than in teaching the nation's young and solving the nation's problems.

Merely to sketch the stereotype is to show how antiquated it is. The 1999 Good Universities Guide 'University of the Year' was for partnership and the new production of knowledge. It was won by Deakin and Wollongong jointly. An article in *The Australian* (31 August 1999) tells us something of the successes of these universities in winning business by working with business. Deakin's 40,000 corporate program students outnumber its 28,000 'mainstream' students. Large universities turn over tens of millions of dollars in R&D and other contract work, and hundreds of millions in other industry-related research, according to this report which also refers to the University of Queensland's \$200 million Molecular Biosciences Institute. My own

university took the opportunity of the annual contest to take stock of its range of partnerships. It amazed itself by what was found: not just the number but the diversity of partners and activities, and the depth of penetration into so much of the university's work by so many relationships. Equally striking was the inter-connectedness of many partnering activities. The university appeared less as a stand-alone institution pursuing its teaching and research agenda, more as one node in a rich and complex network of relationships, a service centre through which pass many clients with many and diverse requirements. Mutuality of exchange was another obvious feature.

This suggests that our understanding, what we perceive and assume, has fallen somewhat behind what is happening. It would be reassuring to claim that a paradigm shift has already occurred, but is yet to be fully acknowledged. The truth falls short of this, however. Universities are complex communities: microcosms of the society in which values, attitudes and assumptions are replicated beneath the officially acknowledged surface of mission, strategy and policy. The cultural under-life of the university is richer and more complex than university leaders may care to acknowledge. If universities are not yet 'up to the job', the reason may reside in their particular character as highly diversified collectivities – micro-communities – of knowledge workers owing allegiance to very different universes of scholarship. The reference point for a biologist, mathematician or historian is often their world community of specialists: the international journals and scholarly meetings of these very special tribes. On the one hand the grounded and networked institution dedicated, perhaps, to becoming a leading partner embedded in a learning region – very much the declared mission of my own University of Western Sydney. On the other, international communities of specialists competing for top honours in an ever more open global village.

There are other reasons why universities may find doing the job of leading the lifelong learning agenda difficult. Lifelong learning is a catch-all term as well as flavour of the decade. Unless it is sharply focused and translated into terms that can be put to work, it is no more than a patina spread over a host of activities that go on already, not an ordering principle and critique for universities' performance. Secondly, partnership with business implies a shared understanding of what is needed and hopefully of how to go about it. Yet the complexity, unevenness, and multi-directionality of change relevant to both business and universities is bewildering. What does learning to learn really mean? How does a society prepare itself for still greater longevity and earlier retirement combined with persisting unemployment? What does it mean to talk of the public and private sectors when there is so much commonality of management practice and so many organisations which partake of the character of both? How do we come to terms with Australia's twenty-five percent casualisation of employment (second highest in the world) and the prospect that regular, conventional, let alone lifelong employment may soon become a very tiny minority occupation?

With more certainty it is recognised that (to use Martin Trow's typology of thirty years ago) we have long abandoned elite higher education. We are now rapidly passing out of the phase of mass into the new-century era of universal higher education: universal in being lifelong as well as seeing ever-rising cohorts entering the

system from, or soon after, school. In the awkward term now two decades old from Sweden, universities have been 'adultified'. We are also into an age of customisation of products of services. We are coming to recognise higher education as one such service, highly valued but by ever more critically discriminating clients. Socialisation and induction of young people by protective colleges acting in loco parentis has rather little to do with our late nineties students, for many of whom workplace experience and the portfolio may be as important as the final degree. Indeed the 'final' degree may itself become a minority preoccupation as individuals take out elements of education and training (supported and accredited learning) when convenience dictates, the credit card allows, and need arises. The finality of the 'graduate' (or 'master' or 'doctor'), the rite de passage into full adult participation, seems more and more quaint as the world, economy and workplace change and change.

Little wonder if there is a little nostalgia around, a wish for older certainties to return. Our version of 'back to basics' in higher education takes the form of drawing back towards elite from mass provision, to a quest for 'standards' and 'excellence', even to reassertion of the primacy of the 'discipline' over that which is problem-oriented and trans-disciplinary.

We may be confident that there can be no going back to those simpler times. Some universities will become more distinctive and distinguished for their scholarship, and for the standing of their graduates on a world rather than just a national stage. The higher education system will continue to grow, diversify, and find itself ever more open to influence and partnership with other sectors and stakeholders.

We talk a lot about breaking down the silos of government administration. The metaphor holds true for universities in their communities. The real challenge is to transcend worn-out dichotomies – the liberal and the vocational, curiosity and utility in research, research-intensive and teaching-only institutions, the theoretical and the practical. The next century will be a learning century par excellence.

There is no retreat for the university. The task for university leaders is to manage their own paradigm shift, to facilitate the transition of their universities to open partnership learning systems, and to move from a discourse of either-or to one of both-and. For this universities will need a lot of help from their friends in business. The good news is that there is no choice: business too is in the same boat.



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LIFELONG LEARNING AND CURRICULUM TRANSFORMATION

An uncertain future, rapid technological change, the convergence of information and communication technologies and the explosion of knowledge present challenges to employers and educators. Together we face the excitement, the opportunities and the dangers of planning for an unpredictable future. There is no question that we have to respond but our responses will have important consequences – for Australia's transition to a knowledge economy and for the future not only of some industries but also of some universities.

While much is unclear it does seem there is widespread agreement that education will be a critical determinant of the future success not just of individuals but of whole societies. However, we are all still trying to work through what kind of education will best prepare people for the future and how societies should organise education for their citizens. The debate about this is still confused. Do we prescribe more of the same or do we need to change how we organise and deliver education?

The advocates of change argue for a transformation in both the process and content of education. They cluster around the lifelong learning banner and argue that people must learn how to learn. But for this to happen formal education, whether in schools or universities, needs to shift away from an almost exclusive concern with the organisation, transmission and assessment of the individual's mastery of subject content. Rather, learners must engage actively in problem solving and must develop and use a repertoire of information gathering and information sifting skills if formal education is to prepare them for an uncertain future.

This offers particular challenges to the curriculum of universities. Traditionally they have been places where the lecturer has been at the centre of the educational exchange. But a lifelong learning approach puts the learner centre stage and places much greater emphasis on the process of learning itself.

It demands that we provide students with a broad range of learning opportunities, resources and activities. It means, too, that one of the teachers' roles is to help students develop personal responsibility for and active involvement in their learning experiences. The development of a capacity for lifelong learning is not then a by-product of higher education, but an integral part of teaching and learning in all courses. For this to be realised, however, many of our cherished methods of managing students' learning must change and university teachers need to employ new skills in

curriculum construction, facilitation of learning and assessment of performance.

Lifelong learning approaches have some particular characteristics. For example, they depend on a set of information literacies, of which computer literacy is only one. So, the curriculum must be structured and assessment organised to ensure students can locate, manage and use information in various contexts. As well, activities which help students to hone their skills in communication, teamwork and self reliance while they develop broader understandings like ethical and social responsibility must be built into the curriculum and demonstrated at the point of assessment. Finally they must be student centred – they must operate with the student rather than the teacher at centre stage.

The curriculum must provide opportunities both for the student to make choices about when and how to learn and to connect any new learning to their own experience. Within this approach the teacher moves from fount of wisdom to facilitator of learning and in the process relinquishes significant control over the process of learning.

At the University of South Australia we have identified the capacity for lifelong learning as one of the seven personal qualities we wish our graduates to demonstrate. We are reshaping the curriculum across the University and changing our assessment techniques to ensure that we can say with confidence that our graduates possess these seven qualities:

- appropriate professional knowledge
- capacity for lifelong learning
- logical, critical and creative thinking capacities
- ability to work both autonomously and collaboratively
- ethical and social responsibility
- effective communication skills
- international perspectives.

Well, you say, I've seen lists like this before but how do they translate into the students' experience? And how can you prove that you have achieved these outcomes? Two examples – from Civil Engineering and Accounting – demonstrate how we are working to ensure these qualities are nurtured and then evaluated.

Civil Engineering

In Civil Engineering all final year students undertake a year long Design Project. The project is realistic and challenging in engineering terms, with significant environmental, social and economic implications that can be tested in a feasibility study.

The whole class group functions as a company with a management structure determined by the students. The company's coordination team sets work programs, is responsible for communication between work teams, and collates final documents. Every student keeps a work diary which is audited by the company's Quality Manager and all must make a presentation to the class at the end of one stage of the project. Throughout the year academic staff organise sessions for the whole class group on topics such as working in other

countries, team skills, and recognising the contributions of team members.

Equal weighting in assessment is given to the performance of the whole class, the work team's performance and peer assessment of the contribution of each individual to the team's achievement. The quality of the final documentation, the comprehensiveness of the approach to the design problem and the effectiveness of oral presentation are assessed in each category. The final 10% of the mark is allocated by the academic coordinators as a Performance Bonus

for successful leadership, significant technical contributions, or overall enthusiasm.

The responses by students to this subject are very enlightening. Some students are initially dismayed that they have not been 'taught' all the information

required to complete the project. This is deliberate. As in most fields, engineering knowledge and technology are evolving so rapidly that practitioners must know how to uncover new information. As students explore a multitude of resources, they develop the skills of lifelong learning. They browse websites, email companies that produce appropriate technologies, write and talk to government departments, local councils and businesses, as well as consult traditional printed information sources. They are also required to interact and work cooperatively with colleagues in the cross cultural teams to which they are assigned by academic coordinators. These are strategies and skills they will need as practising professionals as soon as they begin employment in the next year. They are, too, skills which will make them effective lifelong learners.

Accounting

The redevelopment of a first year Accounting subject taken by nearly 2000 students who are both Accounting and non-Accounting majors is a good, if perhaps, unlikely, example of another way of embedding lifelong learning approaches. Academic staff have used an approach which is both content and process driven to ensure that a number of the graduate qualities, including the capacity for lifelong learning, underpin the subject.

There are many points of congruence between our graduate qualities and the registration requirements of the two major professional Accounting bodies. Together they have formed a framework within which to restructure both content and learning arrangements and to create a consciously student-centred curriculum – even in such a large first year class. The subject – Accounting Decisions and Accountability – provides a bridge from a predominantly teacher-centred school experience to an adult learning environment in which autonomous learners succeed.

Lecturers make explicit the graduate qualities and professional requirements which particular exercises address; tutorials emphasise the 'why' of accounting, rather than the 'how', and encourage students to explicate what is not understood; printed and online study guides suggest a range of different resources for solving accounting problems. The major assignment is a report to a client, presented both in writing and

“But a lifelong learning approach puts the learner centre stage and places more emphasis on the process of learning itself.”

verbally. It requires students to demonstrate that they can collect and present findings from accounting information. Since the subject's revision, pass rates for both Accountancy and non-Accountancy students have risen by over 20%, with no drop in standards.

Technologies and lifelong learning

We believe that the new information and communication technologies provide revolutionary opportunities for teachers and learners both to access knowledge and to interact with each other. The University of South Australia has developed UniSAnet – an online teaching and learning environment which puts into practice our teaching and learning philosophies. UniSAnet does not require a high level of technical expertise before students and teachers can interact. Rather, it seeks to make simple and straightforward the use of information technology to communicate and to find relevant information. We are particularly concerned to put as few barriers as possible in front of learning – whether they are barriers of cost or of technical expertise.

Conclusion

A great deal of planning, creativity and subject knowledge is required to restructure learning in this way. While a set of lecture notes, a textbook and some overhead transparencies are a kind of security blanket for the teacher, they won't support the kind of learning and skill development necessary for a future where there is rapid change in professional knowledge.

Today's learners must learn how to find, sift, evaluate and present information. They must also learn how to do this in collaboration with other professionals, including people from other cultures. This is a great challenge for all of us whose business is education. It requires a revolution in our approaches to student learning – indeed a transformation of the curriculum. But we must accept the challenge of change if we want our graduates to be active participants in shaping the future and not passive victims of change. The University of South Australia has consciously planned to do this, using its policy framework, resource allocation mechanisms, industry links and professional development expertise. By supporting our academics to make the necessary changes we pave the way for our students' success. Their success will depend on their ability to identify, evaluate, and apply knowledge – the critical currency of the future.



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**DENISE
BRADLEY**

AO,

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QUALITY LIFELONG LEARNING

Introduction

Lifelong Learning expresses the importance and relevance of learning at every stage of our development. The concept is equally relevant to members of our society at all stages of their life-span – as young children, maturing youth, adults and as older persons. It affects national governments, industry, information agencies and virtually all of our institutions of learning.

The concept expresses an acceptance of the need for a new philosophy of education and training, the need to facilitate a coherent set of links and pathways between work, school and education, and it further recognises the necessity for government to give incentives to industry and their employees to “invest” in lifelong learning. As Judith Chapman and her colleague David Aspin have argued, it is “a provision for economic advance, democracy, social cohesion and personal growth.”

The concept is also premised on the understanding of a learning society in which everyone is entitled to quality learning. For commitment to quality life-long learning, however, it seems that new models of learning and knowledge transmission are required for the future. I would like to discuss one such model we are trying to introduce at Australian Catholic University and to talk about how one university has tried to tackle the problem. First, the multiple implications of lifelong learning have to be elaborated, and I think we need to consider carefully the nature of the university environment which seems best to conduct that pursuit. Lifelong learning, of course, is appropriate to all stages of our education, but here the emphasis for the purposes of discussion is on the tertiary level and on quality learning in a specific university environment.

The Nature of Lifelong Learning in a University Environment

At tertiary level (and all other stages), we have to argue that there is a need to establish a learning society in which everybody, independent of race, creed or gender, is entitled to quality learning that is excellent. Both the Dearing and the West reviews argue forcibly that quality of education requires careful attention if our universities are to succeed in engendering a commitment to life-long learning among their graduates. New models of learning and knowledge transmission are required, and to my mind the focus should be on university learning that draws upon at least some of the principles which underlie a liberal education.

Educational inputs, the provision of well-resourced environments of study, or even quality learning experiences, are all important to universities, but quality needs to be endorsed by them in a totally unequivocal way. Universities' essential task is to pursue quality without putting learning at risk and, in order to pursue quality learning, they need to develop particular educational environments.

To pursue the right emphasis, universities need to focus on learning rather than just teaching and provide an environment in which students learn rather than are instructed. Students should learn how to solve problems and to think critically, with critical thinking skills being an essential education requirement. Any emphasis on learning process, however, inevitably requires a re-examination of the curriculum and variations to university structures and processes, and the most appropriate approach is to regard student learning and its success as primary. Lecturing and tutoring, for example, become just one of a number of possibilities to promote learning. Universities should be concerned fundamentally about the degree to which their students learn with them, share in that process with them, and take responsibility for students' learning. We should examine what is the best organisation to recognise and manage joint responsibility for student learning and its success. The achievement of quality learning impacts and outcomes must be the criteria by which university efforts are measured, and there are definite structural and curriculum implications in pursuing that goal.

Students in our universities – regardless, I would say, of the discipline in which they are enrolled – need to discover and construct knowledge for themselves, become genuine members of “communities of learning”, and jointly participate in the act of discovery and the solution of specific problems. The continuous improvement of the quality of learning is more the issue than the quality of instruction, even though the latter is important. At the same time as universities aim to increase their graduation rates, they must also aim to increase learning standards and capacities. Organisationally, they have to examine how best to evaluate performance in learning, rather than in teaching terms, they need to examine what are the structures to provide the best evidence of learning, and they should provide proper evidence for its reward. Technology is with us and definitely assists. Technology, however, should be harnessed to promote student learning in these kinds of ways, but we also need to provide alternative learning technologies. Quality learning actually demands constant evolution of suitable technologies to work better for student learning and success. Universities need to utilise information technology much better by exploiting it to redefine learning practices and learning relationships. At the core of proper learning is the ability and willingness to question assumptions and certainties with a view to letting go of those that no longer help us – and society – understand, or respond to, current realities. And technology must assist in this regard.

At the core of a community of learning is the ability to enter into meaningful conversation (which demands mutual listening). Such facilitates “learning how to learn together”. This demands that our students become capable of interdependent learning as well as independent and autonomous learning, and the process should be approached developmentally. A community of learning seems the right metaphor for understanding how people, as a group or an organisation, adapt and change to meet emerging demands, or generate information, knowledge and wisdom that facilitate learning adaptation and growth. Members of this community should learn how to work and learn together and develop collaborative and interdependent models and processes that will enable them to evolve and thrive in these turbulent and uncertain times.

Redesigning old structures (restructuring) or creating new ones can assist in “bringing people together” but there is no guarantee that students and their university tutors will “converse” or have meaningful conversations. Most organisations have numerous communication systems and processes in place, and it can be argued that people in many of them do not really talk to one another. Above all, we need to ensure that “conversations” really do occur.

Relevance to Industry

Finally, I would wish to argue that students trained in these ways will serve the interests of their employers (including industry) far better than students instructed didactically. This is a controversial position I know, but employers, I would argue, will reap vastly richer rewards from students trained in the ways that are being suggested. The graduates we employ will be able to adapt, generalise, analyse and respond to situations and problems others might find some difficulty in solving. This is perhaps a recasting of the statement that “on site” learning is a necessary component of the provision of learning for life.

Learning opportunities have their certain parallel at all stages of life's development. Primary, secondary teachers and all those involved in tertiary and continuing education (including government) have a unique opportunity to create (and put into practice) models of learning that will be vastly to the advantage of our society. It is only with this kind of re-orientation that employers and individuals – who must benefit from society's investment in their learning – can be regarded as genuine partners in life's educational outcomes.



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LEARNING IN CONTEXT: THE VALUE OF UNIVERSITY/ INDUSTRY PARTNERSHIPS

Professor

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Life long learning suggests an ongoing quest for education, knowledge and skills. It is a concept that many would accept without question. Learning is good – an indicator of progress and vitality. When it is linked to credentials and employment however, it can appear to be a life ‘sentence’ rather than an ‘opportunity’. Some might argue it signals the failure of our education system.

Graduates are so ill-equipped for the reality of the workplace they must accept a lifetime of remediation. Conversely, the concept acknowledges the rapidly changing nature of work and technology.

Students are being educated for unknown future (Bowden and Marton, 1998). How can a time limited educational experience adequately prepare graduates for a future workplace that at present is only speculative and visionary? In ten years time there will be professional opportunities that we have not yet conceived. There will be communication and technology advances that will transform the way we interact in the workplace. The challenge of preparing graduates for

that future cannot be confined to a university degree. It demands a partnership incorporating industry, a range of higher education providers, and the current and future workforce. It is also unrealistic to imagine that it can be limited within national boundaries. Learning must facilitate a global perspective that both reflects, and enables one to respond effectively, within a global economy.

Traditionally, an undergraduate degree prepared graduates for a career in the discipline area of their choice. Educational opportunities were limited to a select and uniform minority of well prepared students. Their educational experience was designed to offer a social and athletic balance to academic study. Today mass education ensures a broad diversity within the student population. Many are already participating in the workplace. The opportunity to engage in extra curricular activities designed to cultivate broader ‘generic’ skills and abilities are limited. For many students the extra-curricular experience associated with university life is irrelevant (Chipman, 1999). At the same time, employers are critical. Graduates have adequate technical skills and disciplinary knowledge but they are not able to apply their education effectively within the workplace. They lack communication and problem solving skills, their leadership ability is under-developed and they are not team players.

To address these concerns many universities have placed an increasing emphasis on the development of generic skills. It is acknowledged that generic capabilities such as communication, problems solving and leadership are most effectively developed within a discipline context. The development of excellent debating skills for example, will not necessarily assist a graduate engineer to communicate effectively with clients and colleagues. At present, considerable energy is being invested to identify the generic capabilities that employers desire, to adopt teaching approaches that make explicit and cultivate these capabilities and to ensure that they are assessed with the same rigour as discipline skills and knowledge. The assumption underpinning these efforts is that generic skills are not innate and their development demands an explicit and focused educational approach (Stephenson, 1992).

One time-honoured commitment to generic skill development is the concept of work experience or industry placement. In fields such as medicine, nursing and education, work-based experience is integral to undergraduate learning and regulated by both educational and professional bodies. In other fields industry placements are considered an optional extra and they are not necessarily monitored or resourced in a manner that guarantees their educational value (Lawnham, 1999). The quality and level of supervision associated with work experience and industry placement is critical.

The greatest challenge for the students is to make meaningful links between theory and practice, to appreciate the relevance of their university studies within the context of the workplace. The most effective mechanisms to support the link between theory and practice are access to varied experience in the workplace, the availability of a competent mentor and the opportunity for structured reflection. Well supervised, quality work experiences provide a 'reality check' regarding career expectations, foster workplace adaptability and identify further learning needs. Potentially such placements can increase student motivation, clarify career expectations and smooth the transition from study to employment.

Work experience is just one aspect of effective industry-university partnerships. Ideally the link between university and work would endure beyond the undergraduate experience. Potentially it can support professional development opportunities for the individual employee and organisational development opportunities for the employer. While most organisations realise an obligation to support the professional development of their employees, fewer capitalise on the concurrent opportunity for organisational development. The phrase 'just enough, just in time, just for me' characterises the narrow conceptualisation of professional development as an individual activity. The most effective and enduring professional development is embedded in the experience of work and parallels broader organisational development. On an individual level it is maximised through participation in a structured program of study, mentoring and reflection. On an organisational level, it is maximised through opportunities for group learning.

The experience of an inspiring professional development opportunity isolated to one employee and not shared by colleagues is common. Few individuals have the charisma and motivation to galvanise the energy of those around them to embark on significant organisational learning and change. A group of key individuals, belonging to the same organisation, who share a relevant learning experience however, can have a significant impact. Their collective learning contributes to the concept of a learning organisation. Rather than addressing hypothetical case studies they can use real issues from a shared workplace as a basis for discussion, action and evaluation. A learning organisation effectively harnesses the collective ability of employees to pro-actively adapt to changing technology, changing markets and changing client expectations. Creative industry/university partnerships can cultivate a stronger link between individual and organisational development. They provide a mechanism to ensure that the organisation develops in a direction, and at a pace, that matches the development of its most creative, capable and valued employees.

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As with any successful partnership there are conditions that contribute to success and positive, mutual outcomes. On the part of universities there is a the need for greater flexibility in curriculum offerings – a willingness to respond more readily to the complex and multiple needs of industry in regard to on-going professional development. On the part of industry there is a need to recognise the value of an integrated and conceptually sound program of professional development. University staff can have an important role to play as mediators and facilitators of learning. They can sequence and structure learning experiences. They can build in opportunities for group discussion and reflection. They can assist employees to make the link between theory and the real world problems they encounter daily. They can encourage 'students' to expand their learning to encompass organisational goals as well as individual goals. Advances in communication technology provide an important underpinning to such collaborative ventures. Learning is no longer limited to time and place. Internet resources and e-mail communication allow the workplace to become the learning place. The concept of life long learning is both a challenge and an opportunity. Without a real commitment to university/industry

partnerships it is unlikely that graduates will be well prepared to enter the workforce or able to sustain a valued contribution to organisational goals throughout their employment. While a student, industry placements provide a valuable mechanism for developing the skills and capabilities desired by employers. While an employee, professional development programs (tailored to the needs of industry and delivered in the workplace through the effective use of communication technology) offer a convenient and effective form of life long learning. Most importantly university / industry partnerships provide a focus for sustainable organisational development in a changing marketplace.

**“For many students
the extra-curricular
experience associated
with university life
is irrelevant.”**

(Chipman 1999)

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ORGANISATIONAL REORIENTATION FOR LIFELONG LEARNING

Senge (1992) identifies the mental models, which underpin the way in which organisations operate, as the key to any change program. Those mental models comprise the often unspoken values and assumptions of the organisation and its people.

They determine what gets done in an organisation and how. They determine the worldview of those within the organisation, the way in which its external environment is interpreted and the organisation's place within that environment is perceived. Failure to acknowledge such implicit values and operating assumptions is seen by many (for example, Argyris 1990; Senge 1992) to hinder the success of organisational change programs. Proposed changes are often operationalised in accordance with those unchallenged assumptions and thus intended outcomes are distorted. In some cases the staff of the organisation will simply refuse to implement proposed changes because of their incompatibility with existing processes.

In thinking, therefore, about how educational institutions might approach the new demands for lifelong learning, it is useful to consider the operating assumptions that exist in our institutions which may limit our capacity to respond to those demands. Indeed, the very absence of those operating assumptions in new entrants to the sector may be the secret of their success in meeting the new demands. In the discussion that follows the objective is to identify those operating assumptions, which exist in our institutions, that are challenged by those new demands.

In designing our teaching and learning programs, the following assumptions tend to apply:

- the target audience are school leavers with minimal life experience and a high need for structure and guided learning
- this group need an initial post-secondary qualification to begin a career
- the students are full-time and/or available to attend campus-based instruction
- programs should reflect professional/vocational or disciplinary specialisations
- academic staff represent the gateway to knowledge expertise and their role is to disseminate this knowledge

Yet the characteristics of those who pursue lifelong learning

- are working adults who are often accustomed to managing themselves in work or life

- they juggle competing demands for their time and their resources
- they increasingly seek updated or further formal education to support their career and the frequent and lateral moves that now characterise them
- the problems they face in their work are often multi-faceted and require systemic or team-based solutions/approaches
- they can access knowledge/information through several different avenues.

A shift to greater emphasis on lifelong learning requires major reorientation within institutions. Even assuming that traditional educational models are appropriate for traditional school-leaver students (and many dispute hotly their appropriateness there) they most certainly are not for working adults. New ways of teaching and learning are required. Adult learning theory must be applied; this tends to call for a wider range of educational experiences than have traditionally been applied. To the extent that the educational experience is being paid for and prescribed by an industry

“A shift to greater emphasis on lifelong learning requires major reorientation within institutions”

or enterprise, specific tailoring of those experiences may be needed. Such tailoring requires a degree of flexibility for both academic and institution. In the case of the latter a stock of industry

knowledge and ‘cases’ will need to be built. To the extent that academics believe that the degree of specification required by enterprises is too narrowly based or too short-term in its thinking, they must persuade their new clients of the benefits of taking a broader approach. Such persuasive skills perhaps have not been required in days in which the right of specification lay strongly with the institutions and was jealously guarded.

As individuals re-enter education and training to enhance their careers, they are met by staff who remain wedded to their specifically focussed course and discipline. Their capacity to cater for the needs of working adults is limited to the extent that they do not contemplate the career needs and range of skills and competencies required to help people move between employers and sectors. The desire to work within disciplinary boundaries may provide satisfying work environments for staff and creativity in their research activities but may result in less integrated programs for the students.

Universities in particular have relied on their traditional monopolies to award degrees and accredit programs. As industry is called upon to pay for an increasing amount of formal structured education, or demands that previously unstructured inhouse training effort is replaced with programs which give portable recognisable awards to employees, then universities are losing control of the content of programs. Increasingly they are being asked to deliver to the specifications of others.

Respect for and recognition of the experience and prior learning (formal and informal) that people bring to their ongoing education is called for. Within didactic educational paradigms, which tend to assume that 'if I haven't told you, then you don't know', this work-based or life-based education is particularly threatening. The cost (and frustration) associated with being forced to 'repeat' learnings, especially among adults, cannot be underestimated. A certain irony attaches to this point. For many academics a commitment to instilling attributes to foster lifelong learning in their undergraduate students is based on a conception of lifelong learning as a process of continuous learning through a variety of life's experiences (Cunningham et al. 1998). Yet a certain amount of preciousness often greets those who seek to have this learning formally recognised.

The competing demands and the value of learners' time must be recognised and accommodated. Much has been made of the need for flexible learning modes which make those ongoing educational experiences time and location-dependent but to date the major changes have yet to occur in most institutions. While many would cite the expense associated with moving to such modes of delivery there are as many obstacles that emanate from traditional ways of structuring teacher/student relationships, especially within the older more prestigious institutions which have never had to worry about attracting sufficient students. The nature of the programs themselves, too, needs to change. The traditional focus on award programs needs to be supplemented with non-award programs and the two integrated within some overall schema for the professional or occupational grouping. The focus within enterprises and also by individuals on just-in-time learning, together with a desire for 'stored' credits in recognisable and portable forms, combine to make the drive for such integration.

These changes have significant implications for the ways in which the product line of the organisation is conceived and planned and marketed. New client groupings need to be considered; their different characteristics and needs catered for. This will have implications for the way in which programs are packaged and delivered. It has implications for the underpinning educational paradigms of institutions and individual academics. It has implications for the capital infrastructure of the institution. To the extent that flexible delivery modes are accommodated through the new technologies, then a different investment mix of capital will be required.

Linkages with students over their careers and/or lifetimes are needed. For those countries or institutions without long traditions of alumni this requires a whole new set of institutional linkages which must be established and maintained.

Staff development in new ways of teaching and learning are required. Instructional design is a skill that academics are increasingly called upon to exercise. They will be called upon to structure educational experiences to take account of the need to encourage students to acquire new attributes as well as new ways of thinking, in different time packages and using a range of different delivery media. As institutions encourage the greater use of online delivery and self-paced learning packages their computer and information literacy skills will be tested. Traditionally academics in higher education institutions have been required to demonstrate content

expertise (through research degrees) and have often acquired their educational process skills 'on the job'. This has not necessarily provided the robustness of educational theory underpinning with which to contemplate the new demands. It is unsurprising, therefore, to see calls for more formal educational training of academics (for example, West 1998).

Clearly the provision of such training will assist in the challenging of many of those operating assumptions with which academics meet the needs of lifelong learners. However, the extent to which these challenges will be threatening and anxiety producing in many staff within our institutions cannot be underestimated. This is exacerbated by the ageing profile within our institutions as we demand that people who have had apparently successful academic careers spanning 20-30 years are called upon to re-think their basic assumptions and ways of operating.

This extends beyond the issue of techniques. Learning experiences which involve 'the guide on the side' rather than the 'sage on the stage' imply fundamentally different ways of working and relating. The power relationships which have traditionally applied between young adults and academics are different from those who are self-managing adults with full lives and other responsibilities. The need to work in teams and across disciplinary boundaries will not come easily to people trained in the specialism of one discipline and in the paradigm of the single researcher whose solo publications have been the basis of competitive career success.

Institutional relationships too will need reconfiguring, especially for those that have maintained a degree of aloofness from their surrounding community. Instead of seeing our institutions as the only places in which knowledge is created and preserved, the Information Age implies that knowledge will be created in a variety of settings. If we are to continue to play a pivotal role in the information sector of our community, we must work alongside these new sources and creators of knowledge. Similarly, to ensure an appropriate level of access and participation in lifelong learning processes, it is argued (for example, European Commission 1996) that educational institutions must be part of integrated networks which see different kinds of organisations cooperating and being involved in the provision of education and training. To the extent that this occurs within enterprise settings, this will necessarily require both multi-disciplinary and multi-level approaches. It will also challenge traditional ideas of who should provide the content of an educational program.

"Excerpt from paper presented to OECD Conference 'The Life-long Learning Challenge for Higher Education: Competition or Cooperation', Paris, France, September 1998."

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LIFELONG LEARNING IN A GLOBALISED WORLD

Lifelong learning is sometimes described by way of contrast with the “lifeboat” theory of learning – the notion that it is the job of educators to provide the student with a lifeboat containing all the knowledge and skills that the occupant will need to deal with life’s emergencies.

If this metaphor was ever appropriate, it is certainly no longer so. No doubt “launch” events such as graduation will continue to be celebrated, but whereas in the past a first degree might have been sufficient both to achieve entry and sustain performance in many career areas, it will increasingly be valued more if it is the kind of degree that generates an ongoing capacity for learning rather than one that merely signifies the absorption of a measured quantity of knowledge. For the corollary of the knowledge “explosion” is the increasing rate of obsolescence of knowledge, so that it will be the scholarly abilities to learn, to discover, to sift, to discard and to change direction, rather than the “quiz kid” ability to emulate a database, that will be sought after.

Much of the contemporary discussion of lifelong learning may be seen as a response to heightened uncertainty and turbulence in the labour market which has accompanied deregulation, marketisation and globalisation. Certain features of this changing scene are by now well-defined: the average employee’s expectation of shifts between employers and between industries has increased dramatically; the need to renew and rebuild one’s skill base to enable declining opportunities in one area to be offset by a response to expansion in another; the consequential need for the education sector to respond flexibly and quickly to changes in the labour market; and so on. But the full consequence of globalisation for the labour market and the education sector have yet to be adequately studied and absorbed into policy and practice.

The consequences of globalisation are often expressed in increasingly unpopular language of economic rationalism, but the message is more quickly conveyed by the graphic description recently given by Thomas Friedman of the *New York Times*:

Unfortunately, not everyone is equipped to run fast. There are a lot of turtles out there, desperately trying to avoid becoming roadkill. The turtles are all those people who got sucked into the Fast World when the walls came down, and for one reason or another now feel economically threatened... the jobs they have are being rapidly transformed, downsized, streamlined or made obsolete by globalisation.¹

Moreover governments cannot for the most part respond by deficit funding of bigger and better safety nets, because another constraint of the globalised world is the fiscal constraint generated through flexible

international currency and financial markets, now integrated by e-commerce and other forms of telecommunications.

Another factor generating increased demand for lifelong learning is the increased life expectancy accompanying better medical services and better nutritional standards. This effect is most conspicuously evident in the lengthening of retirement periods with related increased demand for further education as a complement to leisure and entertainment needs. This component of the demand for lifelong learning might be described as “long life learning”. The University of the Third Age (U3A) is one well-known response to this need. Many universities, including Griffith, now host chapters of U3A.

The importance of learning in a general sense is increasingly being recognised in government policy. In the context of promoting “The Learning Age” Prime Minister Blair in the UK has said “Education is the best economic policy we have”², and President Clinton says in the White House Home Page that “We are living in a world where what you earn is a function of what you can learn.”³ More specifically, lifelong learning has been the focus of an increasing number of international events:

- 1996 was the European Union Year of Lifelong Learning
- the OECD Education Committee held a high level conference on lifelong learning in January 1996
- the APEC Human Resource Development Working Group held a workshop on lifelong learning in 1997.

Australian policy-makers are also responding as, for example, in the recent paper *Reducing Unemployment in Queensland*, issued by the Queensland Government. After noting that in the 12 months ending February 1998, 40 percent of job movements in Australia involved shifts between firms in different industries and over one-third of job movements involved shifts between occupational groups, the paper goes on to acknowledge “The profound social and economic changes affecting the Queensland labour market”, and the “importance of continuous enhancement and realignment of people’s employability through formal education, jobs that provide ongoing development opportunities, lifelong learning and open interaction with the global community”.⁴

How should educators respond? Of course, many are already doing so. Griffith University has a specific commitment to lifelong learning in its Mission Statement and an increasing number of universities are articulating such a commitment. An increased focus on student-centred learning, and on the generic skills which generate a durable capacity to learn, also characterises much of the current increased attention to teaching and learning within universities. Again, Griffith University has had a long-standing record of commitment to and achievement in the development of generic learning skills.

It is already evident that much of the response to lifelong learning by universities will involve concepts

already familiar to us: continuing education, post-experience courses and training, recognition of prior (including informal) learning, flexible delivery, internet-based courses, and so on. While the award-based area is flourishing, some analysts believe that the market for lifelong learning is larger and is growing faster than the degree-granting sector.⁵

Whether this bold projection is realised or not, we can certainly expect major innovations on the supply side of the education market. Here I focus on two responses. First, we may expect to see some new developments emerging from a key characteristic of lifelong learning, namely the on-going need for contact of a client-provider nature between learners and professional educators. It is possible that we will see educators, by this avenue, achieve a new level of significance as advisers, counsellors and brokers to individuals, families and corporations. Perhaps it is some way off before we will hear people refer to their "educationist" in the same way that they refer to their lawyer, doctor or accountant, but the notion is not fanciful.

What would these advisers provide? They would extend the role of the school guidance officer into longer-term dimensions. They would recommend particular products for particular client needs, as financial planners now do.

They would facilitate introductions on behalf of their clients, whose career pathways they would closely monitor and document.

What sort of people would provide this new professional service? Existing employment agencies and search firms might develop these services to enhance their product range. Universities and other institutions could develop their career and employment services, in conjunction with their alumni associations, to provide an ongoing basis for assisting their graduates. Experienced executives from the human resource and other corporate specialisations might set up business in this area. And these possibilities might be complemented by, or even integrated with, initiatives from education product providers (publishers, media corporations, etc) eager to enhance their marketing networks.

The key feature of such a scenario, the continuous nature of the learning activity, will generate a requirement for professional and ethical standards to be defined and made operational, and perhaps the counselling/brokering activity itself will generate new professional courses which will provide a basis for credentialling practitioners.

A second major innovation on the supply side will be a massive reinforcement of existing trends towards flexible learning and resource-based delivery of education. The flexible learning agenda is increasingly well defined in the literature of higher education and in other sectors of education. A number of Australian universities, including Griffith, have made major investments in flexible learning methods, both for on-campus and off-campus students.

The features of flexible learning which are particularly relevant in a lifelong learning context are:

- Asynchronous (anywhere, anytime) delivery
- Innovative and intensive use of digital and internet-based technologies
- Efficient and convenient methods of course management (enrolment, payment, assessment, etc), again in many cases net-based
- Flexible and speedy methods for assessing previous learning and providing recognition with credit for formal and informal prior achievement.

There can be little doubt that the implementation of flexible learning in a lifelong learning context will accelerate two forces already evident in our universities. First, institutions will need to become more client-focussed and service-oriented since competition among education providers will be no less affected by globalisation than will competitive forces in other industries. Second, the nature of flexible delivery and lifelong learning will reinforce the pressures for deregulation of public sector providers and enhancement of opportunities for private sector providers, pressures which have been evident in government policies in higher education in Australia for at least a decade.

“The importance of learning in a general sense is increasingly being recognised in government policy.”

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THE UNIVERSITY AND LIFELONG LEARNING

Over the past decade 'life long' learning became 'life-long' learning, and is now 'lifelong' learning, surely an indication that the concept has become part of our everyday life, part of our educational expectations and indeed aspirations. In the new millennium we might just speak of learning, because everyone has accepted that we need to learn throughout our lives.

The OECD, national inquiries into education, the labour force and labour market, and political analysts all agree that the shape and functioning of our society and economy will be vastly different in the years to come. Age profiles of the population and the cultural diversity of societies will change; creation, dissemination and acquisition of knowledge will be organised and executed differently from now; work and leisure arrangements will change in form and status. A new knowledge society, a learning society is needed in which all citizens participate fully.

I would hope that in the new millennium people will not only accept that they need to learn throughout their lives but will also want to learn throughout their lives. We now all know people who happily accepted redundancy because they would rather not learn new ways of working, particularly new ways of using information technology.

This option will be closing soon. Technical skills, knowledge and understanding will need to be constantly updated. Fortunately, there are some areas where both natural aptitude and learning enrich both professional and private life: interpersonal skills and communication skills which will be ever more important.

How will we get there?

Universities in Australia, more so than in many other countries have for long taken some responsibility for continuing education, extension work, or extra mural education activities.

The University of Sydney agreed to establish a Department of Tutorial Classes and a 'joint committee' with the Workers Educational Association early in the century and collaborated until 1983 with the WEA. The WEA has been a very successful general education movement for 85 years, particularly in NSW and in South Australia, providing non-formal lifelong learning opportunities for adults. From 1999 on the University of New England (UNE) is offering pathways into its Faculty of Arts degree courses to successful students of certain WEA courses.

This is appropriate, as UNE was a university pioneer in adult education and still fosters learning in the community through a variety of activities.

UNE was also a pioneer in distance education or external studies, starting to teach in this mode from 1957 on. In 1999 we enrol over 13,000 external students and about 3,700 on campus students. Of these close to 5,000 are in their thirties, over 3,000 in their forties, 1,300 in their fifties and close to 400 students are 60 years or older. Truly, our students like those of most large distance education providers are lifelong learners.

I do not doubt that the universities will continue to play a major role in providing lifelong learning opportunities to our own communities and also internationally.

Australian universities have extensive articulation arrangements with TAFE institutions and private providers. They already offer tailor-made in-house award and non-award courses to corporations, government departments and other agencies. Our degree programs are increasingly flexible.

UNE's own vision statement is encapsulated in 'Open to change, open to challenges, open to our communities'. And this openness to our students, our learners, demands a great deal of flexibility: Flexibility in the types of awards offered, flexibility for students when, where and how they study, which in turn demands flexibility in our working arrangements for staff, in our administrative procedures, in our assessment and guidelines.

This flexibility which some universities will provide, which UNE will provide, is a key to changing the climate in which learning occurs. Children, youth, adults will want to learn because they have choices.

They can choose what they are interested in, they can choose what they need now, or they can prepare for a future career and life by choosing areas in which they might want to be involved professionally or personally.

They can choose to sit in lectures and tutorials with their fellow students at a University site, eg UNE students in Australia can interact with fellow students on our main campus in Armidale; or in a study centre in Tamworth, Taree, Brisbane, or Sydney; or in community centres throughout the country. Or they can have virtual meetings via the Internet.

They can choose to use the University's main library or download from the Internet, get books and articles on inter-library loan, or visit municipal, state or other university libraries.

They can choose to read, listen, experience. They can study in college, at work, at home, at the university, a study or community centre. They can learn from books, videos, audiotapes, CD-ROMs, and/or the Internet, and from people in person or via the other media.

They can choose to enrol in degree programs, in diplomas or certificates with the knowledge that they can use each as a building block for further study.

They can choose to enrol in private colleges, in work sponsored courses, in overseas and Australian universities and be sure that there will be articulation and accreditation.

They can choose to have work and life experience accredited through Recognition of Prior Learning.

We now know more about how adults learn than we ever have. We know the students' need for relevance, for flexibility, for opportunities to provide input into both course content and the process of learning.

We also know the students' needs for association with other learners and indeed with teachers.

And we are providing for this.

We have award and non-award courses; we also organise weekend schools, summer courses, study schools and short courses for a diverse group of clients, from the Country Women's Association to Corporate Directors, from gifted children to elderly people living in isolation, from those interested in archaeology to those interested in information technology.

Our offerings range from the highly practical, hands-on short course to the highly theoretical four year PhD program.

I am saying then, there is a place for universities in the provision and facilitation of lifelong learning.

Now that there is a market for education, now that education is regarded widely as an industry, there is fierce competition from virtual universities, corporate universities, private providers. They can respond quickly and cheaply to the demands of the corporate world as well as to those of groups of individuals. They are in the business of education and training, and they teach and train. They do not need fulltime tenured academics with PhDs and time and funds for research, an expensive research infrastructure, libraries, laboratories etc. But universities do, and they spend a significant proportion of their resources, both in staff time and other financial outlays on research.

This means that other organisations will, they must have a role in the provision of lifelong learning opportunities. I said the Universities can provide. The question is also – should they?

In view of our tradition, I believe yes, they should. Or some should, could, may. Some universities do not have the flexibility, some do not strive for it. And within the diversity of the Australian higher education system which we value, this is appropriate.

The challenge for Australia is, I believe, to ensure that all disadvantaged groups in our society will be able to access the choices outlined, because it is these groups that will need most the benefits of lifelong learning. People in rural and isolated areas, the elderly, and our Indigenous population, for example, will need to be included in the lifelong learning agenda. If they are not, then our society will have increasingly divisions, will suffer from a moral burden, a discrepancy between values and actions that will poison the civic mind.

Universities as not-for-profit organisations do have an access and equity agenda, have a social mission, and believe in lifelong learning as a value, unlike business providers of tertiary education.

What we need now is a concept, a government vision, a partnership between government, industry, educational institutions and other societal agencies to make lifelong learning happen for all.



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LLL: CAUSES AND CONCERNS

'Life-long Learning' (hereafter, LLL) is one of our turn-of-century buzzwords. It envisages a major shift in the relationship of education to life and work, in which 21st century people keep on learning in one way and another as they go through their careers and lives, rather than preparing for adult life and work with a single period of formal education, as has been the case conventionally up until now.

Like all buzzwords, LLL carries with it confusion, ambiguity and uncertainty. What does it really mean? Who is responsible for it? Who will pay for it? Who will regulate it? These questions will no doubt receive attention from others. My interest is in causes and accompaniments. So let's begin with what has produced the movement for LLL. There seem to be three principal engines of change, and they are of course related.

1. The demand for skills

The second world war was a war in which technology was critically important. Someone portrayed the first world war as 'the generals' war', and the second as 'the scientists' war'. The economic boom which followed the second world war allowed much wartime technology to be translated into consumer products and processes. That translation in turn caused a great demand for new skills, and the process has since become almost continuous: new products lead to further new products, and each innovation prompts the need for new skills, new knowledge and new training.

A half-century later Western societies have virtually no unskilled jobs available for their work-forces, and there is always an acute demand for certain types of skill. Today's deficit is in information technology; tomorrow's is likely to be in biotechnology. And the speed of change means that new skills and knowledge may only have a short half-life. We keep needing to acquire new skills in our daily lives, and our society needs new skills to support the extraordinarily sophisticated civilisation we inhabit.

2. The enormous growth in knowledge

The world of academic knowledge has increased some fifty times in scale since 1950. No doubt the same order of magnitude has occurred in other forms of knowledge too. There are now more than half a million academic journals in circulation. No library contains them all, and no library now can claim to be comprehensive.

What should we learn, what should teach, given the extraordinary increase in matters that could be learned and taught? The older style was cumulative, or vertical:

we learned a 'subject' from its robust bases to its less certain heights. If we did that long enough we became an expert, wrote a PhD thesis, and taught about it at university, or we filed patents for a new product or process.

But the 'subjects' of 1950 are now empires, with thousands of journals and dozens of adjectival sub-fields. What does a historian or a physicist need to know today? Life is not long enough, despite the advances in medical knowledge, to acquire total competence across a whole discipline. Not only that, there are many other branches of knowledge that one needs to know in order to be really good at any discipline. It is commonly said that the places of intellectual excitement are where the bodies of knowledge intersect. To be there usually requires competence in several areas, not just one.

There used to be half a dozen 'learned professions'. The phrase now applies to any occupation, the entry to which is essentially governed by formal preparation at university. Like medicine and law, the new professions make reference to an ever-expanding body of knowledge, use familiar research paradigms, have governing bodies which use various forms of accreditation, and publish journals to disseminate new knowledge. My own University prepares people for entry to and advancement in 28 professions. It is very likely to be the case that in twenty years' time we will be teaching students seeking entry to professions which do not presently exist.

Much professional knowledge also has a short half-life, and professions are now themselves involved in 'in-service' education, and require practitioners to maintain their knowledge base by taking part in courses of one kind or another. Good professionals are already engaged in 'life-long learning'.

3. The discovery that human beings are all intelligent

In 1950 the prevailing model of intelligence (based on so-called 'intelligence tests') had only 2 percent being really intelligent. Unsurprisingly, nearly all of them seemed to come from the educated middle class. The great demand for skills and the retention rates in school and university have made clear that this was not an accurate account of the distribution of intelligence. Today's university enrolments approach 700,000; those of 1950 were around 30,000. Then, as now, some teachers complained that we were 'scraping the bottom of the barrel'.

The work of Howard Gardner and others suggests that all human beings are intelligent enough to succeed in pretty well anything. What prevents them, apart from location, the laws of supply and demand, and so on, are the differing degrees of encouragement, motivation and preparation we all enjoy. Gardner has proposed 8 1/2 different 'intelligences', and that as children we present one or more of them early. Our parents and teachers then mark us out early as 'musical', 'good at numbers', 'sensitive', 'good at words' and so on. He argues further, and I think that this is even more powerful, that all of us, given appropriate amounts of training and the requisite encouragement and motivation, could be good at employing those intelligences which we do not present early.

That Gardner is at least on the right track can be inferred by the astonishing proliferation of courses that

purport to train anyone to do anything, by the huge enrolments in formal education, and by the abundant stories of success of people who have mastered skills and learning despite poor or almost non-existent schooling. Indeed, were Gardner not right, we could never have reached where we are today.

4. A peal of trumpets, and an anxiety or two

I am in favour of what has occurred. Indeed, it would be pointless to be against it! The capacity of all human beings to receive as much education as they want, and to gain in proficiency and self-confidence thereby, seems to me to be a necessary background to a successful 21st century, socially, democratically and economically. LLL is already part of our lives, and will become much more obvious in the next decade.

If we started with a general degree after high school, before long we will need a specialist qualification of some kind. The movement can and will go the other way, too. If we want to transfer from one profession to another, we will most likely do that by another period of specialist learning. We will build up 'knowledge portfolios' to accompany our 'career portfolios'.

In mid-life we will start to build up our knowledge of areas of life that are pressingly important to our development as human beings – art, music, history, spirituality, self-awareness, and so on. In later life, perhaps through U3A (the University of the Third Age) or its equivalents, we will pursue other learning possibilities: we will have become habituated to do so. All of this seems to me welcome, and to be applauded.

But I have some worries, nonetheless. It may be an old-fashioned attitude of my own, but I have found it possible to explore the utilities offered by other disciplinary perspectives than my own because I have a decently solid disciplinary knowledge base myself. It worries me that 21st century Australia is likely to have a lot of people who may know a lot, but who don't know a lot about anything in particular. Perhaps I am over-anxious, but I write at the time of the sending of Australian troops to East Timor, and am conscious, for example, that the Australian populace seems to have no understanding of the historical dimensions of the conflict there, and that Australian and Indonesian perspectives hardly meet.

A second anxiety flows from the first. Our last two hundred years has been built on the principle of division of labour. In terms of knowledge it is as though there is only so much we can know and use, and we are all becoming more and more specialised. Has it gone too far? I feel an almost daily need to extol the virtues of a generalist education and generalist approaches to problems.

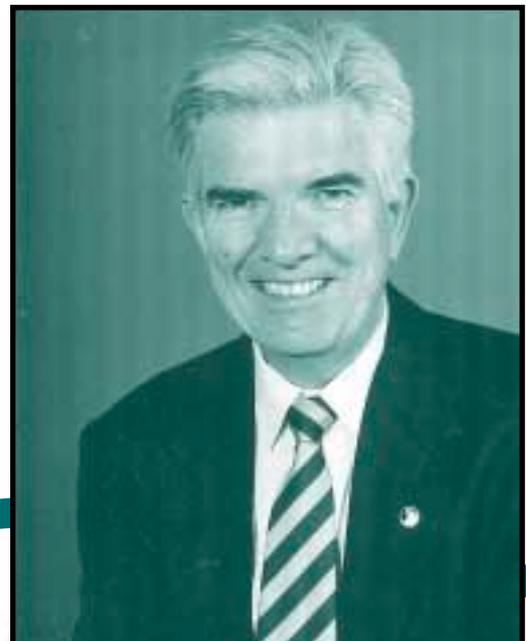
On the same tack, some of our energy and learning will need to go into citizenship: we have given the labour of politics to politicians, and while they have done a reasonably good job over the last century we are going to have to learn to take political questions more seriously as individuals. Fortunately, both the capacity and the knowledge are available.

A third anxiety follows from Gardner's work. If all humans are intelligent enough to do almost anything, and what points to success are encouragement, motivation and preparation, then questions of access and equity – for anyone who is concerned about the underpinnings of a good, democratic society – return with speed. I worry that these issues are less of concern today, yet they seem to me to be most important, and that LLL needs to be discussed with some concerns in mind.

It will follow that I do not see LLL as some kind of panacea for all society's ills. It is necessary, important and potentially most virtuous. But like all good things, it needs to be thought about and handled with care and sensitivity.

Oddly enough, LLL has always been supported as a means of self-fulfilment by the adult education sector and the middle class. While I support and work for its translation to a mass scale, so that our education and training systems can bring its benefits to all Australians, part of me wants to insist that the self-fulfilment part is going to be increasingly important in what looks like humanity's most challenging century.

And we need to realise that in funding terms there will continue to be a public responsibility for LLL, no less than a private responsibility. That bit looks quite difficult at the moment.



Professor

DON AITKIN

AO

*Vice-Chancellor
University of Canberra*

LONG LIVE LIFELONG LEARNING

As the old cliché goes “we live and learn” – and of course we do! In a very real sense humans continue learning from the day they are born until the day they die. So, the notion of “lifelong learning” is by no means a newly discovered phenomenon. Of course the common use of the term actually refers to more formal approaches to learning than those which occur as part of our daily interactions with the world. But even in this respect “lifelong learning” has a long history.

Universities have always sought to equip their graduates with a love of learning and the requisite skills and attitudes to facilitate continuing education throughout life – an ongoing process of intellectual and cultural maturation. Additionally some universities have a proud history of providing a smorgasbord of stimulating continuing education programs designed to meet the interests and whet the intellectual appetites of broad sections of the community. But many universities have focussed more and more in the past decade on the professional and vocational development needs of particular occupations. Witness the rise and rise of the MBA and the array of specialist postgraduate diplomas. As Baron Rix, Chancellor of the University of East London, recently observed, a much greater profile is now being given to programs designed specifically to cater for the continuing education needs of people who want or need to return to some kind of formal learning. And a major motivator for this is the need to remain skilled in a rapidly changing work environment.

It is the growing concern with the continuing education needs of a transforming economy that has attracted particular interest in recent years and led to ‘lifelong learning’ becoming something of a buzzword. Major national reviews of higher education in Australia, New Zealand and the United Kingdom have all focussed on the necessity to invest nationally in lifelong learning approaches to ensure economic development and prosperity. Universities and other higher education institutions around the world are responding in various ways to these growing demands. Many are linking the demands for lifelong learning opportunities to the new capabilities provided by information and telecommunication technologies. As well as gaining access to information via the Internet, the technology

can link the learner interactively with other learners at any time, anywhere in the world. This provides a myriad of opportunities for the person who hitherto has been unable to attend more conventional campus-based classes.

My university is facilitating lifelong learning approaches and capabilities by providing students with a range of tools to assist them in learning how to learn. For example, we have self-managed print materials available for students that are used in combination with interactive web-based programs; the intention being to enable students to learn in their own time. They are also provided with individual assistance as needed to master these tools. These arrangements allow the full time student greater flexibility, but they also provide new opportunities for continuing education for those in the work force and for those otherwise prevented from attending classes on campus.

Employers are also playing a major role in the growing demand for lifelong learning opportunities. More and more organisations, from both public and private sectors, are wanting staff development programs which cater to the professional education needs and interests of their employees, but based on the strategic development needs of the organisation. Witness the proliferation of so-called ‘corporate universities’. These creations are not, of course, universities in the traditional sense. They generally focus on quite narrow areas of professional development, which is understandable given their purpose. But are they necessary and inevitable developments? Those who have created them say yes, because they argue that they were consistently unsuccessful in getting conventional universities to meet their needs. They complain that too often conventional universities are not responsive, empathetic or even up to date with contemporary practice.

At UTS we have sought to respond to employer needs and employee (or student) needs by considering how best to link the two distinctive environments of “work” and “higher education” in ways that benefit the student (employee) and the employer, but in ways consistent with the mission of the university. We describe this particular approach to lifelong learning in a professional context as workbased learning. It extends the notion of partnerships and the focus on work by recognising the fundamental importance of situated learning in the professional development of individuals and, most importantly, recognising that valuable learning does in fact take place at work. Incidentally, the recognition of this fact is in considerable measure due to the work of Alan Tough in the 1960’s, whose research also showed that upwards of 70% of the significant learning in the workplace occurs informally through interactions with workmates.

The design of workbased learning involves a three-way contractual partnership between the organisation, the learner and the university.

This learning partnership shapes the detail and delivery of each individual program. Each program is customised to suit the learning needs of both the organisation and the employee, while at the same time meeting the academic requirements of the university. Each program is designed to be undertaken at the workplace or in very large measure at the workplace.

At present the workbased learning programs which UTS has in place are at the graduate level. Each unit or component completed has a credit point value and students can, if they wish, accumulate points towards a graduate qualification. The qualification requirements allow for the differences in pattern and structure that such individually tailored programs require. The university's private arm, Insearch Ltd, is complementing the graduate level work with sub-degree level workbased learning programs for students/employees who are seeking professional education at this level.

David Blunkett, Secretary of State for Education and Employment in the United Kingdom, commented recently that he was trying to encourage universities to bridge the gap with the world of work. He is urging them to move to a position where every student is expected to take a minimum period of work experience within undergraduate courses. Working in partnership with employers is essential for universities, he believes, and he sees no conflict with the traditional role of developing the potential of the individual. For UTS and universities like it, this is not a novel idea. Our co-operative education programs have been built on such partnerships, but at the undergraduate level. The workbased learning initiatives are extending the partnerships to meet the lifelong learning needs of the workforce.

I have deliberately concentrated on lifelong learning as it relates to meeting the needs of the workplace. I should therefore conclude by emphasising that in my view universities and other higher education institutions have a duty to retain their role of satisfying the lifelong education needs of individuals who seek to learn for self-improvement and out of a sheer love of learning. This remains a fundamental way in which universities contribute to the well being and vitality of a civil society.



Professor

**ANTHONY
BLAKE**

Vice-Chancellor
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LIFELONG LEARNING

Over the past decade or so there have been dramatic changes in the nature of work. The pace of change remains high, and the impacts upon education and training are probably still at an early stage. In the past there was considerable stability in both the work place and institutions of higher learning but this is certainly not the case now.

The most significant changes have been in response to technological change, globalisation and the knowledge explosion. These have resulted in a change in the balance between unskilled and skilled demand, with a large increase in the overall level of skills required in the work place and a much greater demand for the constant upgrading of skills. The need for this upgrading is partly due to rapid change in knowledge and technology, but is also linked to a greater need for different skills and knowledge as employees move up the chain of responsibility and seniority.

Other changes in the work place include a shift towards more part-time and casual work, a decrease in the roles of unions and a greater emphasis on local or individual contracts, and an increasing emphasis on entrepreneurial and technological initiatives in small business. Interestingly the part played by professional associations has increased considerably, probably because, in an increasingly complex system, their roles in quality assurance and the definition of professional standards have become more necessary.

All of this change in the work place is having a profound impact upon both higher education and vocational training.

Distance Education

Australia has long been an international leader in distance education. In view of the vast distances involved, the "tyranny of distance", this leadership is not surprising and there can be no doubt that distance education has made an outstanding contribution to access to learning opportunities in rural and remote Australia.

However distance education offers access that is independent of time, as well as position. Linked no doubt to the changes in the workplace, the independence of time has now become a dominant factor. For example the majority of Deakin's 12,000 external university students are studying part-time and approximately 40% of these are based in Melbourne or Sydney. Distance education has become a major contributor to the needs of the work place and to lifelong learning.

Developments in communication technologies have had a large impact on both distance education and on-campus education. A wide range of media, including interactive on-line systems, are now being used in external studies and these are increasingly also being employed for students studying on campuses. This extension of the independence of time and place to on-campus studies has led to the term "flexible learning" to describe an approach which has greatly blurred the traditional distinctions between on and off-campus learning.

Corporate Education

Despite a large increase in participation in university studies over the past decade, the unemployment rates for university graduates remain below half of those for non-graduates, reflecting the increasing demand for a highly skilled work force. The need for higher education, and for a constant upgrading of knowledge and skills, is also reflected in a growing number of part-time, mature age students. These students are taking advantage of the convenience of flexible learning to enable them to retain a place or gain a more rewarding place in the work force.

Another manifestation of the growing need for lifelong learning is the huge scale of development of corporate universities in the United States. These institutions, which are not universities in the Australian context, are operated by large corporations to serve the work-related educational needs of their employees.

I was recently privileged to spend several days visiting two of the largest corporate universities in the United States. Each had an annual budget in excess of \$US100m and each company indicated a belief that the establishment of the corporate university had been a critical factor in rescuing the firm following an earlier severe down turn. The importance of the university to the firm was indicated by the appointment of the CEO of the university as a Vice-President of the firm. The corporate universities, which I visited, had both developed very comprehensive ranges of course material and much of this was communicated to the students through various modern media that afforded them considerable flexibility in their studies. The courses were of very short duration, typically a few hours to several days, and almost all were directed to the specific needs of the employer. Apart from certificates for completion, no formal course awards were made.

Deakin Australia

Deakin Australia is the commercial educational arm of Deakin University. Students enrol in courses ranging from TAFE certificates to university masters degrees through contracts between an employer, or a professional association, and Deakin Australia.

In some ways Deakin Australia operates as a hybrid between a corporate US university and a conventional Australian university. Standards, particularly curricula and assessment, are the responsibility of the University but the curricula is developed to meet the needs of each client firm or professional association. Most of the courses lead

to formal awards of the University and these awards therefore enjoy national and international recognition. In many cases there is a series of articulated courses so that each award results in eligibility for entry to a higher award course. The recently announced Coles Institute operates in a similar way to the contracts with other firms except that the Institute involves an all embracing role for Deakin Australia in the education and training of the employees.

By reaching into the work place, and by enabling the students to move up through a sequence of award courses, Deakin Australia is enabling many persons to gain access to higher education. It is also interesting to note the recent policy of Coles to significantly decasualise their work force.

Many of Australia's leading companies are major clients of Deakin Australia and the present enrolment in courses administered by Deakin Australia exceeds 45,000.

As is often the case with the corporate universities in the United States, the curricula developed for the corporate clients of Deakin Australia are also generally closely related to the strategic planning of the firm. In some cases firms have developed a new corporate plan alongside the development of their Deakin Australia courses.

Professional associations, which are partners of Deakin Australia, include the Association of Professional Engineers, Scientists and Managers, Australia, with Australasia's largest MBA enrolment, the Australian Society of Certified Practising Accountants and the Financial Planning Association of Australia. The courses operated with these associations are also being offered in many overseas locations.

Future Challenges

There are many daunting challenges and exciting opportunities in the future provision of flexible learning and corporate education.

Probably the greatest challenges stem from globalisation and the related rapid development of on-line technologies. In the future we must compete with the best in the world or be relegated to second rate status. This will require us to have access to the very best relevant technologies and the high cost of these will certainly require us to form strong national and international partnerships. Likewise the high costs of a wide range of curricula material, and of quality course design facilities, will also need to be shared across consortia instead of being covered in a single university.

In the past universities largely held monopolies in knowledge and in the accreditation of educational courses based upon this knowledge. In the future, as must always be the case when monopolies crumble, survival will be based upon competitive quality.

*Professor Geoff Wilson AM,
Vice-Chancellor and
President, Deakin University*



“IT WAS THE BEST OF TIMES, IT WAS THE WORST OF TIMES”

– CAN OUR UNIVERSITIES SURVIVE INTO THE NEXT MILLENNIUM?

*An edited version of an Address by
Professor Peter Swannell, Vice-Chancellor,
University of Southern Queensland to
the American Chamber of Commerce,
Sheraton Hotel Brisbane, 17 February 1999.*

Living in Toowoomba at a height of 700 metres, much of what one says can go over the heads of people at sea level. Nevertheless, I want to talk passionately about things, which, I believe, are very important.

Things as they are

It is all very simple! It is the *most exciting, the most important, most challenging* and potentially the most *disastrous* time in the history of tertiary education.

These are “*change*” times. Unless Australia wakes up, it will lose the greatest opportunity to establish itself, once and for all, as a world leader in providing opportunities for access to tertiary education.

This country is the greatest country in the world when it puts its mind to it! It must recognise that, by coincidence of geography, intelligence, hard work, and a favourable social climate, it is able to influence people around the world in education matters. More than almost any other country, Australia can be influential about matters of education for people, wherever they may live and work, who desire and deserve the right to be provided with the opportunity for *structured* education.

None of that is very new. We have been saying such things for years. Everybody talks about “life-long learning”. What I say is that Australian society must realise, once and for all, that there is a huge pool of intellectually able people here and overseas, with as diverse backgrounds as you can imagine, *who will die of frustration if they are not given the opportunity for academic fulfillment.*

Intelligence is an incurable disease. You could easily die of frustration, and the best thing you can hope for is to be given a palliative to help you live with the frustration of being intelligent. I happen to come from a non-intellectual background and I know a great deal about what it’s like to risk dying of frustration unless you get educated...

Matching wish lists with reality

You cannot achieve “philosophically desirable” outcomes unless there are software and hardware technologies to make them possible. The only certain thing about a new technology, or a new paradigm shift, is that we will under-estimate its significance and effect!

The “new material” analogy is instructive. When engineers discover a new material, the first reaction of the community at large is “*I don’t want it. I am managing perfectly alright, thank you*”.

Then, some people grudgingly say, “*Well, if you’re going to insist, that we use a new material then we will... but we’ll use it in exactly the same way as before*”! In the case of a new material, what then happens is that people design iron bridges that look like timber, plastic sandals that look like leather... And the solutions are worse than they ever were.

Then, hopefully, magic thing happens. Some people say, “*Alright, not only will I use the new material, I will also alter my whole way of doing things to maximise success*”. Then, amazing things happen; things actually get better! But, until you make that change of attitude and culture, what emerges is worse than any former outcome.

The Change

Perhaps for the first time, in the world of tertiary education, two events of a grand and great nature and one event of a disastrous nature have coincided.

The first grand and great thing is the realisation, in Australia and around the world, that part of the social fabric of a highly developed country is the provision of opportunities to people, irrespective of their colour, creed, economic advantage or disadvantage, to maximise their chance of “living with intelligence”.

The second thing that has happened is not actually very new... but it’s the first time we can do something about it. Until now we could *talk* about life-long learning. However what that really implied was that, if you wanted to be educated, unfrustrated, you must be in a *particular* place, at a *particular* time, in front of a *particular* person. Anybody who has worked in company training, as I have, or in universities, knows that this is often impossibly difficult without total disruption to social and business affairs.

Now, we have the mechanism, the technology, to be able to respond to the need as well as talk about it... So what is that technology? And what is the disastrous event?

Internet Education

Our new technology is the Internet. It will change our attitudes, and will change, inevitably, the way we educate people. We can spend a great deal of time discussing whether this is good or bad. It is probably more important that we accept the inevitable and get on with finding a way to maximise the value of it.

The disastrous thing that has happened is that, just at a time when we have enormous potential to do things, we have a Federal fiscal and policy framework that appears to regard expenditure on education as a cost rather than as an investment.

The “engineering” response is that, whilst we must continue to object, we cannot merely sit back and wait for Government to fund the changing needs. What we *can* reasonably expect is that Government will be a cooperative contributing partner, an endorser, a liberator, and a motivator. Unfortunately, the actuality is that universities in Australia, with some notable

exceptions of which my university is one, are finding themselves unable to resource the paradigm shift that is occurring. And USQ can only do it by being quite radical in its approach.

The sources of expertise

Before being very specific, I emphasise that, in Australia, we have great institutions, which, for example, conduct fine research. I am a committed supporter of great universities. I spent 18 years at the University of Queensland, which I regard as a great university.

Now, although you should go to those great universities to get information about some leading/bleeding edge things, you *don't* go to the same people to get the skills and data about flexibility, about open access, about meeting the needs of a society that has changed aspirations about education.

We should look at these data with exactly the same rigor as with research data. You will then notice that some places know more about these new things than others, by virtue of experience and intellectual investment themselves. The University of Southern Queensland (USQ) is one such place. Therefore, if we are to go forward sensibly, we should value, even more than ever before, the great institutions, the traditional institutions. But we should value equally, for their diversity and different contribution, those places which have, through experience and years of planning, come to the forefront of open access, with their ability to deliver *what* people want, *where* people want it, *when* they want it. *Delivering to people in their style, in their place, in their time.*

More than a Tale of Two Cities

I am absolutely certain that we are in the *best of times*. But we are also in the *worst of times* if we do not grab the initiative, in terms of brains and resource, to maximise and capitalise upon Australia's conquest of the tyranny of distance.

The only thing we can do is *get on with it*, in the certainty that the world has changed and there is a mass audience that demands high quality education, no worse and no better than traditional education

What USQ says is that, in tomorrow's world of massive demand for access to structured education, you cannot do it with the same structure and the same organisational actions as in the past.

Commercial Initiative

How do you service this new audience? You have to do it commercially; and when you talk in a university about being commercial it's a very dangerous thing to do!

Universities is not essentially commercial entities, and any university that believes it should be commercial, and *merely happen* to sell education, should be scrubbed off the book. However, if you have a "product" of enormous value called "quality tertiary education", and you can't afford to do it from the public purse, then you had better "get commercial" about the whole delivery structure so that you can in fact resource the core business of the university.

"NextEd Ltd" Established

USQ set up a wholly owned company called Indelta Pty Ltd for the purpose of investing in an international company created by ourselves and others of like mind, called NextEd Ltd, established in Hong Kong and

operationally based in Toowoomba. NextEd Ltd is supported by a range of private investors of the most high quality in Hong Kong and Australia, and with the University of Southern Queensland, through Indelta Pty Ltd, having just over 20% share holding.

"NextEd", firstly, recognises the significance of effective delivery. You cannot, per se, deliver quality distance education via the Internet. If you try, Murphy's Law operates shortly before the student becomes motivated! You have to design a *total system*, that provides a student with 24 hours a day, 7 days a week access, and very fast download times. You have to have a cradle to grave online service with personalised online support available from enrolment through to completion. You have to go beyond providing mere access to unit materials and provide an integrated program leading to accredited Awards if such is the wish of the learner.

Student Benefits

At USQ we have a strong belief that we have faced these facts. By providing, through NextEd Ltd, a network of mirror sites around the capitals of Australia and Asia and into North America, we can deliver satisfying Internet-based palliatives for the frustration of being intelligent, to unlimited numbers of people, with a 24 hour day, 7 days a week service. *USQOnline*, the University's internet presence for the delivery of Award programs is one university's response to the massive changes that have occurred.

The little challenge facing us is the provision of ancillary support that makes a learner feel wanted and needed. How, to use a terrible American expression, can you replace "*the sage on the stage with a guide on the side*"? How can you take away the single, often rather elderly, source of information and concern, and replace that with "infinite content", just waiting to be structured and supported? This is what challenges us organisationally. This is what we're busily working on.

Internet for Flexible Lifestyle, Choice and Study

By way of conclusion, I offer you the following personal view.

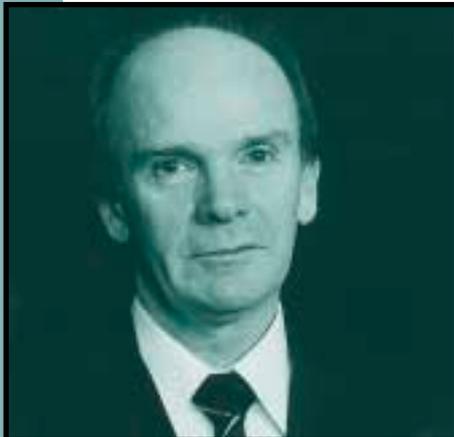
Unlike what may be found in any Report, or what may be heard on some Australian campuses, *there is not the slightest chance that traditional university education, face to face teaching and superb research can or should be replaced or significantly modified.*

There is not the slightest chance that "traditional", paper-based, multi-media distance education, as, for example, participated in by some 14,000 USQ students, will be out-moded in the foreseeable future.

The *option*, Internet delivery, is a third and *equally valuable quality option for people who cannot study in any other way or who choose, by lifestyle, to do it that way.*

This is very exciting! The leaders in this kind of education will not be the "Greats of the Past" from other areas. What the "Greats of the Past" will realise sooner or later is that the emergence of *flexible learning*, gives them a chance to continue doing their own things and being even greater than they currently are. It is a way of the future for *some* institutions. I commend it to you. It has enormous implications for professional accreditation, not least in the accounting, engineering and education professions. Employers will be faced with a whole new clientele of unconventionally educated people...

LIFELONG LEARNING AND LEARNING FOR LIFE IN MULTICULTURAL AUSTRALIA



Professor

**JARLATH
RONAYNE**

Vice-Chancellor,
Victoria University

*'Learning for life',
the title of the West
Committee's Review
of Higher Education
Financing and Policy,
is not to be confused
with 'Lifelong
learning'.*

The latter might be the prevailing leit motif of Australian Higher Education institutions; but it is the former which continues to provide the more substantial philosophical underpinning and *raison d'être* for the sector.

Lifelong learning is more typically associated with being prepared for paid employment. Learning for life, in the words of the West Committee, incorporates the "artistic, spiritual and cultural values that [students] will need to cultivate for a full and happy life." Ideally, the two concepts should be interchangeable – a full and happy life generally assumes paid employment – and perhaps Higher Education institutions need to do more to bring them together as we enter the new millennium.

As in other parts of the world, the Australian Higher Education system is undergoing rapid change as a result of the impact of the joint forces of massification and globalisation and the need to respond to increasingly diverse student populations. As one of the most culturally diverse countries in the world, Australia has additional challenges in the development of a tertiary sector that is responsive to the needs of its population, and at the same time is internationally competitive. For institutions like Victoria University, with more culturally and socially diverse student profiles than the Australian average, the demands are even more pressing – especially in the context of shrinking resources for the tertiary sector.

For Higher Education institutions, social and cultural diversity has posed the challenge of adopting appropriate inclusive approaches in response to the legitimate educational needs and aspirations of the diverse 'communities' that now make up Australian society, and their desire to participate in 'nation-building' processes. Indeed, universities, and education in general, have come to play a truly critical role in the complex social processes aiming to develop an open, democratic and forward-looking society which is equitable, productive, and socially and culturally diverse.

For Victoria University, the experience of being located in one of the most culturally diverse regions in Melbourne has been crucial in shaping our internal priorities, policies and approaches to the provision of educational programs. One aspect of this 'shaping' has been the articulation or closer inter-linking of the TAFE and the Higher Education sectors and the blurring of distinctions between teaching, research and community service as separate and discrete categories. This is reflected in the increasing collaboration between the University and various sectors of the community in all three of these 'core activity' areas.

An early and very successful example of this collaboration is Victoria University's partnership with Melbourne's Maltese community – with public lectures and seminars drawing on visiting Maltese scholars and public figures, community use of University facilities for such events as the annual Manoel de Vilhena Awards, provision of scholarships, a close liaison with local schools and community organisations, encouragement of post-graduate study, and University publication of books, pamphlets and CDs relevant to the Maltese community. All of these initiatives have been complemented by an active staff and student Exchange Agreement with the University of Malta, built on and at the same time extending the firm foundation established with our local Maltese-background community.

This example of partnership has become fundamental to the way in which Victoria University defines itself, with our emerging links with the various ethnic communities in our region influencing our global exchange links. Agreements we have negotiated with universities in Greece, Albania and Macedonia, for example, reflect the composition of the region in which we are located, and should be viewed as a natural extension of the University's longstanding involvement

in the transplanted ethnic communities from which we draw so many of our students and whose interests we are committed to serve. This international orientation creates a further sense of location for the diverse peoples of the western region, and at the same time helps to promote multiculturalism as the fundamental underpinning of local citizenship.

These outcomes complement the University's Personalised Access and Study Policy, which, in addition to working with individual students at point of entry, also tailors alternative-entry processes and curricula in targeted subjects and courses to meet the needs of specific communities in the region.

For example, extensive consultation with the region's recently-arrived communities from the Horn of Africa resulted in the design and delivery of culturally-sensitive curricula in a range of courses from the University's two sectors provided specifically for these communities. Negotiations between the communities on one hand and the teaching staff on the other resulted in some course components being taught in one of the mother tongues (in this case Amharic), English language support integrated at all levels, and content areas re-contextualised to take account of African cultural mores, beliefs and practices. Components of the course were also taught, where possible, by leaders from the communities. Existing curriculum was thus reworked in consultation with, and partially team-taught by, community leaders. The partnership between Horn of African communities and the University has resulted, among other outcomes, in the establishment of a University - African Community Advisory Committee. This is used as a forum to discuss and negotiate the education, training and employment needs of the African communities, and has been extended to include other partners, including Federal, State and local government departments.

To further embed these initiatives in the organisation, we have established an over-arching mechanism to serve as a 'meeting place' between the University and the various community organisations in the spirit of partnership and cooperation. The University-Community Partnership Advisory Committee (UCPAC), formally launched in May by the Australian Minister for Immigration and Multicultural Affairs, advises and works with the University in developing inclusive responses to the various needs of our culturally diverse communities.

An example of the partnership in action at the sub-degree level is the agreement entered into between the African communities, the University, the Electrical Trade Union and a Group Training Company employing apprentices. The University and the African communities collaborate to provide a pre-apprenticeship program for African young people, while the Group Training Company and the Electrical Trade Union guarantee to provide students with apprenticeships upon successful completion of the program. In the Higher Education Division, refugees from the Horn of Africa have taken advantage of the University's Recognition of Prior Learning provisions to access a range of courses in several disciplines. Targeted bridging programs have helped articulate such students into programs such as the Community Development degree course, where students from refugee backgrounds are able to use their experience of working in refugee camps in the course.

The immediate dilemma for the 'group' strategy is in finding ways to meet the demand that the success with

the African communities has generated in other community groups – such as Kurdish, Turkish and Indian. In addition to needing cultural support workers for each group, there is the need to continue to tailor appropriate content and teaching methods for each community effectively and efficiently according to demand. As such successes mobilise communities, the University will be increasingly involved – in partnership with communities – in strategic planning for those communities' educational provision through such bodies as the University - African Community Advisory Committee. Such enterprises are highly desirable, but require careful planning and co-ordination of resources. The level of resources required to develop such partnerships and provide communities with the support they need are not included in the government funding provided to institutions.

The dilemma for the 'pathways' strategy is no less complex. It implies review and evaluation of accredited courses on a regular basis so that adjustments to content and teaching methods can be made in the light of the changing needs of students. It implies the adoption of a student-centred approach to the development of curriculum, both content and delivery. Although the personalised access policy endorsed principles for learning and teaching which are, in effect, a commitment to a student-centred learning approach at the institutional level, more is required to monitor and evaluate learning programs according to how well they meet the learning needs of students. The co-ordination of effort across a number of areas of the University will be crucial in the maintenance and continuing development of pathways.

Continuing development is crucial, not least because the initiatives at Victoria University mirror broader socio-economic shifts within Australian business and industry. As Bertone, Esposito and Turner have recently argued¹, the bipartisan incorporation over the past decade of the concept of 'productive diversity' – valuing and capitalising on Australia's multicultural labour skills – reflects the need for a highly skilled and flexible workforce able to compete in an increasingly internationally oriented market. It also reflects the aspiration of many Australians for a shared culture based on diversity, acceptance and dialogue. Culturally inclusive teaching practices – like culturally inclusive work practices – are an important element in this broader development.

Culturally inclusive teaching has profound implications for the curriculum. It is not a matter of bringing students from diverse backgrounds and asking them to shed their previous culture in favour of a new one, based on Anglo-Celtic traditions. Rather, it involves drawing on an understanding of the way in which cultural diversity is itself constitutive of the social relations within the teaching environment. Learning, if it is to be effective, must value and draw on the culture, values and traditions students bring with them. Different cultures cannot simply be 'added' to the 'mainstream' curriculum. Rather, the curriculum needs to draw broadly on the experiences of *all* students, if it is to help them meet their individual learning needs and equip them to assume their place as full citizens – with paid employment and full and happy lives – in the new millennium.

¹ Santina Bertone, Alexis Esposito and Rodney Turner, *Diversity and Dollars: Productive Diversity in Australian Business and Industry*, Workplace Studies Centre, Victoria University, CEDA Information Paper No 58, December 1998.



LIFE-LONG LEARNING

PROFESSOR DON MCNICOL *Vice-Chancellor, University of Tasmania*

Higher education's discovery of life-long learning raises a few questions. How did people learn before we discovered it? Did they really get all the knowledge they needed before their mid-twenties? If they didn't, what learning resources did they tap once they left formal university study behind them? Now that universities see themselves as a resource for life-long learning, how good are they going to be at delivering the goods?

Because life-long learning has been going on for a long time outside the formal university environment, higher education institutions need to think carefully about the models they will use for delivery of this service. The undergraduate education of 18-year old school leavers is probably a poor model, but it is still the dominant one in many degree programs where half of the enrolments consist of mature-aged students who probably qualify for the "life-long learning" tag.

At the end of the century the delivery of most university education is still characterised by attendance at classes fixed in time and place, and constrained by formal curricula and requirements for the award of a degree. I happen to believe that universities which exist in particular places where real people meet one another on a daily basis, and which set explicit and high standards for the award of their qualifications, are a good thing, but not all learning can, or ever was done in this context.

The matured-aged life-long learning group is a heterogeneous one. Some of its members are career and qualification oriented. Either they missed (or passed up) an earlier opportunity to gain a degree, or they are in the process of changing or advancing their careers, and they need new skills and a formal qualification. Sometimes finance is a barrier to obtaining their objectives, but time is often the greater problem. Juggling the competing demands of study, work, and family responsibilities is made more difficult if the completion of a course requires attendance at formal time-tabled classes.

Although these students frequently turn to distance educators, many of them would still prefer to attend a local university where there is still some opportunity for face-to-face participation with fellow students and teaching staff. What they need is an environment where attendance on campus is not always needed to access course materials or to communicate with fellow students and members of the teaching staff.

Perhaps the entertainment industry offers a useful model for addressing the needs of these students. A year or so ago I spent some time with Japanese and Korean colleagues who work on multi-media in higher education. They were interested in the way in which the entertainment industry is becoming married to the communications system. Multi-media-music on demand, video on demand, or, heaven forbid, Karaoke on demand, have set new expectations for the quality

and availability of entertainment services, so what would be the consequences of applying its technologies and approaches to education? Note that in this world you can still go out to a movie, or make a date to meet your friends in a Karaoke bar, but on-demand systems offer you a more flexible range of choices.

Other members of the life-long learning group are not seeking a formal qualification. They are established in careers, and are looking to upgrade and expand their skills. Many enrol in TAFE courses, but they can be found in universities as well. For example, working artists take individual units of visual arts programs but for them a formal qualification adds no value to the knowledge they acquire from a course, so they never complete the program. This isn't a problem is it? Well, not for the student who is getting exactly the service he or she wants, but it could be for the providing university where course completions are one of the indicators being used by government funders to assess teaching efficiency. Qualifications don't always matter; knowledge and skills always do. Successful provision of life-long learning requires that the former do not become a barrier to the latter.

Life is full of surprises, so not all one's life-long learning can be planned in advance. When the closure of the pulp section of Burnie Paper Mill was announced, a diverse group of employees, many of whom had been with the company for many years, found themselves about to be out of work, and ill-prepared to cope with the future. Rapid remedial action was needed and the university intervened with a tailored mill workers program aimed to satisfy several different objectives. Some of the workers needed to find new jobs. Their priorities were to develop the skills to gain an interview, and to negotiate their way through it successfully. They also discovered that IT literacy was a pre-requisite for many jobs and that they needed to acquire skills in this area. Other workers anticipated a long period out of the workforce. Locating agencies and groups which could give them support during that period was a priority. They needed to acquire the ability to seek out information for themselves, so they also found themselves acquiring the IT skills needed to search the Web.

Another group elected to undertake formal study either as a prelude to a career switch, or as part of their activities in retirement. A continuing involvement in learning will be a major element of retirement strategies. While organisations such as the University of the Third Age serve this need, we should ask whether an increased demand for life-long learning from an ageing, but intellectually active society, can be met purely by voluntary organisations. The universities with the mission to teach the young, and to provide on-going support for people in the workforce also have the potential to support the learning needs of those in retirement, but at present our resources are devoted to other priorities. Many retirees will not be satisfied with golf, fishing, and incessant travel, and Australia would be advised to start planning for the learning needs of people who are presently life-long learners, and who will wish to remain so when they leave the workforce.

INVESTING IN THE EDUCATION AND TRAINING OF ADULTS

Professor

GERALD BURKE

*Executive Director,
Centre for the Economics of Education
& Training, Monash University*



Table 1.

Employment in major occupation groups: percentage growth in the five years to 1997-98

Managers and Administrators	5
Professionals	14
Associate Professionals	6
Tradespersons etc	9
Advanced Clerical/Service	6
Intermediate Clerical/Sales/Service	15
Intermediate Production/Transport	12
Elementary Clerical/Sales/Service	16
Labourers etc	13
All occupations	11

Lester Thurow in his recent book

Creating Wealth (Nicholas Brealey 1999)

sees human skills and knowledge at the heart of the economic system and that:

1. the skills needed are increasing and changing so rapidly that continuing education for adults has to become a reality
2. in the global economy the unskilled are particularly vulnerable to competition from low wage economies
3. with fast changing technologies more skills will have to be created on-the-job but, with reduced security and commitment in employment, employers are less ready to support training for their workers.

How relevant are the issues identified by Thurow to Australia and what are the implications?

It is obvious that technologies are changing rapidly though the consequences for overall skill levels are less clear. The number of professionals employed is growing faster than average but, as Table 1 shows (see left), so too are various clerical, sales and service occupations, many of which have been thought to be low skilled.

Maglen and Shah (1999) analyse occupational change in detail and over a longer time period. They find that the numbers in high skill occupations are seen to be highly valued in the international economy have grown relatively rapidly. However while there has been relative decline in a number of low skill routine production occupations, the fastest growth in employment has been in elementary service work such as routine sales work.

Much of the growth in employment has been in part-time and casual work. In the 1990s casual employment, most of it part-time, has grown by about 50 percent while permanent full-time employment has grown very little. And about half a million of Australia's part-time workers would like longer hours of work. The swing to part-time work is more pronounced in Australia than in most other wealthy countries (OECD 1999).

These job changes have led to a widening distribution of earnings. There is an increase in the number of jobs that pay a lot (the professional jobs) and those that pay a little (casual part-time service jobs) and a decline in jobs with middle rates of pay (Harding and Richardson 1998).

Thurow sees the need for increased in-plant training but a reluctance of firms to provide it. The rise of casual and part-time employment is one reason for this: there is less work time to recoup any training investment. In Australia the reduction in employment in the public sector, where training has typically been provided more readily than in the private sector, is a further factor.

Survey data on employer training expenditure tend to confirm Thurow's fears about employers' provision of training. Expenditure on training by small and medium

sized employers fell in the period 1993 to 1996 as shown in Table 2.

Table 2

**Employer expenditure on structured training, Australia
% of gross wages and salaries**

	Employer size			
	1-19 employees	20-99 employees	100 or more	All employers
1993	1.6%	2.7%	3.2%	2.9%
1996	1.2%	1.9%	3.2%	2.5%

ABS (1997), Employer Training Expenditure, Australia July-September 1996 (6353.0).

The ABS household survey of education and training experience also indicates a decline in training provided by employers over the years from 1989 to 1997. The estimated hours of *in-house* training (training mainly attended by persons working for the same employer) fell sharply in the early 1990s and have not recovered (ABS 1998).

The more optimistic note is given by looking at *external training* (training mainly attended by persons *not* working for the same employer). The percentage of wage and salary earners reporting this form of training rose from 12 percent in 1993 to 20 percent in 1997. A substantial proportion of *external* training is financed by the individual taking the training – whereas *in-house* training is mainly financed by employers.

This discussion has focused on those in employment and on formal training and education. Despite recent improvements there are still about 700,000 persons unemployed. The average duration of unemployment for those aged 35 or more is over a year, and it increases with age. There are considerable numbers of persons, especially older persons, not in the labour force who would like a job. Their income levels, often dependent on government benefits, are generally very low. The jobless have lower rates of participation in training than those at work and no access to the informal training that most employees receive.

The case for increasing training and education

Even before these recent trends in employment there was a very good case for policy to be directed at increasing the levels of education and training undertaken by adults. The case is especially strong on equity grounds for those with low levels of education and literacy who are a major component of the jobless.

There are also strong efficiency grounds for increasing training of workers above current levels. One reason why current levels of training are considered inadequate is that many of the rewards to investment by firms in training are received by others:

- the employees undergoing training in the form of pay increases and
- other firms who can poach the trained workers.

Another factor may be that firms are simply not aware of the full benefits of training. Few keep records on the skill levels of their employees so they must at best have an impressionistic idea of the benefits of raising those skills.

Policies to boost education and training

Thurow advocates a refundable levy on employers to finance training. Australia has already tried this and abolished it: the Training Guarantee Levy. The Australian scheme appeared to increase the level of expenditure on training of medium sized employers but not larger ones whose expenditure usually exceeded the required level prior to the introduction of the scheme. Arguments against the scheme were its unpopularity with employers and that a flat rate assumed that the amount of training required did not vary with the type of employment. There seems little likelihood of its reintroduction in the short term.

A range of measures to support firm based training have been developed. The provision of an infrastructure for training such as the development of training packages and the Australian Qualifications Framework should make it easier for firms to introduce structured training and also help employees to acquire nationally recognised qualifications.

Moves to encourage firms to set standards for training and its reporting may help to increase the awareness of the benefits and encourage greater efficiency in its provision. One way of supporting this are programs

**“...government support
for university education
is being confined to
undergraduate and
research degrees...”**

such as the Investors in People standard which has spread throughout UK with strong government support but has not yet been taken up to any extent in Australia.

Increasingly, government support for university

education is being confined to undergraduate and research degrees, and even there the government support is declining in real terms. Government funding of education and training is falling as a share of the GDP with most of the fall attributable to the shift in higher education funding to the students through HECS and the reduction in the real rate of funds per place. Overall, government outlays on education in Australia have fallen from 4.9 percent of GDP in 1992-93 to 4.4 percent in 1997-98 (ABS 1999). Private expenditures on education have increased in Australia but they have only very partly offset the decline in the government's outlays. Private expenditures (net of government subsidies) have risen from about 0.7 to 0.8 percent of GDP.

The decline in public expenditure on education in the 1990s is not a worldwide phenomenon. OECD (1998) data showed more countries reporting increased expenditure than reporting reduced expenditure. There is a strong case for reversing this declining trend in Australia if we are to boost the levels of education and training of adults.

The expansion need not be more of the same, though a good case could be made for restoring the levels of resources per student in tertiary education if the quality of education is not to decline. There is also a strong case for extending the financial support to adults not in formal education. This could be in the form of grants, or income contingent loans such as the HECS scheme, to be used for both the formal education system and for alternative forms of education and training. For the long term unemployed and those with low levels of literacy more specific programs of education and training will need to be supported along with the improved financial support.

ABS (1998), *Education and Training Experience Australia* 1997, Cat. No. 6278.0.

ABS (1999), *Expenditure on Education 1997-98 Australia*, Cat. No. 5510.0.

Harding, A. and Richardson, S. (1998) Unemployment and Income distribution, in DeBelle, G. and Borland, J. *Unemployment and the Australian Labour Market*, Reserve Bank and Centre for Economic Policy Research, ANU.

Maglen, L. & Shah, C. (1999), *Emerging occupational patterns in the era of globalisation and rapid technological change: Implications for education and training*, CEET Working Paper No 21

OECD (1998), *Education at a Glance*, Paris

OECD (1999), *Employment Outlook June 1999*, Paris.

Gerald Burke is Executive Director of the Centre for the Economics of Education and Training (CEET). The Centre is a joint venture of Monash University and the Australian Council for Educational Research and is funded as a key vocational education and training research centre by the Australian National Training Authority.

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GOVERNMENT SUPPORT FOR LEADERSHIP COURSE



The Hon. Dr David Kemp MP
Minister for Education, Training and Youth Affairs

Professor Ashley W Goldsworthy AO OBE
Executive Director
Business/Higher Education Round Table
Shell House
1 Spring Street
MELBOURNE VIC 3000

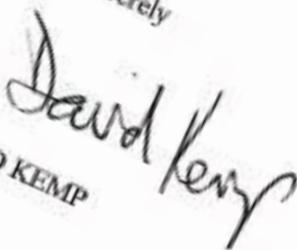
24 JUN 1999



Dear Ashley

Thank you for your letter of 10 May 1999 providing a report on the joint Business/Higher Education Round Table and CSIRO course *Leadership in Innovation: Achievement through Teams*. I have considered the report on the course and am happy to approve continuation of the Commonwealth funding of \$120,000 each year for two years to provide a subsidy for university participation in the course. I am pleased to learn that participants in the course report such positive outcomes from their experience.

Yours sincerely


DAVID KEMP

MAJOR SPONSOR



1999 BHERT Awards for Outstanding Achievement in Collaborative R&D and Outstanding Achievement in Collaboration in Education and Training

Purpose

A series of prestigious awards to recognise outstanding achievements in collaboration between business and higher education in the fields of R&D, and education and training; with the objective of highlighting at a national level the benefits of such collaboration, and enhancing links between industry and universities.

Eligibility

At least one of the participating organisations nominated for the award must be a member of BHERT.

Each submission must be signed by all participating partners.

At least one of the collaborating organisations must be in business and one in higher education.

Frequency

Awards are made annually and presented at the BHERT Awards dinner in November each year.

Number of Awards

There are two Groups of awards.

One Group comprises two separate categories, (1) R&D, and (2) Education and Training. In each category, Awards are given for new initiatives, i.e. projects or programs in train for three years or less, and for established initiatives, i.e. projects or programs that have been in train for more than three years. These categories are further divided into projects or programs which involve companies with a turnover of less than \$50m per annum, and those with a turnover of more than \$50m per annum. This results in eight Awards.

The other Group comprises two Awards:

- Outstanding Achievement in International Collaborative R&D, and
- Outstanding Achievement in Collaborative R&D involving a Cooperative Research Centre.

An application may be submitted for an Award in one or both Groups, provided it meets the appropriate criteria. However, no one application can win more than one Award.

Criteria for Assessment

1. **Innovation** – has the project or program produced new products or services; how innovative is it in its concept or idea, design, delivery or content; what new barriers has it surmounted; what new challenges has it identified?
2. **Strength of Relationship** – (a) what is the extent of involvement of the partners? (b) how has this grown over the life of the project or program? (c) how do the partners work together in a productive partnership? (d) what other spin-offs have there been from the project or program for participating organisations?
3. **Outreach Inclusion** – has the project or program attracted new participants since its inception; has it become a model for other projects or programs?
4. **National Benefits** – these may be economic, financial, social, educational or community benefits: may include for example, growth in exports, creation of new jobs and so on.
5. **Cultural Impact** – what impact has the project or program had on the cultures of the participating organisations? What changes have occurred in what is done and the way it is done in the participating organisations; what changes have there been in attitudes, behaviour or values in the participants?

Process

1. Applications for 1999 were sought from all members of BHERT.
2. Deadline for applications was 31 July 1999.
3. Judging panel is:
Professor Leon Mann,
Pratt Family Chair in Leadership & Decision-Making, Melbourne Business School (Chairman)
Dr Bob Frater, AO,
Former Deputy Chief Executive, CSIRO
Mr Peter Laver,
Chairman, Ceramic Fuel Cells Limited
Dr Jane Munro,
Principal & CEO,
Firbank Grammar School
Professor Vicki Sara,
Chair, Australian Research Council
Dr Peter Scaife,
Director, Centre for Sustainable Technology,
University of Newcastle
Ms Moira Scollay,
Chief Executive Officer,
Australian National Training Authority
4. Evaluations are currently being completed.
5. The 1999 Awards will be presented by the Federal Minister for Industry, Science and Resources, Senator the Hon Nick Minchin, at the BHERT Awards Dinner on 18 November 1999 in Sydney at the Hotel Inter Continental.
6. Submissions were to be no more than one page on each of the above criteria.

As a unique group of leaders in Australian business and higher education, the Business/Higher Education Round Table (BHERT) sees as part of its responsibility the need to articulate its views on matters of importance germane to its Mission.

In recent times BHERT has issued several papers - copies of which are available from the BHERT Secretariat.

BHERT Paper No. 1 (June 1999) – R&D Leadership Training: Direct Contribution to an Enterprise

Background

One of the biggest issues facing an enterprise is achieving commercialisation outcomes in the face of unpredictable change. Nowhere is this more challenging than in the area of transforming ideas and inventions into fully developed products genuinely valued by the marketplace. Leadership of R&D activities, particularly the development phase, and achievement through teams are critical to the success of an enterprise where many multi-disciplinary interactions and complex processes must be orchestrated to achieve desired outcomes.

F. H. Faulding & Co. Ltd is a diversified health and personal care company. Faulding's principal businesses are generic oral and injectable pharmaceuticals, consumer health products, the provision of distribution and retail management services to pharmacies and logistics management services to hospitals. Faulding markets its products to, and has representation in, over 70 countries and employs 3,500 people worldwide.

The Investment

The CSIRO-BHERT R&D Leadership Program was selected to be the vehicle to assist driving change and improvements in Faulding's development processes.

Organisational Outcomes

Although the initial focus was on improved technical outcomes, an equally important benefit has been the major contribution of course participants in helping to resolve operational issues and implement major strategic and organisational change.

The team of trained participants has helped reduce total development and technology transfer times by 25-30%.

A significant increase in the number of parallel activities has been achieved with a greater number of projects and product introductions being handled simultaneously.

Personal Outcomes

Due to its experiential approach the course has had a lasting and positive impact on all participants. Without

exception all participants realised significant personal outcomes from the course - both in their professional and private lives.

Summary

In the context of the enterprise, benefits from the course require a significant commitment from management to ensure that a "critical mass" of participants is built up as quickly as possible.

Based on this experience the critical mass for training is believed to be approximately 10% of potential leaders from all relevant functions and the return on this investment in training is at least 10-fold within the first year - (in Faulding's case this represents a dollar contribution to the bottom line of \$1.5 million in the first year).

BHERT Paper No. 2 (August 1999) –

The Knowledge-Based Economy: – some Facts and Figures

Issue No. 5 (June 1999) of BHERT NEWS focussed on "The Knowledge Economy of Tomorrow". This BHERT Paper extracts a number of statistical indicators from a document published in June 1999 by the Organisation for Economic Co-operation and Development (OECD), and provides some useful and interesting comparative data on Australia's relative global position within the context of the knowledge-based economy.

BHERT Paper No. 3 (September 1999) –

BHERT: Survey of Benefits from Commonwealth Government Business Programs

In recent times there has been considerable debate on the level of R&D undertaken by business in Australia, how we compare with other developed nations, and the trend of business expenditure over recent years.

Government programs designed to promote and encourage R&D and innovation obviously play a significant role in this context.

Raw statistics, whilst helping to measure and track levels of expenditure, do little to explain the underlying reasons for changes or trends in levels of expenditure.

BHERT recognises the fundamental importance of R&D as the main driver of innovation, and the critical role government policy plays in building a supportive infrastructure for R&D.

In this context BHERT decided to conduct a survey across a range of companies to try to better understand the reasons behind the statistics and the impact various Commonwealth Government programs were having on business R&D expenditure.

The Report identifies what the respondents saw as the critical issues in R&D support and provides a series of compelling short case studies highlighting the experience of the business community with various government business programs in support of R&D.



NEW BOARD MEMBER

BHERT is delighted to announce that
Professor Denise Bradley, AO,
Vice-Chancellor and President of
the University of South Australia
has agreed to join the Board of Directors.

International Activities

In 1990 she was a member of the South Australian Ministerial delegation to Indonesia and in 1991 she participated in the Australian Government delegation to the UNESCO General Conference. In 1992 she was a member of the Australian Government mission to the Republic of China. In 1995, as a conference leader at a conference in Hanoi, for Rectors and Vice Rectors of universities in that country she presented sessions on curriculum planning and quality assurance in universities. In 1995 also, she was a member of the OECD panel reviewing the first years of tertiary education in Norway. Since 1996 she has travelled extensively in the Asia Pacific Region supporting the development of an international focus in the University of South Australia.

National Activities

She is a member of the Australian Vice-Chancellor's Committee and Chair of its Standing Committee on Education and Students, and has been extensively involved in national educational policy groups. Professor Bradley was a member of the National Board of Employment, Education and Training and Deputy Chair of its Higher Education Council. She has been a member and Chair of the National Women's Employment, Education and Training Advisory Group. Professor Bradley was a member of the national Committee for Quality Assurance in Higher Education, of the Commonwealth Tertiary Education Commission, its Technical and Further Education Council and its Advanced Education Advisory Council. She was formerly a Director of the Australian Credit Transfer Agency and a member of the committee established to manage the development of a national service to provide employment and course information, OZJAC. She is a Director of the Open Learning Agency.

In South Australia she has previously chaired the Management Committee for the South Australian Tertiary Admissions Centre (SATAC), the Industry Training Steering Committee for Community Services and Health and the Higher Education Entry Consultative Committee. She has been a member of the Health Industry Development Council, the Teacher's Registration Board, the Ministerial Task Force on Education and Training and a member of the South Australian Health Commission. She is a member of the Adelaide Festival Writer's Week Committee, Chair of the South Australian Vice Chancellors' Committee, a member of the Board of Education Adelaide, a trustee of Business Vision 2010 and a Business Ambassador for South Australia.

BHERT welcomes Professor Bradley to the Board and looks forward to a very productive association.

WHY IS WORK PLACE LEARNING NOT MORE WIDELY PRACTISED IN AUSTRALIA?

Work place learning for students, an integral part of life-long learning, is a popular concept, seen to deliver benefits to students and employers – Why then is it not more widely practised in Australia?

Morgan & Banks, a large HR consulting company with alliances with the Australian Technology Network and other universities, asked employers Clayton Utz, Macquarie Bank, Codan, Wakefield Hospital, Lend Lease and Morgan & Banks about work place learning.

These companies identified that investment in the development of young people, and the completion of projects that would otherwise not have been done, as the most common outcomes of work place learning assignments. Other outcomes included the identification of future employees, increased productivity and the injection of new ideas.

Outcomes for students include developing capability to:

- Perform in different environments
- Communicate and collaborate effectively
- Manage value issues – their own and other peoples¹

Survey results – at a glance

- 6 out of 10 employers provide work place learning opportunities
- They most commonly engage 2-10 students per year
- Students find employers through the university or their own networks
- Half the students are paid
- The employers usually specify the content of the assignment

Given a degree of consensus about positive outcomes, we then asked about impediments to work place learning. These included a lack of facilities, and the amount of time and effort it takes to organise and supervise placements.

This led to conversations about what could be done to increase the practice of work place learning. Employers' suggestions included having a third party facilitate the planning which would reduce time-consuming and repetitive tasks. A possibility may be an Internet service staffed by industry specialists able to promote and broker work place learning and close the gap between universities, colleges and firms. This service would need to include a simple, on-line administration service for work place learning placements. This is not dissimilar to the way recruitment companies organise contractors in the workplace.

Following this theme, Ian Burns, a Director of Morgan & Banks, who has developed one of Australia's largest executive contracting businesses, was asked why the use of contract workers is growing and whether there were lessons in that growth for work place learning.

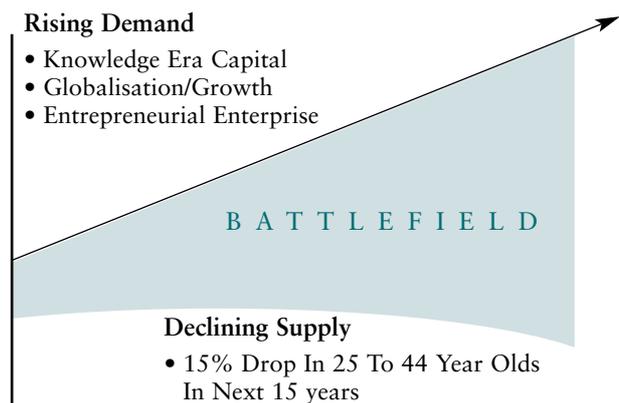
“As a business culture we are split: some firms have dropped the idea of developing people – that is why staff turnover will continue to grow and loyalty to the firm is falling - high performers who love their work will move to employers who provide the environment in which they can excel (employers of their choice)”.

“Contracting is growing because it fits with a ‘buy off the shelf’ philosophy – no up-front investment, pay for only what you use, dispose of it when it is no longer required.”

Can we increase the popularity of work place learning by selling it, not only to the employers who believe in developing people, but also to those who are looking for immediate outcomes? In other words, package some work place learning as contract work and benefit from the growing demand for immediate solutions.

“To address an issue of this magnitude both sides of the equation will need to work together in a pincer movement. Politicians, business leaders and employer organisations need to collaborate under the banner of a public campaign to raise Australian Knowledge Investment², of which work place learning is a part. The imperative for this is graphically illustrated in the escalating war for talent”.

THE ESCALATING WAR FOR TALENT



Source: McKinsey/Sibson Joint Study – The War for Talent

¹ Stephenson, J. 1999, ‘Corporate capability: Implications for the style and direction of work place learning’ Occasional Paper 99/1, Research Centre for Vocational Education and Training. UTS, Sydney, Australia

² Knowledge Investment is defined as public spending on education, research and development and software. Our growth is 2.4 against an OECD average of 2.8. BHERT Paper No.2, 1999, “The Knowledge- Based Economy: - some facts and figures.” Melbourne, Australia.

Mission Statement

At the same time, university and college policies could change to include work place learning as an integral part of all courses and have exemptions for courses where this is not applicable.

As part of RMIT University's strategy to close the gap between learning and work, Ruth Dunkin, says "RMIT University supports the concept of workplace learning as part of the shift in culture for Universities towards developing flexible partnerships with industry. Bringing students to the work place enhances their education and employment prospects by giving them the skills to implement concepts through practical application. It is the commencement of the lifelong learning process. Successful workplace learning outcomes also provide a dynamic and sustainable link between the University and the employer".

Professor Tony Blake from Sydney's University of Technology said, "The Academic Board at UTS has recently adopted guidelines on the integration of work and professional practice that enable the university to highlight programs that are innovative and unique". University initiatives of this type are welcomed by employers as they directly tackle problems arising from gaps between academic awards and workplace needs.

Lack of a concerted effort in work place learning will increasingly disadvantage Australia by leaving open gaps between tertiary education and employment. Along with the United States, the Netherlands, Canada, Korea, and Norway, we provide a relatively high percentage of our adult population with tertiary education, we need to drive this advantage on all fronts, including increasing the occurrence of work place learning.

Data researched and compiled by Nicole Wallace,
Morgan & Banks Limited (1999).



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Adjunct Professor,
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The purpose of the Business/Higher Education Round Table (BHERT) is to pursue jointly initiatives that will advance the goals and improve the performance of both business and higher education for the benefit of Australian society.

It is a forum where leaders of Australia's business, research and academic communities can jointly examine important issues of mutual interest, to improve the interaction between Australian business and higher education institutions, and to guide the future directions of higher education.

In pursuing this mission BHERT aims to influence public opinion and both government and non-government policy on selected issues of importance.

BHERT believes that a prerequisite for a more prosperous and equitable society in Australia is a more highly-educated community.

In material terms it fosters economic growth and improved living standards – through improved productivity and competitiveness with other countries. In terms of equity, individual Australians should have the opportunity to realise their full social, cultural, political and economic potential.

The membership of BHERT comprises, by invitation, the chief executives of major Australian corporations and research organisations, and the vice-chancellors of Australian universities. BHERT pursues a number of activities through its Working Groups, State Chapters and active alliances with relevant organisations both domestically and internationally. It publishes a regular newsletter (BHERT NEWS), reporting on its activities and current issues of concern relevant to its Mission.

As a unique group of leaders in Australian business and higher education, the Business/Higher Education Round Table (BHERT) sees as part of its responsibility the need to articulate its views on matters of importance germane to its Mission. In recent times it has issued three Policy Statements – copies of which are available from the BHERT Secretariat.

Increasingly, reducing resources, coupled with a greater emphasis on revenue raising and entrepreneurial activities as well as inter-institutional competition, both domestic and international, 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.

BHERT has identified the necessary key features of the higher education sector in this country – the prerequisites for Australian universities to compete effectively at the highest international levels.

**Position Paper No. 2 (October 1998)
– The Development of Cooperative
Research Centres**

CRCs were established in Australia in 1991 to foster ties between universities, industry and government departments and research organisations, in order to bring research closer to commercial realities and provide education and training opportunities.

The program was established to address a number of specific issues, among which were:

1. The need to ensure that advances in science and technology were linked to applications in various sectors of the economy.

2. Related to this was the need to improve international competitiveness. The need to ensure that Australia's undergraduate and graduate programs in science and technology were of world class; specifically involving researchers from outside the higher education sector to ensure better quality and performance.

The CRC Program was to play an important role in ensuring that Australia benefited from the strength of its science and technology resources. Specifically, it would help ensure that Australian research and research training remained at the forefront in those areas of specific importance to the country as a whole.

There are 67 Centres currently operating in six industrial areas:

- manufacturing technology;
- information and communication technology;
- mining and energy;
- agriculture and rural based manufacturing;
- environment; and
- medical science and technology.

Overall the program has resulted in a strongly positive effect on Australian spending on research and development by government departments, universities, CSIRO and other public R&D agencies and industry.

BHERT Policy Statements

**Position Paper No. 1 (July 1998)
– Higher Education in Australia:
The Global Imperative**

The Business/Higher Education Round Table (BHERT) comprises the chief executives of many of Australia's major corporations and the vice-chancellors of Australia's universities, with the mission of advancing the goals and improving the performance of both business and higher education for the benefit of Australian society.

Education and training is a key ingredient 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.

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 welfare standards and more advanced social and political structures. Our goal is that Australia must develop the expertise of its human resources so that it is a significant regional leader in professional, service, education and technological fields.

In today's environment there is a certain tension which universities and their staff feel in attempting to maintain the traditions of high quality research, scholarship and teaching.

**Position Paper No. 3 (April 1999) –
The Case for Additional Investment
in Basic Research in Australia**

In the latter half of this decade many OECD governments, including the US, Japan, Germany, UK and Canada, have recognised public investment in basic research as essential for economic development. Emerging Asian economies, despite the setbacks of the recent financial crisis, are maintaining growth in public investment in R&D including basic research. All these countries have provided additional funding for basic research despite competing budget priorities.

Much of the economic growth in this decade is attributable to the growth of knowledge based industries particularly those associated with information technology and biotechnology.

Returns on investment in basic research over the next decade are expected to be even greater than in the 1990s. Completion of the sequencing of the human genome scheduled for 2003, for example, will provide unprecedented opportunities for growth in biotechnology industries for countries able and willing to position themselves. Australia is one of only eight to ten countries that have this capability. Continuing rapid advances in information and communications technologies provide immense opportunities for nations prepared to exploit them.

As in the case of the UK, where substantial funding increases for research were provided within the context of a Competitiveness White Paper, Australia needs to ensure that additional funding is provided within a broader policy framework. Such a framework should ensure maximum returns from this investment through diffusion of knowledge to industry and community, improving the skills level of the workforce, encouraging organisational culture change and collaboration, and promoting competition.

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PLEASE NOTE THE FOLLOWING DATE FOR THE LAST BHERT MEETING FOR 1999:

Thursday, 18 November 1999

Sydney – Hotel Inter-Continental – 2.30pm - 5pm

inclusive of Annual General Meeting

(followed by Awards dinner at which Senator the Hon Nick Minchin,

Federal Minister for Industry, Science and Resources, will present the

Awards and deliver the after-dinner address).



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