

RESPONSE BY THE
BUSINESS/HIGHER EDUCATION ROUND TABLE
TO THE POLICY DISCUSSION PAPER ON THE
REVIEW OF HIGHER EDUCATION FINANCING AND POLICY

(WEST COMMITTEE)

1. Introduction

The Business/Higher Education Round Table has a unique membership in this country, comprising corporate Chief Executives and the Vice-Chancellors of Australian universities. It is a forum where those members jointly pursue initiatives that advance the goals and improve the performance of both business and higher education for the benefit of Australian society.

It is therefore vitally interested in the higher education system and thus the outcome of this review.

It needs to be stated at the outset that changes in structure and funding are essential if the higher education system in Australia is to meet effectively the increasing demands of the next millennium.

As the Round Table said in its original Submission to the West Committee, "Without a national vision and sufficient investment in our higher education system, Australia and today's young Australians are likely to be marginalised as the region moves towards higher living standards and more advanced social and political structures." (Round Table, 1997).

In an increasingly competitive global environment, current levels of higher education funding will not create or sustain the kinds of world class universities that Australia profoundly needs. This is not to say additional funding necessarily has to be out of the public purse.

Australia needs to be benchmarked against international competitors. The Paper fails to do this. For example, Keio University in Japan, a major research and teaching university slightly smaller than the University of Melbourne, gets between three to four times the resources to produce world class graduates that Melbourne gets - and Melbourne is among the best funded of Australian universities. And Keio is not an exception.

The same kind of disadvantage exists when we compare ourselves with the best American universities.

Even the third best resourced Canadian university (University of British Columbia), again about the same size as the University of Melbourne - has a resource base about 50 percent as big again as Melbourne.

The only alternative to the public purse is a heavier reliance on the "user-pays" principle, more support from the private sector and more generous altruistic support from individuals.

Alternative funding mechanisms, such as "vouchers" (why avoid the word?) or "student-centred" approaches, should be neither blindly accepted nor arbitrarily rejected by either the Committee or the Federal Government without a thorough examination of their practicability and suitability as a viable component of higher education financing. This needs to be done as a matter of some urgency.

At the same time, it does not necessarily follow that the current policy framework is "under stress" as the Paper says.

Undoubtedly change is needed, but it must be made in a context which builds on the strengths of the current system, and redresses the deficiencies.

The vision proposed by the Committee is one which recognises the central role which higher education institutions play in the intellectual, cultural and economic development of Australia. The Committee's vision aspires to develop a society for the future which is well-informed and socially responsible and which is founded upon a culture of life-long learning. Underpinning this vision are principles aimed at broadening participation in post-secondary education and providing students with a wide variety of high quality learning options.

We generally support the Committee's vision and principles as enunciated in the Paper, particularly the concepts of universal access and seamlessness between the sectors of post-secondary education.

However, there is a disjunction between the Committee's vision and principles and its detailed proposals for funding and future policy directions. The financing options are based on a premise that increased competition and market influences will produce a world class university system. No justification for the argument is made in the Paper.

The Round Table encourages the placement of more economic choice and power with students through increased student subsidy at the expense of institutional (ea. EFTSU) subsidy, to encourage more competition among institutions. But, there still remains strong argument for government subsidy of higher education studies, on grounds of access and equity, as well as national and community interest. Also, institutions are struggling to find investment capital for new technologies and teaching materials and to restructure their physical and staff resources to meet new demands. A significant increase in institutional funding is needed to assist this restructuring and revigorating process. Government finding will have to comprise part of this.

Whilst acknowledging that competitive markets have virtues, markets do sometimes fail -and governments may need to intervene.

Most of the proposals included in the Paper are based on the concepts outlined in the key Appendix 11, *Australian Higher Education in the Era of Mass Customisation*, which outlines a future higher education sector which shows little understanding of the sector, the nature of student demand, and the critical links between teaching, learning and research. This approach to future financing and policy arrangements in the higher education sector not only fails to acknowledge that a well-educated society confers many non-monetary benefits on the community and those students and graduates of the system, but also would require changes to current legislation governing universities, their industrial relations and employment conditions. The cooperative venture approach suggested also counters the move towards the implementation of national competition policy in the sector. This Appendix is a major negative in the overall document.

A major concern about the options presented in the Paper is that they fail to recognise the critical nexus between teaching, learning and research. The close relationship between these three areas of academic activity is vital because each component is synergistic with the others and thus contributes to the quality of the whole.

The artificial separation of teaching, learning and research is out-dated and misleading. It not only short changes students, it also short changes their future employers because it can result in graduates with incomplete skills in areas which are of benefit to industry and commerce, as well as to society more generally.

The creation of a new binary system of 'teaching-only universities' and 'research universities' - as would effectively result from the discussion paper's proposals to remove access to research funding granted in base funding or obtained through ARC competition) - would not produce a viable university system for the 21st century.

The proposed structural and funding changes for the higher education sector do not adequately address the need to balance the tensions between access, quality and financial support. None of the three teaching and learning funding and policy models proposed by the Committee is able to adequately assure each of these three components.

The Paper raises on its first page the issue of low staff morale, yet there is no attempt to suggest how this might be raised, or what steps need to be taken to ensure that high quality academic and support staff will be retained or attracted.

This Paper should have sparked a robust debate about the shape of our university system. Unfortunately, its one-dimensional view aborts such a debate before it is even begun.

The Nature of a University

The role of the university is not adequately defined, and one of the dangers in the Paper is that the focus on a confusion of detail in the document will derail any debate on the bigger issues at stake.

In the list of commitments (p3) and in the statement of principles for the future (p4), there is no explicit attempt to articulate the role of the university. Yet this role has changed dramatically, particularly over the past decade or so.

There is no doubt that some functions have been imposed which in the past were considered minor or even irrelevant. For instance, the concept of tertiary education as a key element in promoting social mobility has certainly emerged as a crucial role. The provision of a path for self-actualisation, devoid of any external objective, which would have seemed laughable not too long ago, today is virtually beyond challenge.

Whilst these and other emerging roles will no doubt change the function and therefore the structure of our universities, it seems that there may be even more basic changes. In its development as a nation, Australia has relied on its universities to be the repositories of much of its intellectual and cultural capital. The capital analogy is particularly apt, because unlike the more volatile and transient arenas of unionism, politics and commerce, the hallowed halls have provided a constantly simmering cauldron of debate and dissension, without ever quite boiling over.

While the Paper states that 'education has special social and cultural dimensions that contribute to the transmission of knowledge, and informed citizenry and the quality of life, the Paper does not adequately recognise the role universities play in developing the social and intellectual skills of the late adolescent outside the lecture theatre. University is not an extension of school, nor is it just the acquisition of academic knowledge that results in a 'university education'.

Universities have provided the fertile environment for the development of some of the most important social movements of this century. Opposition to the Vietnam war and Apartheid, the beginnings of the mass feminist movement and the push for abortion reform are just some which clearly started in and/or grew up on campus. This role as society's conscience is not easily replaced, yet there seems little or no place for it in the Committee's vision.

The broad impact of the university on the community outside of teaching and research is also largely ignored.

There is an analogous effect on this country's culture. Certainly the formal courses in "things cultural" contribute by supplying researchers and teachers. Even more important, however, are the more subtle processes. The exposure of the ever increasing numbers of technocrats to the rich and varied world of the arts cannot help but exert a civilising influence on many of them. Many teachers of literature write and teachers of the history of art paint. The best and bravest of these, if they are very, very lucky, become celebrated practitioners.

Universities have been the home of some of our greatest social critics and commentators. Philosophy does not sell. If there is no longer room for such prophets, then the only commentary is likely to come from partisan sources, and what was once an intellectually based debate will become yet another occasion for name calling.

Despite a denial to the contrary, the Paper also fails to clearly distinguish between the nature of technical education and that of a university when it states its 'post-secondary view'. The role of technical education is important and respected and it has a skills and competency emphasis that is distinctly different from that of a university. Effort should be made to clarify these role and responsibilities. When considering collaboration and co-operation between the sectors the emphasis should be on dual qualifications. TAFE should not be seen as a feeder to the universities.

The vision of life-long learning etc. is commended. It is however, difficult to relate the strategies of the Paper to the achievement of this vision.

The Paper seems to assume that there is only one stakeholder in tertiary education. Important as the student is there are also parents, graduates at various stages of their careers, staff, employers, and taxpayers to consider.

Much of the language and not a few of the concepts suggest that education is being viewed as a process. If this is so, then a few questions need to be asked and answered:

- * who is the customer?
- *what is the product?
- *what are the inputs?

We live in the era of customer satisfaction, so the suggested move to greater student control of both content and process, implies that the student is the customer. Yet the broader community via the public purse, pays most of the bills. One view is that society is the customer whose interests are paramount. The student becomes, product/patient/victim, albeit a voluntary one. The view was expressed that teachers know more than students, i.e. their opinions should carry more weight. In this context the introduction of fully portable vouchers might well see choice of institution based on:

- * cheap good food and a pub on campus if possible
- * minimum fees
- * no examinations but lots of self assessment
- * an active social program, especially after dark
- * numerous soft course options
- * minimum capital and labour intensive activity such as science.

Students should be heard. They should be consulted and nurtured but we would be ill advised to abrogate our responsibility to lead and manage them. The nature of the education they are seeking is, after all, the intellectual capital of the teachers. Choosing an education is not analogous to choosing a new car.

Australian universities are internationally recognised for the quality of their programs and this should appear on any list of their strengths.

3. Funding

The Paper argues for change which alters the focus of funding from the university to the student. It fails to adequately demonstrate how this change would be more cost-effective or show how the present system is failing. The virtues of the present system which are worth maintaining are not discussed.

A determination of the amount of 'public good' as opposed to 'private good' arising from higher education would help determine the proportion of cost to be borne by the student.

The funding options proposed involve a shift in the balance of funding between the Government and the users of the higher education system. One suggestion in each of the financing options for teaching and learning is the concept of a Government established average fee or standard course cost. Such an approach is detrimental to the higher cost disciplines such as Engineering, Health Sciences and Applied Science. There needs to be recognition of differential costs across disciplines within universities with appropriate levels of Government funding to support them.

The current proportions of user contribution following the large increases in HECS introduced in the 1996 Commonwealth Budget are already amongst the highest in the world, and the proposals in this Paper would have the effect of increasing the private/government ratio still further.

There is no recognition that as the student debt in respect of education increases, the ability for large groups of people in the community to participate in higher education diminishes.

Another fundamental shortcoming in the options for teaching, learning, research and research training is the failure to strike the correct balance between deregulation of the sector and accountability for the expenditure of public funds. On the one hand, the Paper espouses the philosophy of greater deregulation of the sector, promotion of institutional autonomy and allowing institutions to behave more like businesses by the removal of many of the Commonwealth and State government structural and funding impediments to the competitive functioning of these institutions. However, on the other hand, it proposes the establishment of accreditation and prudential regulating bodies which have the potential to dictate to and constrain post-secondary education institutions to an even greater degree than applies at present.

Some universities would expect to benefit from a system which allocated funding to the student rather than the institution. Other universities may struggle in terms of attractiveness to students. Implementation of the policy might result in mergers, but a sure result would be greater competitiveness at the expense of increased collaboration. The Round Table believes that increased collaboration between universities is a sine qua non of a more effective system in Australia.

Competition and collaboration are not mutually exclusive. They deserve equal attention. The Paper fails to do this.

The Paper does not seem to address the problem of limited places for professional placement on graduation. Does Australia really want to be flooded with doctors and lawyers? What responsibility does a university have to ensure, for example, that a medical graduate gains an internship or a lawyer articles? Will it be left to the professions to determine who enters the workforce in that profession? Is this acceptable? Is it not better to regulate numbers at entry rather than at the end of training?

Public funding for an unlimited number of students would encourage late bloomers and those who come to appreciate the need for further education with maturity to gain access to higher education so long as the take up date from the time of leaving school was not too short. A difficulty is how to cap the total educational bill.

Mosely (1997) lists criticisms of entitlement systems as follows:

Market forces do not necessarily reduce costs

Market mechanisms provide inappropriate incentives for education delivery

Successful entitlement schemes require that each student has equal access to information regarding the quality of providers

Exposure to the market will encourage the further separation of institutions perceived as being 'elite' from other public and private providers

Entitlement systems incur substantial transaction and monitoring costs and there is no proof that these will be offset through course cost reductions and improved efficiencies.

These criticisms should be fully addressed in any document recommending a move to such a system.

While welcoming competition, more private universities if supported by public subsidy would further threaten the viability of some public sector institutions. Historically the political difficulties of closing a university or even arranging a merger have been acute.

While we welcome the Paper's direction in opening up the market to private providers, there must be a clear understanding of the relationship and roles of private and public domains. Private universities focus in areas which are high in demand and relatively inexpensive to deliver, such as law and business. Public universities are able to demonstrate a vital commitment to areas of research and teaching that do not return a significant level of profit for individual users, but are of critical importance for societal development and creativity. Research funding cannot be left simply to market-driven approaches. As Richard Attiyeh stated on efficiency in universities some years ago:

'Knowledge, unlike a loaf of bread or electrical power, can be used again and again without destroying it. As a result, no individual consumer is likely to take into account the full value to society of his purchase of research. Thus, in the absence of any collective action through governments or foundations, for example - the market price for additional

research would be less than its value to society. As a result universities which sought to make a profit would produce less than the optimal amount of research.'

Allocating Australian resources to assist students to study at foreign institutions would not do much for the balance of payments. This is opposed except for assistance with study abroad where the units taken form part of an Australian university degree.

The limitation of public funding to a 'package of study' is questionable. Does this mean that public funding will not be provided for higher degrees? Accordingly, it might be preferable not to impose a monetary or time limit.

Not all courses have a positive correlation between cost and income earned by the graduate over a lifetime. This may be used as an argument for a flat amount. It also raises questions as to the logic of a differential HECS based on predicted income levels - not all law graduates become QC's, or even lawyers. On the other hand there is some evidence that under a HECS style scheme that courses are not cost sensitive and economics argues for a HECS charge to be a proportion of the course cost, particularly if the total higher educational bill is to be managed.

An alternative model of a three year general degree followed by graduate study of two years (in medicine more) leading to a professional qualification would allow a high public good and hence low flat HECS for a bachelor's degree with a high private good and higher cost dependent HECS for the professional.

The number of places for postgraduate course work has been reduced and DEETYA has signalled the phasing out of HECS places for this segment of the educational market. Tax deductions for course work which are available for those in the workforce are inequitable as those not earning get no break. If as recommended, income contingent loans are to be made available even at a high percentage of course costs for this area they should be introduced quickly as the current situation is very messy.

The Paper fails to address the problem of replacement of an ageing staff. This has been exacerbated by release of younger contract staff under the recent economic squeeze on the universities. Non-compulsory retirement may also have an impact.

To introduce university infrastructure charges will effectively mean an increased cost to the student. It is also a highly complex issue. Some universities are major tourist attractions and their buildings and gardens are highly prized by the community. Universities should husband such resources in time frames of centuries not election cycles. Poor management of resources within the universities is best tackled by improving that management (for example by rent charges to departments), not by taxation.

The funding options proposed fail to emphasise and value the need for a diverse range of higher education institutions which exhibit a variety of teaching, learning and research characteristics and which cater for a range of educational experiences for different student groups. In fact, many of the proposals contained within the Paper, if adopted, would actively deter institutions from continuing to diversify and would put in place policies and

programs which advantage small sections of the sector at the expense of others. Rather than laying the foundations for a globally competitive, modern Australian higher education system, many of the options proposed have the potential to produce a post-secondary education sector which is poorly funded, has lower quality education and research outcomes and which lacks the capacity to be responsive to new developments in education and research which are potentially of substantial benefit to Australia's economic and social development.

4. Good Teaching

The emphasis on good quality teaching is welcome. However, the Paper overlooks the reality that often a cost is involved in delivering that quality.

Many universities have introduced, or are introducing, reward mechanisms for good teaching and would prefer to manage their own system of teaching quality improvement. Centralised systems do not allow innovation and comparison between alternative approaches.

The concept of a Centre for Teaching and Learning would have merit if no such centres existed. However, there is no justification as to how this proposed Centre of Teaching and Learning would be more effective than the system of specialised teaching support units currently existing within most universities in Australia.

The Paper only superficially covers quality issues. The Paper assumes that market forces and competition are the only drivers which ensure that universities provide high quality services and products to students. It also takes a limited view of the types of activities on which assessments of quality should be made and consequently re-emphasises its limited vision of the types of activities undertaken by universities.

The establishment of an independent university accreditation body and a prudential regulator would create an even higher level of central control than at present, with flow on effects which will be detrimental to the overall freeing up of the system. While recognising the need to ensure the quality of educational providers, the concept of an accreditation body takes the post-secondary education system back to the arrangements for the pre-1988 colleges of advanced education and is a retrograde step.

5. Research

Research is seen in the Paper as some strange extra-curricular activity.

In discussing the question whether the ARC should have a role in setting national research priorities it should first be recognised that the problem is that nobody is setting national research priorities at the moment, nor is there a national policy framework within which such discussions could take place. The ARC has a fairly 'academic' view of research and should not have a sole role in setting national research priorities, but rather be reactive to a national Science and Technology policy (as called for in the Stocker report) and any other national drivers.

It is difficult to find substantiating evidence with the comments on p.37 that 'we cannot afford to set national priorities'. We should look to Singapore, Ireland and some Scandinavian States to see what can be achieved. National priority setting for research needs to be seen in the context of encouraging innovation more widely and not limited to the role of the ARC. Also care needs to be exercised in the level at which priorities are set, with the prime focus needing to be on strategic priorities.

The following are comments on the various models presented for the future of peer reviewed grants:

Model 1:

The status quo is rapidly becoming unworkable with respect to ARC large grants (as has been acknowledged by DEETYA)

Infrastructure grants tied to project grants do not allow for on-going infrastructure costs, e.g. for the life of the equipment. The overall figure of 40c in the \$1 is probably about right, and would provide crucial support.

A national moderation of postgraduate scholarship allocation is not workable.

Model 2:

Many of the weaknesses of Model 1 (see above).

Fewer large grants would limit flexibility and possibly restrict entry of new players.

Model 3:

Allows institutions to set their own priorities (consistent with a deregulated marketplace). It also includes the baggage of models 1 & 2 and depends upon the ability to measure quality of research outcomes.

A move to block grants with future allocations being dependent upon quality of research outcomes is recommended for consideration. It would be far more efficient to roll research infrastructure funds into a block grant and let institutions decide on internal breakdown. This should contain mechanisms to ensure that some proportion is maintained for 'scholarship of discovery'. Block grants also lack any mechanism by which national priorities could be pursued by government.

Various models for changes of the research quantum are presented.

The existing model of 4.9% does not reflect the cost of maintaining a research program. 6-10% would be nearer the mark. The present scheme is too costly to operate.

Model 3 is probably most cost effective, but the increase in research quantum to 10% should be matched by an increase in funds, not by digging more into the existing budget. Continuation of the funding should be dependent upon quality of outcomes. It is imperative that quality of outcomes be continued to be assessed by peer review.

Skills transfer and technology diffusion programs should be supported, possibly as part of the Collaborative Research portfolio.

Equipment and facilities purchase under the present RIBG scheme seems to work satisfactorily.

National moderation of an honours system would be a bureaucratic nightmare. The present system is equitable and reasonably cost-effective. Efforts made a few years ago by the AVCC to moderate honours across universities were a failure.

The proposals for all research students to be funded through scholarships rather than being funded through the research and training component of the operating grant contradicts the Paper's emphasis on knowledge transfer, does not address the issue of employers' needs, and is unworkable.

The problem with the Paper's research models is that the key principles do not take adequate recognition of a deregulated system. The most cost effective solution would be to make discipline areas (as in UK model) or even whole institutions accountable for quality outcomes, rather than individuals/small groups. This leads naturally to a block grant model to support the scholarship of discovery. Industry-collaborative and technology transfer (scholarship of application) programs could be set up along lines of the present NZ model whereby consortia (including end users) 'bid' for government research contracts to support the scholarship of application and interpretation.

There is a rather interesting proposition advanced that in some way, resources which would best be dedicated towards worthwhile ends, are being diverted to and wasted on research. This betrays a stunning lack of understanding of the nature of "research". Consider two extreme examples. The development of a viable electric car is clearly worthwhile. There is no reason, however, why such work should be funded by other than commercial interests. Even some of the associated basic research in the physical sciences carries with it enough economic incentive to survive on its own merits. As a contrast, consider research leading to a definitive work on the origins of the Heidelberg School. There is no commercial return expected, but that is not to say that there is no return. It seems that the Committee would have these two projects competing for funds. The notion that we should have clearly identifiable teachers and researchers and that mixing the two is somehow untidy is truly quaint and overturns a long standing practice in Western scholarship.

The Paper has failed to acknowledge the significant contribution made by university supported applied research to Australia's overall research effort. The discussion of research issues and the related research funding models focus almost exclusively on the notion that curiosity driven and basic research should be the only recipients of public

funding; the implication being that unless an industry partner is involved, applied university research will not receive public Funding.

The Committee has failed to address the importance of international links in research and how they should be supported, even though this matter formed part of its terms of reference. Instead, the Paper promotes a very insular approach to addressing research and research training policy issues. It fails to recognise that researchers in Australia are members of an international research community and that constraints on their ability to participate in that community have flow on effects with respect to the visibility and quality of Australian research, development and innovation.

6. Information Technology

The assumption that the information revolution will lead to lower costs of delivery of higher education is debatable. A better balanced analysis of the possibilities is needed than that contained in Appendix II.

The Paper suggests that new technologies may make higher education cheaper: '... new technologies offer cheaper and less expensive (sic) means of communicating information to large numbers of people' (pi 1). This does not of course translate to new technologies making teaching and learning less expensive. However, throughout the Paper suggestions are made concerning the inevitability of the technological imperative in higher education. We interpret this as inferring that new technology is with us today, it's the latest and the greatest and it's bound to be improving what we are doing. The UK Dearing Committee report also talks of the growth in importance of new technology, notably communication and information technology (C&IT), although it is more cautious with its rhetoric:

'Universities have also been experimenting with new technology, in the expectation that this could lead to more cost-effective teaching. Almost invariably IT has led to higher costs, with greater efficiency still a promise for the future.' (Dearing Report, 1997).

Technology resources - e-mail, the Internet and the World Wide Web (WWW), and multimedia - are increasingly common components of the instructional experience for American college students, according to the 1997 Campus Computing Survey, a national study of the use of information technology in higher education (Green, 1997). The cost of these technology resources, however, cannot be borne by the institutions themselves and students are required to pay an extra 'IT fee' of around US\$140 per year to cover the excess costs. The survey also points out that this extra funding is way short of the requirements and institutions are having to look elsewhere to supplement the costs, which each year increase.

'Financing technology is a growing concern ...: fully a fifth of the survey respondents (20.4 percent, up from 17.4 percent last year) identify "financing the replacement of ageing hardware and software" as the most pressing IT issue for their institutions' (Green, 1997).

Becker (1996) conducted a detailed costing of introducing information technology into education. His estimates are that an additional US \$2,000 to \$2,500 is needed to fund each student (two thirds of this cost is human).

The publication of the Dearing inquiry into higher education in UK, was closely followed by a one-day colloquium on the implications of the report's pronouncements concerning the use of C&IT. The paper reflecting on the Dearing's findings was published shortly afterwards (Fraser, 1997). The Dearing inquiry into C&IT recorded its main concern to resolve the problems associated with using C&IT in higher education. It defined these main concerns as C&IT costs in terms of time and funds and the relative scarcity of materials where value of the content outweighs the difficulties inherent in its mediation by computer.

'The development of computer-based materials is ... always expensive and any economic benefits, at least, are notoriously difficult to identify ... The use of C&IT in learning and teaching might result in a better quality of learning: it might result in a more efficient means of learning: it always results in higher costs' (Fraser, 1997).

Todd Oppenheimer in an article entitled *The Computer Delusion* (1997) raises a number of controversial issues concerning the importance of computers in schools.

'There is no good evidence that most uses of computers significantly improve teaching and learning, yet school districts are cutting programs -- music, art, physical education -- that enrich children's lives to make room for this dubious nostrum, and the Clinton Administration has embraced the goal of "computers in every classroom" with credulous and costly enthusiasm' (Oppenheimer, 1997).

Other Comments

The paper lacks the depth of analysis of, for example, the Dearing Committee and consequently is unconvincing in some areas. Presenting one side of an issue without analysis of alternatives is disturbing. The report lacks international comparisons to provide benchmarks on the current performance of the Australian universities. It avoids asking, let alone answering, some of the fundamental issues that one might expect in such a Discussion Paper.

Kemp (1997, September 15) has expressed concern that a third of school students have literacy problems. What kind of post-secondary education will this group receive in a mass tertiary education system?

It has been stated that the final West Report may be substantially different from this draft. Any major rewrite should be referred back to the universities and selected contributors for comment.

Australia, along with the rest of the world, is heading into a knowledge-driven future in which the only really decisive comparative advantage among nations will be access to the best, most innovative, most highly skilled people. These are the people our higher

education system must produce, otherwise we will suffer economic penalties, diminishing freedom of choice and degraded quality of life. The Paper leaves a lot to be desired in setting out a policy framework in which these outcomes will be achieved. It has failed in its task.

References

Attiyeh, R. (1974). Survey of the Issues. Keith G Lumsden. Efficiency in Universities: The Lu Paz Papers. London. Elsevier Scientific Publishing Company. (p.12)

Becker, H. J. (1996). How much will a truly empowering technology-rich education cost?

Business/Higher Education Round Table, (1997): Directions for Higher Education in Australia (p.9).

Dearing Report (July, 1997). The national committee of enquiry into higher education.

Fraser, M. (August, 1997). Dearing and IT: Some Reflections. CTI Textual Studies.

Green, K. (1997). Campus computing survey: a national study of the use of information technology in higher education. Claremont Graduate University: Center for Educational Studies.

Kemp, D. (1997, September 15). Results - national literacy survey. http://www.deetya.gov.au/minwn/kemp/K61_150997.htm

Mosely, B. (1997, October). An analysis of the proposed entitlements approach to funding tertiary education in New Zealand. Otago University.

Oppenheimer, T (1997). The Computer Delusion. The Atlantic Monthly, 280(1), 45-62.

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