Academia Becalmed

Australian Tertiary Education in the Aftermath of Expansion

Edited by
G.S. Harman, A.H. Miller, D.J. Bennett and B.I. Anderson

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Preface

This book is based on papers presented at a special conference on the theme of 'Australian Tertiary Education in the Aftermath of Expansion' held at The Australian National University from 13 to 15 July 1978. The conference was organised jointly by the ANU's Education Research Unit in the Research School of Social Sciences and the Office for Research in Academic Methods. After the conference the speakers were invited to revise their papers for publication in this volume, taking into account points raised in discussion in conference sessions and in other papers. Their prompt response to this request was most gratifying to us as editors, and we are delighted that it has been possible to include in the volume all papers presented at the conference.

To the conference papers we have added five others. Two, by members of the editorial team, deal with some problems of first year classes in universities and colleges of advanced education, and with some possibilities with regard to multi-level tertiary institutions. The other three papers, by Professor L. M. Birt, Professor D. G. Beswick and Mr H. K. Coughlan, were originally presented at a seminar on 'Education and Training to 2001' organised in June 1977 at The Australian National University for the Federal Enquiry on Education and Training, chaired by Professor B. R. Williams. Professor Birt and Mr Coughlan kindly revised their papers for publication here, while Professor Beswick allowed us to use, in a slightly abridged form, a revised version of his paper given as a public lecture at La Trobe University on 21 September 1977 under the title of 'The Changing Pattern of Higher Education'.

As editors and as organisers of the July 1978 conference we have received help from many people. We wish to express our sincere thanks to the secretarial staff of both the Education Research Unit and the Office for Research in Academic Methods for their

assistance with the organisation of the conference and with the preparation of this volume. We owe a special debt to Mrs D. M. Shaw, who assisted with typing of the manuscript. But above all we are grateful to the various contributors to the volume for allowing us to include their papers.

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Canberra D.J.B.
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Abbreviations

ACT	Australian Capital Territory
AEC	Australian Education Council
ANU	Australian National University
ARGC	Australian Research Grants Committee
AUC	Australian Universities Commission
CAE	College of advanced education
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DOCIT	Directors of Central Institutes of Technology
EFTS	Equivalent full-time students
ERDC	Education Research and Development Committee
HERDSA	Higher Education Research and Development Society of Australasia
NHMRC	National Health and Medical Research Council
NIOTE	National Institute of Open Tertiary Education
ORAM	Office for Research in Academic Methods
PG1	Graduate diploma course in college of advanced education
RMIT	Royal Melbourne Institute of Technology
TAFE	Technical and further education
TAFEC	Technical and Further Education Commission or Technical and Further Education Council
TEAS	Tertiary Education Assistance Scheme
TEC	Tertiary Education Commission
UG1	Bachelors degree course in college of advanced education
UG2	Undergraduate diploma course in college of advanced education
UG3	Undergraduate associate diploma course in college of advanced education
VIC	Victoria Institute of Colleges

WAIT	Western Australian Institute of Technology
WSU	Weighted student unit

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Introduction

G. S. Harman

Academia today in Australia is becalmed.[1] This may appear to be a surprising statement, but we believe that it is true in two different ways. First, as far as the universities and colleges of advanced education (CAEs) are concerned, academia or tertiary education is becalmed in the sense that after a long period of sustained and rapid expansion it has now entered a period of no growth and decline. In the language of higher education, the 'steady state' phenomenon has arrived. Student enrolments, which multiplied so rapidly, especially during the 1960s and early 1970s, are now approaching a stationary situation, and in some particular cases have begun to decline. For example, in eight of the nineteen universities total student enrolments actually fell between 1977 and 1978. Over this period the number of full-time internal university students also decreased by 1.6 per cent. But as well as this trend in student enrolments, since 1976 financial support for universities and CAEs, which in past years increased to keep pace with and to facilitate expansion, has been cut progressively in real terms by the Commonwealth Government. For 1979 universities and CAEs will not only have available reduced recurrent funds per student but will have very few funds indeed at their disposal for capital works.

Second, academia in Australia today is becalmed too in the sense that it has lost much of its wind, its energy and its vitality. The end of the era of rapid expansion for universities and CAEs came abruptly, and caught many academics and administrators by surprise. After coming to regard growth and sustained expansion as normal, they have found it both difficult and painful to adjust to the new situation in which universities and colleges of advanced education find themselves today – to the aftermath of expansion. Of course, this is not surprising; a high proportion of today's academics and adminis-

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trators until recently had spent their whole careers in the era of expansion. But the consequence is that today universities and CAEs (and in some senses the whole tertiary education system too) have lost much of their drive, their confidence and their sense of direction. Moreover, this problem of adjustment to the 'steady state' has been made more difficult by the oversupply of graduates in a number of fields (particularly teaching and engineering) and by a marked change in public attitudes towards education and educational institutions. Much of the strong public support for education that characterised the late 1960s and the period of the Whitlam Government has gone, and there is a new mood of doubting the value of educational expenditure, of demands for greater accountability and of anti-intellectualism. In this new situation universities and CAEs have tried to cope largely by hastily contrived *ad hoc* measures and short-term responses, rather than by tough, well-planned long-term policies. And in many cases they have gone on hoping that before long the bad dream of tough times will be over and that there will be a return to normal conditions, meaning increasing student numbers, steadily rising budgets, additional staff and the construction of new lecture theatres and laboratories.

This collection of papers is concerned with these current difficulties of Australian tertiary education, particularly the university and CAE sectors. Its overall message is simple. The 'good old days' of pre-1975 expansion are unlikely to return in the foreseeable future. Tertiary education will never be the same as it was through the 1960s and in the early years of the 1970s. As far as universities and CAEs are concerned, the prospects for future growth in traditional terms are not bright; there seems little real possibility of any substantial expansion in student numbers and in levels of government financial support between now and the end of the century, and there could well be reductions in both. Both academics and administrators, as well as governments, need to face up to these realities; they also must face up to the realities of declining enrolments and oversupply of graduates in particular areas, of the real possibility of amalgamations and closures of particular institutions, of the need for more effective co-ordination and greater efficiency, of changing societal needs with regard to courses, and of tertiary education in some senses being under siege. But more is needed than merely facing unpleasant realities. What are required are positive responses and constructive long-term policies. The

future not only presents difficult problems but it offers great challenges. For example, how can a university or college be kept lively intellectually in a no-growth situation, and without any expansion or major injections of funds how can it adjust to meet new and changing societal needs? How can quality be improved in a time of steady state? What incentives can be provided to induce academics to be really interested in improving teaching and learning? Can the existing physical and staff resources in universities, CAEs and technical and further education (TAFE) colleges be employed differently in order to serve society more efficiently and effectively? How can research contribute better to more efficient policy making?

Before proceeding further two points of explanation are necessary in order to avoid confusion. The first relates to use of 'tertiary education' and related terms. For many years what was meant by the term 'tertiary education' in Australia was perfectly clear; the term referred to universities and CAEs and meant formal post-school education in which the entry requirement was completion of a full secondary school course. However, in its *Tertiary Education Commission Act* 1977 the Federal Government introduced a new usage for the term tertiary education, to displace the expressions post-school education or post-secondary education, as the comprehensive term to encompass TAFE as well as university and advanced education. Since this new usage is now becoming well established, we have adopted it here. Thus tertiary education is used to mean universities, CAEs and TAFE. At the same time, we would point out that it is unfortunate that the usage of a well-established term should be changed by government action without proper consultation with affected interests, and we would make a plea for both scholars and administrators to work towards achieving greater consistency in the usage of basic terms. Throughout the book the terms 'post-secondary education', and 'post-school education' are used synonomously with tertiary education, while the term 'higher education' is used to refer to universities and CAEs only.

The second explanatory point relates to TAFE. While it is true to say that overall the teritiary education system is experiencing cutbacks in funding and reductions in growth, the TAFE sector is by no means in a state of depression or experiencing the 'aftermath of expansion'. In fact, its enrolments are still increasing, its funding from the Commonwealth Government is growing dramatically as a

Table 0.1
Total Student Enrolments in Australian Universities and Colleges of Advanced Education, and Annual Growth Rates

Date	Universities		Colleges of Advanced Education	
	No. of Students	Increase on Previous Year (%)	No. of Students	Increase on Previous Year (%)
1957	36,568	6.3		
1958	41,492	13.5		
1959	47,151	13.6		
1960	53,391	13.2		
1961	57,672	8.0		
1962	63,317	9.8		
1963	69,074	9.1		
1964	76,188	10.3		
1965	83,349	9.4		
1966	91,291	9.5		
1967	94,509	3.5		
1968	100,295	6.1	44,850	
1969	108,255	7.9	52,250	16.5
1970	115,630	6.8	60,300	15.4
1971	122,668	6.1	70,550	17.0
1972	127,645	4.1	81,360	15.3
1973	132,557	3.8	96,558	18.7
1974	142,300	7.4	104,962	8.7
1975	149,414	5.0	123,603	17.8
1976	153,484	3.9	133,063	7.7
1977	157,919	2.9	140,312	5.4
1978	159,506	1.0	149,747	6.7

Sources: 1. *Sixth Report of the Australian Universities Commission,* Australian Government Publishing Service, Canberra, 1975, pp. 71-4
2. Tertiary Education Commission, *Report for 1979-81 Triennium,* Australian Government Publishing Service, Canberra, 1978, Volume 1, p. 36 and Volume 2, p. 33.

Notes: 1. Reliable figures for colleges of advanced education before 1968 are not available.
2. The figures for colleges before 1974 include enrolments in those teachers colleges which became CAEs in July 1973.
3. The college figures for 1978 are only preliminary figures.
4. The figures given for colleges for the years 1974 to 1977 differ slightly between the two volumes of the TEC's 1978 report. Those used here are from Volume 2.

deliberate government policy (in 1979 TAFE will receive an increase of about 19 per cent in overall funds from federal sources) and it is commonly thought to be poised for considerable expansion. But in various ways TAFE is being affected by changes in public attitudes to education generally, and by the problems being experienced currently by the university and CAE sectors. Further, in all probability within a few years TAFE institutions may well be facing similar problems to those being experienced now by universities and CAEs. For these reasons we decided to use the words tertiary education rather than higher education in the title of the book. We recognise that in some senses the title may be misleading, but on balance we consider the abovementioned factors outweigh the disadvantages. Further, we believe that there is considerable value in attempting wherever possible to think in terms of a comprehensive system of tertiary or post-school education.

It is not always fully appreciated how rapid and how sustained the expansion was in Australian tertiary education over recent years. The fact is that from the end of World War II until very recently tertiary education experienced a period of unprecedented growth, which transformed the character and appearance of the whole system in many important respects.

In the university sector between 1946 and 1978 total enrolments increased from about 26,000 students to almost 160,000 – a six-fold increase in just over thirty years – while the number of universities grew from six (plus two small university colleges) to nineteen. During this period the growth rate varied considerably. Immediately after the war, with large numbers of ex-servicemen seeking places, numbers increased very quickly, but then levelled off in the early 1950s. Rapid growth resumed in the late 1950s (just as the Federal Government came to provide new help for the universities) and this continued until very recently. As Table 0.1 demonstrates, between 1957 and 1975 the annual growth rate was 5 per cent or more in every year except two, and for nine individual years it was 8 per cent or more. This growth and the funding provided especially by the Federal Government enabled the universities to expand into many new fields and areas of study, and also to give much more emphasis to postgraduate work and research. Consequently today the Australian universities are much stronger, more lively and far more interesting institutions than they were immediately after World War II.

A corresponding expansion took place in non-university tertiary education. In the late 1940s and during the 1950s there was a major expansion in teachers' colleges (for example, between 1947 and 1958 the number of government teachers' colleges in New South Wales alone increased from two to seven) and technical education. Then in the 1960s the Federal Government promoted the development of the CAE sector, and more recently came to provide substantial funds for TAFE.

This expansion is more difficult to document because of the lack of reliable figures for the earlier part of this period of growth both for the CAEs and TAFE colleges. However, it is clear that in recent years the rate of growth in both non-university sectors has been high. Table 0.1 indicates that between 1968 and 1978 enrolments in CAEs increased from about 44,800 students to almost 150,000. For much of this period the annual growth rate was extremely high – over 15 per cent for six separate years, and over 5 per cent p.a. for the whole period.[4] Table 0.2 shows that between 1973 and 1977 enrolments in TAFE colleges within the six states increased from just over 500,000 enrolments to over 780,000[5] – and increase of approximately 277,000 (or 54.5 per cent) over a four-year period.

The great expansion in Australian tertiary education between 1946 and the present was the result of the influence of many different factors. In part, it was a consequence of population growth; between 1946 and 1978 the Australian population increased from under four million to over fourteen million people. It also resulted from greater participation by both students completing school and older people in the community in different forms and levels of tertiary education. As Table 0.3 demonstrates, participation rates of young people between 17 and 22 years of age increased appreciably through the 1970s in both universities and CAEs; in CAEs the increase was particularly striking (from 5.9 per cent in 1971 to 10.2 per cent in 1978). In turn, this in part reflected significant changes in the retention rate in secondary education. Table 0.4 sets out dramatically the trend with regard to increased participation by older people in higher education. Over the three-year period 1974 to 1977 the proportion of students over 22 years of age in universities increased from 39.3 per cent to 42.4 per cent, while for CAEs it increased from 32.0 per cent to 41.3 per cent. But in addition the growth in tertiary education since the mid-1940s was the result of deliberate government policy and initiatives. Except in

Table 0.2

Enrolments in Six State Divisions of Technical and Further Education (Streams 1 to 6)

Date	Full-time	Part-time	External	Total	Increase on previous year (%)
1973				508,000	
1974	26,250	526,698	56,994	609,942	20.1
1975	34,862	570,408	57,136	662,406	8.6
1976	36,785	645,665	55,096	737,546	11.3
1977	39,515	687,833	57,641	784,989	6.4

Sources: 1. *Tertiary Education Commission. Report for 1979-81 Triennium Volume 2 – Recommendations for 1979,* Australian Government Publishing Service, Canberra, 1978, p. 38 (for 1974-7)

2. *Technical and Further Education Commission, Report for the Triennium 1977-1979,* Australian Government Publishing Service, Canberra, 1976, p. 16 (for 1973)

Note: Enrolments for 1973 are estimates only.

particular specialised areas of study, the general policy of both the Federal Government and state governments over this period was to provide opportunities for all qualified students to enter tertiary education, though not necessarily to gain enrolment in the institution or field of their first choice.

For universities and CAEs the end of the era of rapid and sustained expansion came quite suddenly and unexpectedly. First came the budget cuts. In August 1975 the Whitlam government announced that the triennial system of funding would be temporarily abandoned, and that for the 1976 calendar year universities and CAEs would be held at 1975 levels of funding for recurrent expenditure while many capital works programs would be postponed. Since then each year universities and CAEs have both suffered cuts in real *per capita* terms in recurrent funding, and funds for capital projects have been steadily reduced. In 1979 university and CAE total expenditure will be reduced further. At December 1977 cost levels, a sum of $1172.0 million ($1086.4 million recurrent, $85.6 million capital) was provided by the Federal Government for universities and CAEs in 1978; in 1979 this will be reduced (at the same December 1977 cost levels) to $1146.0 million ($1094.0 million recurrent, $52.0 million capital).[6] Second, there

Table 0.3

Participation Rates of Persons 17 to 22 Years of Age in Higher Education (percentages)

Date	NSW	Vic	Q	SA	WA	Tas	Aust
Universities							
1971	9.1	7.4	9.6	7.6	7.2	8.3	8.5
1972	9.4	7.6	9.0	7.8	7.2	7.8	8.6
1973	9.8	7.8	8.8	8.0	7.4	7.4	8.8
1974	10.3	8.3	9.4	8.3	7.8	7.4	9.2
1975	10.5	8.5	8.7	8.4	8.1	7.1	9.3
1976	10.6	8.8	9.0	8.8	8.2	7.2	9.5
1977	10.7	9.3	9.0	8.7	8.3	7.0	9.6
1978	10.5	9.4	9.0	8.2	8.4	6.9	9.6
Colleges of Advanced Education							
1971	2.9	8.7	3.9	5.9	6.7	4.5	5.4
1972	3.4	9.2	4.3	6.2	7.8	4.5	5.9
1973	4.4	10.2	5.0	8.9	10.5	4.8	7.1
1974	5.0	11.2	5.7	9.3	12.1	5.2	8.0
1975	5.8	12.5	6.5	10.3	12.8	5.4	8.9
1976	6.3	13.0	6.9	10.4	13.9	5.8	9.4
1977	6.6	12.7	8.2	11.4	14.2	5.9	9.7
1978	7.2	13.2	9.2	11.6	14.3	5.0	10.2

Sources: *Tertiary Education Commission, Report for 1979-81 Triennium*, Australian Government Publishing Service, Canberra, 1978, Volume 1, p. 35, and Volume 2, p. 31

Notes:
1. Figures for Australia include the ACT
2. Enrolments for Deakin University are included in the university figures for Victoria for 1977 and 1978. If these enrolments were excluded, the participation rates for Victorian years would be 8.6 per cent and 8.5 per cent respectively.
3. Figures for 1977 and 1978 for New South Wales and Victoria include advanced education courses in TAFE.

have been government restrictions on enrolments. Since 1976 the universities have been instructed to maintain their intakes of students at 1976 levels. For 1977 the CAEs were allowed to increase the size of their intakes slightly, but for 1978 and 1979 they were instructed to maintain intakes at 1977 levels. Third, as a result of demographic and other factors (especially perceived employment opportunities in particular fields) demand from students has begun to fall. This has been most pronounced in teacher education, but it has affected many other fields too in both universities and CAEs.

Table 0.4

Higher Education Enrolments by Age (percentages in each age group)

Age (Years)	1974	1975	1976	1977
Universities				
Under 23	60.7	60.4	58.4	57.6
23 to 39	34.8	34.7	36.2	36.7
40 and over	4.5	4.9	5.4	5.7
	100.0	100.0	100.0	100.0
Colleges of Advanced Education				
Under 23	68.0	63.5	60.8	
23 to 39	29.0	32.3	34.4	
40 and over	3.0	4.2	4.8	
	100.0	100.0	100.0	

Source: *Tertiary Education Commission, Report for 1979-81 Triennium, Volume 1, Recommendations on Guidelines,* Australian Government Publishing Service, Canberra, 1978.

The effects of these influences have been very dramatic for both universities and CAEs. As Table 0.1 shows, the growth rate has fallen quickly. In universities since 1975 the annual growth rate has fallen progressively from 5.0 per cent, to 3.9 per cent, to 2.9 per cent, to 1.0 per cent, while in CAEs it has fallen from almost 18 per cent in 1975 to between 5 to 7 per cent. But the situation is even more serious when we probe beneath the figures set out in Table 0.1. For example, for universities the number of students commencing study has fallen off much more sharply than total enrolments. In Table 0.5 it will be noted that since 1975 intakes to universities have been relatively stable. However, despite government instructions, intakes into CAEs for 1977 and 1978 increased significantly. Again in the case of universities the number of full-time internal students actually decreased by over 1,600 students (or 1.6 per cent) between 1977 and 1978, while in 1978 the student load expressed in weighted student units (WSUs) also fell. Further, as already mentioned, in 1978 eight out of the nineteen universities had smaller total enrolments than they had in 1977. In case of CAEs, although total enrolments overall increased by 6.7 per cent between 1977 and 1978, seventeen out of the seventy-two CAEs in 1978

Table 0.5

Numbers of Students Commencing Study in Universities and Colleges of Advanced Education

	Universities	CAEs
1974	51,865	44,659
1975	54,326	53,953
1976	54,626	52,122
1977	54,054	56,619
1978	54,787	62,619

Source: Publications of Australian Bureau of Statistics, Canberra

suffered a reduction of enrolments on their 1977 figures. These colleges were ones engaged entirely in or heavily dependent on enrolments in teacher education. Many of these trends suggest that higher education may well be further towards an overall flattening out of enrolments or an actual decline than many people imagine.

The papers in this book provide a reasonably wide coverage of the theme. They are arranged in five sections. In the first section Professor Karmel provides an overview from his vantage point as Chairman of the Tertiary Education Commission. He comments particularly on some of the consequences of stability following rapid growth, discuss future possibilities particularly with regard to demographic considerations, participation rates and political-financial constraints, and explores consequences of the rapid growth of the past two decades on the labour market, academic programs, academic staff, institutional management and organisation, and system management and organisation. The second section provides case studies of selected current problem areas. It contains papers by Dr Barker on engineering education, Dr Anderson on teacher education, Mr Hoper on external studies and Mr Miller on first-year programs in higher education. The third section takes up some important issues in system planning and management. Here Professor Borrie presents information and comment on demographic trends, Mr Jones and Mr Parry look at funding and co-ordination from federal and state perspectives respectively, while Professor Selby Smith tackles a problem that few academics and administrators have had the courage to face squarely – the amalgamation and closure of universities and colleges. Section IV provides a discussion of some institutional responses and

consists of papers by Professor Roe on improving teaching and learning, by Professor Johnson on problems related to academic staffing, and by Professor Low on The Australian National University's recent experiments with academic reviews. The focus of the final section is on looking to the future. Professor Birt, Professor Beswick and Mr Coughlan each deal with the possible future for one of the existing sectors of tertiary education, while Dr Harman explores some options for the creation of new multi-level tertiary institutions.

Despite the wide coverage provided by the various papers, the book does not pretend to provide a comprehensive treatment of the topic. Clearly many subjects are not treated in the depth they deserve, and many others are not even discussed in detail. For example, there is little reference to the problems of youth unemployment, to the effects of changing technology on the labour market, to the problems of oversupply of graduates in particular fields other than teaching and engineering, and to possibilities for further developments in the area of recurrent education. Further, the papers concentrate largely on the university and CAE sectors and do not provide a proper coverage of the TAFE sector. This emphasis of the book was not intended. However, since the TAFE sector is not in a steady state the various authors inevitably concentrated on universities and CAEs. But there is a more fundamental reason for this lack of balance in treatment. In simple terms, most students of tertiary education know little about the TAFE sector, and the literature on TAFE is still very limited indeed.

Throughout the book a number of themes stand out; of these six deserve special comment. First, despite the fact that the growth rate in universities and CAEs has dropped dramatically, it is somewhat misleading to talk of Australian higher education as being in a 'steady state' situation. As we have already noted, total enrolments for each of the two higher education sectors have not yet levellled off; in 1978 university enrolments increased by 1.0 per cent and CAE enrolments by 6.7 per cent. Of course, it is possible (and perhaps highly likely) that within a short space of time total enrolments in either or both sectors may become stationary, or begin to fall. We have already noted that each year since 1975 the size of the new student intake into universities has changed relatively little. Presumably this trend alone in time would produce a plateau in enrolments for the university sector. But apart from

this, the term 'steady state' is also somewhat misleading in that it implies no change at all in the relevant variables. Even it total enrolments were to become stationary, we could still expect changes to continue almost indefinitely. For example, while enrolments in some fields and in some particular institutions would fall, in all probability they would rise in other fields and other institutions; something along these lines is already taking place in the university sector. Moreover, as Professor Karmel demonstrates in his overview paper, many important and quite fundamental changes will continue in the higher education system for some years as a direct consequence of the fact that the present situation of relative stability has followed a period of sustained rapid growth. He cites as examples an ageing of academic staff in both universities and CAEs (since most institutions have relatively young staff, the retirement rate for the next few years will be quite low), and a sharp increase in the proportion of the workforce holding university or CAE qualifications. On the other hand, the term 'steady state' is firmly entrenched in the literature of higher education, and it provides a handy means for referring to a no-growth situation and all that follows from that.

A second theme that runs through many of the papers relates to the future prospects of the university and CAE sectors. Essentially the agreed judgment of the contributors is that, at least in the short term, there is little prospect for substantial growth either in student numbers or in levels of government financial support. With regard to student numbers, both Professor Borrie and Professor Karmel point to the demographic realities from which stem the main causes of the present drop in the growth rate in universities and CAEs, and demonstrate that for the next two decades population trends are most unlikely to be favourable to growth. With a reduced birth rate and assuming a relatively low annual gain of immigrants, Professor Borrie estimates that by the year 2001 the Australian population will have grown to only between 16 and 17.6 million. This means that the population growth rate will be much less than that experienced over the past two decades. Borrie's actual estimate of population growth is 0.75 per cent to 0.44 per cent a year in the absence of immigration, or about 1.1 per cent to 0.8 per cent a year with an annual flow of 50,000 immigrants. A much lower population growth rate will have both direct and indirect consequences for student enrolments in higher education. The direct consequences

will be that the numbers of potential students will no longer increase at the same rate as they did during the 1950s and 1960s. With regard to the main traditional clientele group for higher education (i.e. the 17-22 years age group) the number will increase little between now and 1995, and over different periods within this time span will actually fall. Professor Karmel estimates that the numbers in this age group will increase slightly from now until the early 1980s, and then decline for some years. This will be followed by some more growth in the late 1980s and by a further decline. By 1995 the numbers will be very close to those for 1978 and the prospects for real growth in the age group will not return before the year 2000. Thus, even if participation rates amongst this age group remain constant, intakes into higher education from this group will not.

The indirect consequences of a lower population growth on higher education will be felt mainly through their influence on participation rates. For example, declining school enrolments will mean reduced demand for teachers, and this in turn will most likely lead to reduced enrolments in university and CAE teacher education courses. Dr Anderson believes that reduced demand for teachers will have a much greater effect on higher education than reduced demand in any other professional area. This is because teaching is by far the largest single professional field within undergraduate education, and because it seems likely that the downturn in growth in teaching is likely to be more severe than in most other areas. Dr Anderson demonstrates how large the reductions in numbers of primary and secondary teachers may be; for example, between 1979 and 1986 the number of children in primary schools is likely to fall by 10 per cent, and unless schools are staffed more generously this alone could lead to a loss of 8000 teaching posts.

This influence of population trends on participation rates makes it by no means easy to predict future participation rates. But in addition participation rates are difficult to predict because they are influenced as well by a number of other factors including the state of the national economy, the value placed on high level qualifications by employers, career ambitions and motivations of young people and government policies. On balance the contributors tend to take an optimistic view, believing that, at least in the long term, it is likely that participation rates both for persons in the 17 to 22 years age group and for older persons in the community will rise further.

Professor Karmel thinks that retention rates in high schools and participation rates in tertiary education will both most likely rise further in the long term. At the same time, he notes that at present young people are quite sensitive to the state of the employment market (we have already noted that participation rates have levelled out for universities and CAEs) and points to signs of switches in the form of participation, such as from full-time to part-time study, and from enrolment in universities and CAEs to enrolment in TAFE. Mr Hopper believes that demand from adults in the community for tertiary education still has not been fully met, and that we may well see a clear trend towards more part-time and external study.

It is not always realised that government policies can have a major influence on participation rates. For instance, through quotas or limits on enrolments governments can quite effectively limit increases in participation rates or significantly influence the balance of enrolments between sectors, between fields and between full-time and part-time study. On the other hand, by providing facilities and through inducements such as scholarships or TEAS living allowances governments can encourage overall increases in participation rates, or increases in particular fields or institutions. For instance, the current problems with regard to teacher education enrolments could be significantly cushioned if federal and state authorities decided that all teachers must complete a four-year bachelors degree course before commencing teaching.[7] On the same lines problems in some CAEs with regard to falling teacher education enrolments could be somewhat lessened should the Federal Government decide to accept the recommendations of the Sax Committee on nurse education.[8]

With regard to future prospects for funding, it is clear that all education, and higher education in particular, is suffering something of an eclipse in terms of public popularity. In the community there are strong voices claiming that too much money has been spent on education and that it is desirable to cut back expenditure. Possibly in time this mood will pass, but for the present there are certainly no grounds for optimism. As Professor Karmel notes, there are no signs of a revival of that enthusiasm for educational spending that the universities enjoyed in the late 1950s and early 1960s, that the CAEs enjoyed in the late 1960s and early 1970s, and that the schools enjoyed in the early 1970s.

Third, the drop in the growth rate and the decline in enrolments

in some fields and in some institutions have produced a host of difficult management problems for university and CAE governing bodies and their senior administrative and academic staffs. In many cases both governing bodies and senior staff are ill equipped to deal competently with these problems, and there is available very little expert help on which they can draw. As already noted, most senior administrators and academics have spent their whole careers to date in an era of expansion, and the kind of management style and skills that went well with growth often are not at all suitable for an institution with stable enrolments, or for one in which enrolments are falling. Further, as Taylor has suggested elsewhere, contraction may well demand a somewhat different management style from that required when enrolments are stable. He writes:

> The self-effacement and low-key decision-making that sits easily with the maintenance of steady state might not match the needs of a rougher political climate that accompanies contraction. The one thing that contraction *does* require is decision, and of a kind that seldom went with growth.[9]

Even a stable state requires more decisions than a situation of growth. When resources are freely available and student enrolments are expanding the main concern of administrators is to get roofs over students' heads and teachers in front of classes. New activities can be supported from the annual marginal increments of additional resources, and few painful decisions have to be made about weaker programs and departments. In contrast, in a stable situation or in a period of contraction very difficult decisions have to be made about priorities. Which fields and programs are to be encouraged and which are to be run down? Which fields of research are to be encouraged and which are to be phased out? These decisions have to be made against the growing recognition that in most cases all resources for new ventures must come from existing programs. It is one thing to accept this principle but quite another to put it into practice and to decide who will make the decisions about quality and priorities and to develop appropriate procedures to be followed. In his paper Professor Low explains how his university has tried to cope with this situation and has developed procedures for systematic evaluative reviews.

Over the next few years it seems almost inevitable that much greater emphasis will be given to evaluation and review of existing

programs, policies and organisational arrangements at both institutional and system levels. Already a number of universities and CAEs have developed mechanisms for systematic reviews and evaluation, while the Commonwealth Government has agreed to the establishment by the Tertiary Education Commission of a program of evaluative studies; for 1979 an amount of $180,000 has been provided for this purpose.[10] The development of effective evaluation and review mechanisms will not be easy. Most tertiary institutions and government bodies have little past experience on which to draw, and there is a great shortage of persons with high level skills in this area. Moreover, evaluation and review are far more complex and difficult activities than many imagine. For one thing, evaluation has a highly political character. 'Contrary to common belief', writes Ernest R. House, a leading American scholar in the area of school-level evaluation:

> . . . evaluation is not the ultimate arbiter, delivered from pure objectivity and accepted as the final judgment. Evaluation is always derived from biased origins. When someone wants to defend or to attack something, he often evaluates it. Evaluation is motivated behavior . . . At its simplest evaluation is the process of applying a set of standards to a program, making judgments using the standards, and justifying the standards and their application. But there are many standards, especially in a pluralistic society: which to apply? There are many ways of using the standards. Often the initiator of the evaluation determines the standards: if a school superintendent wants to defend a program, he usually chooses the ground on which it is evaluated, if a school critic wishes to attack the program, he chooses different standards. Whichever side the results favor will use them to gain political advantage. Evaluation becomes a tool in the process of who gets what in society.[11]

Evaluation has even more political facets than House suggests. Certainly, as he states, a decision to evaluate something or someone is a political decision primarily because there is the intention or possibility of modifying the distribution of the stakes or, at least, of modifying the influence available to some persons to press for a new distribution or to maintain the *status quo*. The choice of criteria too is largely political. But the decision to evaluate is itself usually a political decision, one determined by the relevant influence of pertinent actors at any point of time. Moreover, a decision to

evaluate is usually not the final political decision; those to be evaluated are generally not without some political influence and they use it to ensure, to the best of their ability, that an evaluation does not reflect badly on their efforts.

Many of the papers deal with other important management and administrative problems at institutional level – staff morale and turnover, reduced flexibility, a strong tendency to increased administrative centralisation, more rigid management practices, the scaling down of hopes and expectations, the special problems of first-year classes, the lack of real concern about improving the quality of teaching and learning, and the difficulties of making programs in professional areas more adequately serve the current needs of society. Understandably, problems related to academic staff receive particular attention. Professor Karmel comments on the low turnover that can be expected in the next few years as a result of the fact that university and CAE staffs are still relatively young, Professor Johnson illustrates the complexity of problems of staffing, such as low turnover, reduced flexibility between fields, and lack of promotion opportunities through a case-study of the School of General Studies at The Australian National University, while Professor Selby Smith points to important considerations with regard to academic staff if amalgamations or closures of tertiary institutions are to be successfully carried out.

A fourth theme relates to problems of system-level management and control that have emerged with the cessation of growth at both federal and state levels. There are difficult decisions to be made with regard to particular fields of study and particular institutions. For example, with regard to teacher education enrolments there is the problem for governments of deciding how much to cut back on intakes, and the dilemma of whether to cut all programs evenly across the board or to make selective cuts. There are also difficult decisions to make concerning enrolments in fields where there are at present surpluses. Professor Borrie warns against the idea that we are about to be inundated with large numbers of unemployable graduates. He sees the increasing proportion of graduates in the workforce as something to be welcomed, not feared. He points to the opportunities that the present situation affords:

> With the large stock of young professional and skilled people now available and expected to emerge from our tertiary institutions, the years ahead must surely be seen as years of

> opportunity, for increased efficiency and productivity, rather than as years of surplus. The policy issue now is how to get the pay-off in the future from the investments from the past . . . never will the nation have had such an opportunity to improve the quality of its workforce.

Apart from these difficult decisions there are strong pressures for greater co-ordination and central control of individual institutions, for an increased emphasis on manpower planning, for rationalisation of institutions and courses and for the development of new mechanisms of accountability. Old tensions have become more pronounced – federal *v.* state, institutional autonomy *v.* co-ordination, and centralisation *v.* decentralisation. There is also a definite move towards greater government intervention in universities and CAEs. This is a matter for concern, for it is our belief that higher education institutions operate best under conditions of maximum independence. Martin Trow has observed a similar trend in the United States with regard to public universities and colleges. His comments are worth noting:

> State planning efforts are no longer 'merely' aimed at managing growth, but now address themselves to evaluating and improving academic programs. But it is one thing when the concern for reforming academic programs lies in the administration of the university itself; it is quite another when it is located in the administrative departments of government. Here is a potentially serious threat to the freedom and autonomy of public higher education in America, and, in my view, the source of the gravest uncertainties for the future of our leading public colleges and universities. It may be that our best efforts at 'planning' should be addressed to the question of the relations between higher education and the state, and to the dangers of increasing state intervention into the heart of the teaching-learning process in our public universities.[12]

A fifth theme that comes out clearly from the papers is that in the present situation it is vital that higher education and the whole tertiary education system respond in a positive, forward-looking way. Clearly there are problems of considerable magnitude, and the institutional and personal hopes of many will never be realised. But higher education is by no means finished. It can perform functions of great value both for individuals and for society, and with effort, imagination and co-operative enterprise workable solutions can be developed to meet many of the problems that confront universities

and CAEs today. Further, the current situation offers possibilities as well as problems. Martin Trow's comments written for an American audience are equally relevant for the Australian scene:

> . . . it is less well recognised that steady-state may involve gains for institutions as well. For example, there may be a distinct reduction in the level of faculty distraction. The very rapid growth of the 50s and 60s created the problem, for faculty members and administrators alike, of managing growth rather than of developing programs. It may be that under conditions of steady-state, university and college teachers and administrators both give more of their time and attention to the quality of the academic program.[13]

A positive response means facing up to the challenge of making courses fit the contemporary needs of society. As Barker puts it, there is no use adding to the efficiency of the old sailing ship when a completely new age of steam is about to dawn. It means taking the hard decisions when required, engaging in medium-and long-term planning as well as short-term planning, and looking far ahead as Birt, Beswick and Coughlan have done with regard to the three current sectors of tertiary education. It also means exploring possible new administrative and learning arrangements to make more effective use of existing resources.

Sixth, the papers demonstrate clearly the need for policy-oriented research in the field of tertiary education. As Professor Beswick points out, such research has hardly begun in Australia. Apart from work from the Regional Colleges Project there are available no comprehensive national studies of the characteristics of the student population or of academics. So many important policy questions have received no serious attention at all, and there have been few attempts to evaluate existing program policies and procedures. Frequently sweeping claims are made without reference to data, and planning for the future is seriously limited by the lack of research studies and by the inadequacy of educational statistics. But for policy-oriented research to develop significantly both government encouragement and funding is essential. Professor Beswick points to the need for multi-disciplinary team research, while Mr Parry calls for the establishment of an independent national research body which could, to use his words, 'stand independently of the governments and the established education bodies and make a sustained study of where post-secondary education, . . . ought to be in fifteen or twenty years hence'.

References

1. We are indebted to Mr Ron Parry for the title of the book and for the idea of 'academia becalmed'. See his article, 'Academia Becalmed on a Sea of Words' (*Education News,* Vol. 16, No. 6, 1978) which provides an excellent report of the conference on 'Australian Tertiary Education in the Aftermath of Expansion' at which most of the papers in this book were initially presented.
2. This is expressed at December 1977 cost levels. See Tertiary Education Commission, *Report for 1979-81 Triennium: Volume 2 Recommendations for 1979,* Australian Government Publishing Service, Canberra, 1978, p. 77.
3. This introduction assumes a good working knowledge of the Australian tertiary education system. Overseas readers will find the essential features of the system described and explained in the following publications: G.S. Harman and C. Selby Smith, 'The Universities of Australia', *Commonwealth Universities Yearbook,* Association of Commonwealth Universities, London, 1978, Vol. 1, pp. 1-8; Bruce Williams, *Systems of Higher Education: Australia,* International Council for Educational Development, New York, 1978; Barbara Burn and Peter Karmel, *Federal/State Responsibilities for Postsecondary Education: Australia and the United States,* International Council for Educational Development, New York, 1977; E.R. Treyvaud and John McLaren, *Equal But Cheaper: The Development of Australian Colleges of Advanced Education,* Melbourne University Press, Melbourne, 1976; G.S. Harman and C. Selby Smith (eds.), *Australian Higher Education: Problems in a Developing System,* Angus and Robertson, Sydney, 1972; and Terry Hore, Russell D. Linke and Leo West (eds.), *The Future of Higher Education in Australia,* Macmillan, South Melbourne, 1978.
4. It should be noted that in Table 0.1 the figures for CAEs before 1974 include enrolments in those thirty-odd teachers' colleges which became CAEs on 1 July, 1973.
5. These figures are for enrolments, not students.
6. See Tertiary Education Commission, *Report for 1979-81 Triennium,* Volume 2, p. 77.
7. It is conceivable that the Federal Government Committee of Enquiry on Teacher Education being chaired by Professor Auchmuty could recommend along these lines.
8. *Nurse Education and Training: Report of the Committee of Inquiry into*

Nurse Education and Training to the Tertiary Education Commission, Canberra, 1978. This Committee recommended among other things a further extension of basic general nurse education courses in colleges of advanced education, and suggested a target figure of 2200 places in CAE nursing schools by 1985.

9. William Taylor, 'Managing Contraction', paper presented at the Fourth International Intervisitation Program in Educational Administration, Vancouver, May 1978.
10. Tertiary Education Commission, *Report for 1979-81 Triennium,* Volume 2, p. 11.
11. Ernest R. House, *School Evaluation: The Politics and Process,* McCutchan, Berkeley, 1973, p. 3. See also Gerald R. Sroufe, 'Evaluation and Politics' in Jay D. Scribner (ed.), *The Politics of Education: The Seventy-sixth Yearbook of the National Society for the Study of Education,* University of Chicago Press, Chicago, 1977; and J. Myron Atkin, 'Institutional Self-Evaluation Versus National Professional Accreditation', *Educational Researcher,* Vol. 7, No. 10, November 1978.
12. Martin Trow, 'Notes on American Higher Education: "Planning" for Universal Access in the Context of Uncertainty', *Higher Education,* Vol. 4, No. 1, 1975.
13. Ibid.

I
Overview

Chapter 1

Tertiary Education in a Steady State

Peter Karmel

Stability after Rapid Growth

The title of this paper and the title of the overall theme of 'Australian Tertiary Education in the Aftermath of Expansion' need to be read together. To talk of tertiary education in a steady state is something of a misnomer at present, because a steady state is one in which there is no change in the relevant variables, and that really is not the position in which we are placed at present. It is important to distinguish between a situation in which stability is following a period of rapid growth, and a situation which has been in a steady state for some considerable time. We are at present in the first kind of situation; Australian tertiary education grew very rapidly, but now it has levelled out. We are not in the second kind of situation, which would be a true steady state.

Effects on the Academic Staff Structure

The difference I have referred to is an important one, because there are certain variables which will certainly change as a result of the situation of stability immediately following growth. For example, because our tertiary system has been growing very rapidly in the past, the age distribution of the staff of the institutions – I refer particularly for the moment to universities and colleges of advanced education – is a relatively young one. In universities at present some 17 per cent of the total academic full-time staff, including tutors, is

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Professor Karmel is Chairman of the Tertiary Education Commission. This chapter is an edited transcript of the opening address he gave to the conference held at The Australian National University in July 1978 on 'Australian Tertiary Education in the Aftermath of Expansion'. The transcript was prepared for this publication by the editors, and it is published with Professor Karmel's permission.

over the age of 50 years, and a calculation for the colleges gives the figure at about 15 per cent. However you look at it, only a small proportion of people may be expected to retire over the next fifteen years. Indeed, in the universities there are only 260 members of the full-time academic staff over the age of 60 years, which gives a rate of retirement of something slightly over fifty per annum for the next five years in a total population of 12,000 academics. I have no doubt the situation is about the same in the colleges.

If the universities and colleges had been in this situation for a long period we might have expected a rate of retirement of approximately 3 per cent per annum at least. Such a rate with other turnover and the odd accidental death would open up a limited number of opportunities for young people in the institutions, and would lead to a stable age distribution with a steady intake of young people at the lower end and a steady progression through the ages. We certainly do not have that in Australia at present; we have a relatively young age distribution, and later I will deal with one of the implications of that for the future.

Effects on the Production of Graduates

As a result of the great expansion in tertiary education, Australia is now producing appreciably more graduates from universities and colleges than it was fifteen or twenty years ago. The number of graduates in the workforce at present is the result of the relatively small outputs of the last twenty to thirty years. The number that will be in the workforce over the next twenty years will be the result of the relatively large output that we will continue to produce. Thus there will be no steady state in the distribution of the workforce by educational qualifications, just as there will be no steady state in the age distribution of the staff of the institutions.

In the paper I intend to concentrate more on universities and colleges than on TAFE, because TAFE is still growing significantly. TAFE enrolments are increasing by about 8 per cent per annum; the problems of TAFE are more similar to those of the universities and colleges ten or fifteen years ago than they are to those of the steady state. It is, of course, important to emphasise that TAFE will not be able to go on growing at this rate for ever. The idea that you can extrapolate these exponential rates of growth for long periods is a ridiculous one, but it is a trap into which many of us fall; a more normal situation in any population is a situation of relative stability.

An examination of the growth of enrolments in universities and colleges over the past twenty-odd years illustrates this. In the case of universities, between 1955, the year in which enrolments steadied after the immediate post-war bulge, and 1975 enrolments rose from 31,000 to 148,000 students. That is an increase of nearly five-fold in twenty years, and it gives an annual growth rate of slightly more than 8 per cent. In the last two or three years the growth rate in university enrolments has been at the rate of only 2 or 3 per cent, while the actual total student load in universities this year is in fact slightly lower than it was last year – the first decrease since the early 1950s. One could predict with confidence that over the next few years university enrolments will show only negligible growth. As far as CAE enrolments are concerned, we can begin the series only about 1968; before then there is great uncertainty as to the meaning of college enrolments. Between 1968 and 1975 college enrolments rose from 49,000 to 126,000 students, which is a two and a half-fold increase in a very short period, and a rate of growth of about 14 per cent per annum. In the last few years that has dropped back to 5 per cent, and, again for reasons of financial constraint and government policy, one can expect college enrolments to stabilise within the next couple of years.

This great growth in enrolments has been accompanied by a great growth in output of graduates, defining graduates as people who obtain a formal degree or diploma. We do not have adequate figures to compare the number of college graduates in 1955 and today, but we can do this for universities. In 1955 the Australian universities produced just over 3000 bachelors degrees, nearly 300 postgraduate diplomas and not quite 300 higher degrees. In 1977, just twenty-two years later, the universities produced 24,000 bachelors degrees, over 4000 postgraduate diplomas and 2700 higher degrees. Thus we multiplied the bachelors degrees seven-fold, the post-graduate diplomas about sixteen-fold and higher degrees ten-fold. Moreover, in the very year in which the universities produced 24,000 bachelors degrees, the colleges of advanced education produced 24,000 UG1, UG2 and UG3[1] graduates and another 4000 or so postgraduate diplomates. By 1977 the number of undergraduate qualifications given by colleges was roughly equal to the number given by universities, and the number of postgraduate diploma qualifications was also roughly equal to the number given by universities. Thus we are now producing nearly 50,000 people a year with first degrees or

diplomas. Some of this is duplication, because some students are converting from a lower diploma to a higher one, and in some cases there are people taking second degrees. But even allowing a 10 per cent overlap, the figure is very large.

Looking To The Future

Demographic Considerations

Of the growth that took place in the last two decades about half was due to population growth and about half to increases in participation in higher education. If we look to the future, the first point to note is that the demography is not favourable to growth. This is pointed out in the most recent publication of the National Population Enquiry.[2] If we consider, for example, the age group 17 to 22 years, which is the one we have traditionally looked at for universities and colleges, there is still some growth left until the early 1980s. There is then a decline, some more growth in the late 1980s, and again a decline in the 1990s. By 1995 we will be back to the same number of people as we have this year (1978). Although there will be some variations between 1977 and 1995, over the long haul of that twenty-year perspective there is no demographic potential for growth of student numbers. (There may be, of course, some growth from higher participation among the older age groups.) We may reasonably conclude then that while demography will not produce a decline in enrolments from school leavers, certainly not before 1995, it is not going to produce any strong growth.

Participation Rates

When we come to participation, the situation is more debatable. School retention rates have levelled out over the last few years; in fact, the rates among boys have actually fallen slightly, while the rates among girls have risen considerably – so much so that retention of girls in high school is now slightly above the retention of boys. I find it difficult to believe that in the long run these rates will not rise further, as pressures for people to get higher qualifications reassert themselves. But it is certainly the case that young people seem quite sensitive to the state of the market – to the value of getting a higher qualification – and there is at present a levelling out in participation in higher education. Further, there are some signs that there may be a switch of full-time students from

universities into colleges, but perhaps to a greater extent from both universities and colleges into full-time TAFE study. In the longer run, I would expect the upward trend to reassert itself. The differentials between certain areas in Australia (retention in the Australian Capital Territory is nearly twice that of the average for the rest of Australia), the differentials according to socio-economic class and the differentials between the government and non-government sectors of schools are such that it is difficult to believe that there will not be some further increase in the future.

Political-Financial Constraints

A third factor that must be considered in looking to the future is the political-financial constraints under which universities and colleges operate. There is little doubt that education generally, and higher education in particular, is suffering an eclipse in terms of public popularity. There are strong views held by many people that too much money has been spent on education, and that it would be desirable to cut educational spending back. We have had financial constraints imposed on us since 1975, particularly in the higher education sectors, and it has been partly due to these that the numbers of enrolments have levelled out. However, in my view enrolments would have levelled out irrespective of the financial constraints. It is difficult to guess ahead as to the likely climate in a few years time, but I see no signs of a revival of that enthusiasm for educational spending that the universities enjoyed in the late 1950s and early 1960s, that the colleges enjoyed in the late 1960s and early 1970s and that the schools enjoyed in the early 1970s.

Consequences of Growth

What are the consequences of having grown so rapidly for twenty-odd years and then levelling off? I propose to look at them in relation to five areas: the labour market (perhaps the most important from the point of view of our customers, the students), academic programs, academic staff, institutional management and organisation, and system management and organisation. The consequences for students and graduates are covered by a consideration of the labour market and academic programs.

The Labour Market

The 1971 Census gave us information for the first time on the number of people in the workforce who hold degrees. The definition of degree is in the strict sense and does not include

diplomas, but the figures illustrate an important point. The number of persons in the workforce who held degrees in 1971 was 120,000. Unfortunately the 1976 Census has not yet been finally tabulated, and all that can be done is to cast that figure forward according to the number of degrees which have been awarded since 1971. On this basis it appears that the number of degree holders in 1977 in the workforce would have been probably about 230,000. This is almost a doubling of the number in six years. As I pointed out earlier, we are producing people with degrees from the universities at the rate of 24,000 a year, and in the case of the colleges there is a mixture of degrees and diplomas being turned out also at the rate of 24,000 per year. In 1971 the 120,000 degree holders would have constituted about 2 per cent of the workforce. If we had also counted people who held qualifications equivalent to the present diplomas, the figure might have been 3 or 3.5 per cent. If we look forward twenty years or so, the number of people with diplomas or degrees in the workforce will probably rise to about one million; this will produce a proportion of about 16 per cent of the workforce. Thus, even if the size of our institutions is held constant, inevitably there will be a sharp increase in the proportion of the workforce who hold university or college qualifications.

Unless there are major changes in the structure of employment by way of creating large numbers of jobs which require these qualifications, it is almost inevitable that in obtaining work graduates will be forced down the job hierarchy. In passing I should say that unemployment among graduates is less than unemployment among the adult workforce as a whole. New graduates take some time to get jobs, but the probability of getting a job is directly correlated with educational qualifications. But even if all graduates get jobs, there will be accusations levelled against higher education for producing under-employment among graduates – graduates doing jobs beneath their skills. For the graduates this may well produce frustration, if they have aspired to challenging and interesting jobs, believing that a piece of paper entitles them to a particular kind of job. Employers too may well be dissatisfied with employees who are themselves frustrated or who appear to have qualifications which do not fit the jobs. This is something we have lived with over a long period. The qualifications for getting into the Commonwealth Public Service or securing particular jobs in industry or commerce have been rising steadily over a long period,

and I refuse to become excited about it. Just because we are producing graduates with certain qualifications we cannot expect society to have jobs that demand precisely those qualifications. In the United States this process has been going on for a long time and there people have adjusted to college graduates being employed in more humble jobs. However, forcing graduates down the job hierarchy has a rather special effect on those in the labour market who are the least well qualified, particularly the early school leavers who do not have high formal educational qualifications. Although graduates may end up in jobs that they do not particularly value, at least they are likely to end up in jobs, whereas the less well qualified may be put out of jobs altogether.

One of the major problems that we will have to face in the employment market is that the trend towards the production of more and more graduates will force a revaluation of the match between academic qualifications and the requirements of jobs. This in turn will require us to worry about the bottom end of the labour market, and how the under-privileged sections of the community are treated. The trend I have just mentioned has been exacerbated over the past few years by the peculiarity of the age distribution of the population. The proportion of people aged 20 to 24 years, which is precisely the age group from which most people awarded a degree or diploma qualification come, was relatively small in the early 1960s, and will be relatively small in the late part of this century. But it will peak between the years 1971 to 1981. Consequently we are going through a period in which the particular difficulties of the mounting numbers of graduates has been heightened because of a bulge in the age groups from which they mainly come. Some employment problems may be moderated from about the end of the 1980s, but that is a long time to wait and we have to do something about them before then. Moreover, one of the main employers of university and college graduates is the public sector; this is a universal phenomenon. There are not high employment opportunities in Australia for graduates in manufacturing, nor in primary industry; the big demand is from the service industries, particularly the public sector. But the demand for labour from the public sector has levelled out in the last few years; this is another reason why graduates are having difficulties at present in obtaining employment and are being forced into what are regarded as less suitable positions.

What kind of responses should we make to this situation? One possibility, and one commonly suggested in the press, is that we ought to reduce enrolments. If we take an individual profession or vocation and examine the likely demand for graduates, whether it is medicine, social work, engineering, veterinary science or teaching, we would find that any reasonable estimate of the supply of graduates matched against likely demands produces a statistical surplus. On this basis, an argument could be made for cutting back across the board. Such a policy would, of course, reduce people's opportunities for higher education, and would run contrary to the long-term historical trend for producing more opportunities at universities and colleges. But the alternative to doing this is to promote the demand for graduates by changing job structures, by changing the attitude of graduates to the kinds of jobs they are willing to take and the attitude of the employers to employing graduates, and by trying to make the job suit the potential employee rather than the other way round. The last would require massive changes in our society. At the same time, it is also possible that, by modifying the kinds of academic courses offered and the objectives of the courses, tertiary education might be able to go some way towards assisting in producing graduates more attuned to the labour market.

Academic Programs

The development of the Ph.D. program in Australia in the late 1950s was designed to provide manpower for employment in universities and later in colleges, the expansion of which was clearly predictable at that time. But we now produce ten times as many Ph.Ds. as we did then, and the employment opportunities in academia have dried up. With a rate of increase of 8 or 10 per cent per annum in the number of academic staff there were plenty of jobs for young Ph.Ds. Now with no increase, the jobs are few and far between; this raises the question as to whether the Ph.D. program in its present form is a suitable program for the numbers of people who are enrolled in it. We have the same kind of problem in teacher training, where we have been turning out large numbers of people with diplomas in teaching and degrees in education. Perhaps these education programs which have been directed towards classroom teaching should be redirected towards other aspects of education or communication. There are all kinds of jobs related to education – in

industry as training officers, and in places like museums, national parks and so on as education officers. The numbers may not be large initially, but it is possible that by de-emphasising the classroom aspects of teaching, qualifications in education might be more generally usable, and a greater degree of transfer by the graduates achieved.

Taking this into account and bearing in mind that the job structure is likely to be modified fairly rapidly in the future due to technological changes, it seems that there are strong arguments for making courses more general rather than more specialised. By making them more general I do not mean that we should aim at more liberal arts/science B.A./B.Sc. types of courses. What I mean is that, within any given field, courses ought to be made more general so that various specialisations can be built on them, either through short academic courses (say one year end-on diplomas) or through on-the-job training in particular job situations.

In periods when education is under a cloud and there appear to be surpluses of graduates, there has always been a tendency to put increased emphasis on vocational education in a narrow sense. This seems to be the wrong response. In saying this I am not questioning the need for the development of vocational courses in TAFE institutions. But I am questioning the extent to which these should be highly specific, and the extent to which these should produce highly specific skills. I believe that the way in which vocational training has come into favour lately is a reflection of the total situation that I have been discussing, rather than a considered response to the situation in the labour market as it affects people with academic qualifications.

Academic Staff

I mentioned earlier that the age distribution of academic staff was such that there would be very few retirements from universities and colleges over the next ten years or so. This situation is one that worries the Tertiary Education Commission and I know it worries university vice-chancellors and college principals and directors. First, there is the effect of this on bright young people. Job opportunities are rare in universities and colleges, and when a young person gets an appointment it is likely to be a tutorship on a temporary basis; opportunities are closing out the young. Second, many of the existing staff were recruited in the periods of acute staff

shortage in the 1960s. It is not insulting to say that some current members of staff of universities and colleges might not have become academic staff under other conditions. Thus the institutions have some staff, particularly in the lecturer and senior lecturer grades (and perhaps some in the professor grades too) who secured jobs because of the market situation in the period when they were recruited. Those people will be with their institutions possibly for another twenty years. Third, opportunities for promotion are getting fewer. The institutions are short of money, the actual difference in cost between someone near the bottom of the lecturer range and someone near the top of the senior lecturer range is considerable. Moreover, large numbers are already at the top of the scales of lecturer and senior lecturer with few promotion prospects; this does not make for a happy staff.

Putting these things together, we come to the conclusion that the tendency for conservatism and lack of innovation amongst academics will grow. Their average age will increase, fewer bright young staff will come in, and existing staff will want to protect their position. Institutions will become less lively; the quality of the academic life of institutions will become a cause of concern.

Another problem is that as time goes by there develops an increasing mis-match of staff capacities to teaching requirements. As student preferences shift from the physical sciences to the biological sciences and from the social sciences to the professions, so surpluses of physicists develop and funds are not sufficient to employ enough biologists, and there are too many people teaching sociology and not enough teaching law. Further, there is little chance of doing anything about this if the staff are tenured; the mis-match is likely to get worse as time goes on.

What are the possible responses to this situation? Most that I can suggest are uncomfortable responses and ones that are disapproved of by various sections of the academic community. One is the postponement of the granting of tenure; this is already becoming increasingly common in some institutions. Second, there is an increase in non-tenured appointments, i.e. fixed-term appointments; this too is becoming more common. These policies do not please staff associations. A third strategy is to increase the use of part-time staff. This was common in the 1930s and 1940s, and many of us did our best to change it in the 1950s. But we may be forced back into this practice. Fourth, there is early retirement, the

possibility of which is closely associated with the type of superannuation arrangements operating. Here the colleges are, on the whole, in a better position than the universities, because a large proportion of college staff belong to state superannuation schemes in which the penalty for early retirement is much less than it is in the FSSU scheme. Fifth, full-time jobs may be converted to half-time ones for some older members of staff. It may well be that there are some academics who would willingly convert to a half job, and thus release some resources for the employment of young people. The sixth and perhaps the most unpleasant strategy is retrenchment. This possibility is raised from time to time, not so much because of insufficient recurrent funds in the total system to pay staff, but because of the mis-match of resources that I mentioned earlier and because of a desire to open up opportunities for young people. One problem with this strategy is the current age distribution. Seventh, there are staff exchanges among institutions. This has been raised on a number of occasions by staff associations, and has the great virtue of bringing new people into individual institutions, even if they are not new academics. There may also be exchanges with research organisations and with institutions in the public and private sectors. Finally, we might consider increasing the number of joint appointments between academic institutions and research bodies like CSIRO and others, and perhaps with health authorities. There are, of course, already a number of joint appointments between medical schools and hospital authorities.

Institutional Management and Organisation

I have already mentioned the lack of flexibility which a lack of growth brings. In a period of growth it is usually possible to manoeuvre increments of resources to points in the institution where needs are greatest. In this way a mis-match of resources is avoided; if biology goes ahead faster than physics, then next year more new resources are put into biology and the imbalance is corrected. But this kind of flexibility has now been lost. Second, institutions, particularly newer ones, have aspirations for expansion, for developing new fields and for becoming excellent in certain areas of their activity. With a levelling out of the amount of money available, these aspirations tend to be frustrated. Management, whether of a faculty or a whole institution, will have less in the way of discretionary funds: funds that are available at the discretion of

management to fund new projects. In universities and colleges about 85 per cent of the budget goes on wages and salaries, and the other 15 per cent includes fixed overheads; electricity, postage stamps, etc. must be covered and there is a minimum amount required to keep the library going. The amount of discretionary funds when the total budget is held level is very small indeed. On top of that, institutions face unavoidable cost increases due to the movement of staff up incremental scales. This stops, of course, when all staff get to the top of the scale; while it goes on it costs money and is painful. Sometimes institutions have to meet unavoidable increases in superannuation and these press on limited budgets. The effect of all this is to endanger the quality of operation of the institutions. This does not necessarily mean that the quality will fall, but it does mean that unless an institution takes corrective steps there is a great risk that quality will fall.

What kind of responses might we expect? Perhaps the first is for institutions to implement schemes of strict economy. People become stricter about when you turn the lights off, how much paper you waste, how many long distance telephone calls you make, and so on. There is no doubt that some savings have been achieved by institutions in this direction. Then there are the deliberate efforts to improve efficiency: an emphasis on cost/benefit and on internal accountability. A number of institutions have found that by changing the way in which they maintain or clean buildings, by changing the way in which they handle the heating of their buildings and so on, they can achieve economies. I notice from time to time in the newsletters that come around from institutions that savings are made in this way. It amounts to placing much greater emphasis on internal accountability in the sense of measuring the cost/benefit of each particular activity. Third, there are reviews of existing activities – what is called in the jargon 'zero-base budgeting'. Are there some activities you could do without completely? Although it may be painful, this is a possibility; sometimes a particular activity can be discontinued when priorities have changed. There is also the tendency to draw back funds as much as possible to the centre of the institution in order to create discretionary funds. Some savings occur from time to time in all organisations, e.g. when jobs are left vacant or planned activities do not occur. Instead of allowing savings to remain with teaching units or departments they are drawn back into the centre for reallocation. This involves a tendency towards

centralisation in the control of institutions.

There is also the possibility of the use of what the former Universities Commission called 'general development funds'. Such funds have been provided to the University of Melbourne and the University of Sydney. They can be used only for projects which have a limited life, or for projects which start developments which can later be transferred on to the normal budget. These funds have worked well in those two universities, and have allowed for a certain amount of new activity to take place by preventing all funds being spread around among the existing activities.

The possibility of collaboration between institutions is also worth looking into. I anticipate that there will be an increasing tendency for universities and colleges to seek funds outside the normal Tertiary Education Commission funds by entering into contracts for applied or pure research, or by finding some alternative source of funds. It will certainly be a great advantage from the point of view of institutions if they can do that.

System Management and Organisation

I now turn to look at the effects of the cessation of growth on systems – on the tertiary system as a whole or on the university system or on the advanced education system. By 'system' I mean the organised provision of higher education. The effects on the system come from a whole series of pressures which build up, both through the government and through the public and the press. The first is the pressure towards more co-ordination of individual institutions. The creation of the Tertiary Education Commission out of the three former independent commissions is an example of this at Commonwealth level; the creation of the Williams Committee to look at the whole situation is another example. At state level, there have been reports from Partridge on Western Australia resulting in the creation of the Western Australian Post-Secondary Education Commission, from Partridge on Victoria resulting in the creation of the Victorian Post-Secondary Education Commission, from Anderson on South Australia recommending the creation of a co-ordinating body to be called the Tertiary Education Authority of South Australia, while in Tasmania Kearney has recommended a body to be called the Tertiary Education Commission of Tasmania.[3] It is interesting to note that within a short space of time there has been a rash of proposals for co-ordinating machinery at both state and the federal level.

Second, there are the pressures not only for co-ordination but also for rationalisation. We have had at least one example of the closure of a college in Western Australia – Graylands. We have had mergers in Ballarat, Bendigo and Geelong. We are about to have two pairs of mergers in Adelaide, and certain other ones are suggested in the Butland Report for the Sydney metropolitan area.[4] There have also been reorganisations, of which Tasmania is an example; and policies for reducing the number of institutions and avoiding overlap between courses. One example of the elimination of a course overlap is in Adelaide where the University of Adelaide has withdrawn from library studies, leaving the way clear for the South Australian Institute of Technology to continue with its established course. These are examples of what has happened, but the pressures for rationalisation will continue. Sometimes they are unrealistic and based on misunderstandings; sometimes they are desirable but for political reasons are unlikely to be effected.

Third, there is the question of accountability. When we talk about accountability it is useful to distinguish between at least three levels of accountability. There is first financial accountability in the narrow conventional accounting/auditing sense: making sure that the Vice-Chancellor does not tickle the till and that the moneys are spent in accordance with the conditions of the grant or requirements of the Act. There is nothing new about this kind of accountability. The second level of accountability is what I call economic accountability. This is about efficiency: making sure that when you buy a piece of equipment you buy the cheapest, or the cheapest that will do the job; justifying your expenditure. Institutions should also be concerned at their failure rates and their drop-out rates with a view to ensuring that they are not excessive, and that if they are, something is done about it; this is economic accountability because it relates the efficiency of producing graduates. The recent discussions on study leave are an example of concern about justifying that kind of activity and expenditure. The third level of accountability, and perhaps the level which is the most significant, is social accountability. Do the outputs of the institutions have the sorts of qualities that we would expect them to? Do the institutions meet their broad objectives? The debate that goes on about literacy and numeracy at schools relates to that kind of accountability. So is the questioning about the suitability of our graduates, and whether we produce the right numbers of graduates of the right kind. Increasingly the public

expect universities and colleges to be accountable in this sense.

Not far removed from this is the issue of manpower planning. During the 1950s and 1960s places in universities and colleges were increased very much in response to student demands. There were students knocking at the door wanting to get in. Manpower considerations were taken into account in the very expensive faculties like medicine, but by-and-large institutions and the system were responding to student demand. But funds were forthcoming from governments not just because the students were knocking on the door, but because the outputs of the institution were in high demand and could get jobs easily. Now that the situation has changed, increasingly we hear demands for gearing the outputs of the institutions to manpower requirements. I do not want to go into the difficulties of trying to do that. I have a great scepticism for detailed manpower planning, and I think that even if you could do it successfully it would raise other issues about accessibility to education. The fact is that manpower planning is now much more popular, and I have even heard reference to the importance of manpower considerations voiced by government departments which are normally not great advocates of planning of any kind.

Finally, as I said somewhat earlier, in these situations there is a tendency to put an emphasis on vocationalism as against a more general liberal education. There is a naive belief that higher education is producing a lot of people who have highbrow qualifications, and that it is not possible to make much use of them. If only one could get back to the noble savage and produce people who could do useful things with their hands. This is a reaction about which one has to be careful. Personally I believe it is important to improve skill training, but at the same time I do not think that all our problems will be over if we merely increase the output of people who are trained in skills, without having a sufficiently broad education to adjust those skills in different directions. This is an important consideration for TAFE, and it is one with which the TAFE Council is greatly concerned, namely that TAFE education should provide a sufficiently broad base to build on and that TAFE does not simply involve training in narrow vocational skills.

All these pressures are in the direction of intervention; they result in the establishment of co-ordinating machinery. The co-ordinating bodies may or may not be in favour of intervention, but even if they do not particularly wish to intervene in the internal affairs of

institutions, pressures for intervention exist. What actually happens flows from the balancing of these pressures for intervention against the conviction that there are real values in institutional autonomy and in diversity. I may not have mentioned earlier that the levelling out of growth and the shortage of funds is likely to inhibit diversity. Diversity stems from growth: new courses and new kinds of institutions are developed. When there is no growth, there will be a strong tendency to do tomorrow what you were doing today.

With regard to the pressures for intervention and to institutional autonomy and diversity I wish to quote several paragraphs from the Sixth (and absolutely last) Report of the Universities Commission which, although not implemented, contained words of the greatest wisdom. The Commission referred to its commitment to university autonomy, but its words can be extended to other tertiary institutions:

> The Commission's commitment to university autonomy stems from a conviction that universities will in general better achieve their purposes by self-government than by detailed intervention on the part of the public authorities. The purposes for which universities are founded and for which society continues to maintain them include the preservation, transmission and extension of knowledge, the training of highly skilled manpower and the critical evaluation of the society in which we live. No university performs its functions perfectly; and it is not difficult to criticise aspects of university teaching and administration. Nevertheless the Commission is convinced that society is better served if the universities are allowed a wide freedon to determine the manner in which they should develop their activities and carry out their tasks.
>
> In a free society, universities are not expected to bend all their energies towards meeting so-called national objectives which, if not those of a monolithic society are usually themselves ill-defined or subject to controversy and change. One of the roles of a university in a free society is to be the conscience and critic of that society; such a role cannot be fulfilled if the university is expected to be an arm of government policy. Moreover, universities must prepare their students for life in a world, the characteristics of which are necessarily imperfectly foreseen. An institution which geared its activities to *known* requirements could hardly provide an education appropriate to meet as yet unknown problems.
>
> None of the above implies that universities would make their full contribution to social life if they were unresponsive to community needs. In particular, universities historically have

> performed the function of being a main source of highly trained manpower, especially in the professions, and it is usually the case that governments are in a better position than individual universities to estimate the manpower requirements of these professions. It is not therefore an infringement of a rationally justifiable autonomy if universities are asked to respond to government requests to expand facilities to train students for the various professions, provided the type of training that is necessary is appropriate to be conducted within a university.[5]

These three paragraphs emphasise the rational argument for avoiding too much intervention in the affairs of academic institutions, while at the same time acknowledging that the institutions have to be responsive to society's needs. What happens in practice will depend on some compromise between these two objectives, particularly when the funding of the institutions is nearly one hundred per cent provided by the Government – a fact which gives the Government a good deal of leverage. For my part, and I think for the part of the Tertiary Education Commission (although perhaps sometimes our actions may lead you to believe differently), we are committed to avoid intervention whenever we possibly can and to avoid involvement in the detailed budgeting of institutions; it is for this reason that I am very committed to the notion of block grants, rather that detailed line item budgeting.

There is no doubt that, in the present atmosphere, there are pressures for more intervention and there will have to be a balancing between those and the arguments which favour leaving academic institutions to make their own decisions and to work out their own salvation. I am sure that most institutions with a shortage of funds recognise that there is great value in avoiding unnecessary duplication of courses and that there are some areas where greater co-ordination and co-operation may pay handsome dividends in terms of releasing funds for highly desirable activities. I think, for example, of some of the discussions that have been taking place on the development of library systems in Victoria and New South Wales. But in the long run, the health of the whole system of higher education will depend on the institutions doing the best they can to achieve flexibility so that they can respond to new requirements and make changes in their organisation and the courses they offer. To the extent that they show that they are able to meet that challenge

themselves so will their autonomy be preserved, and society will enjoy a healthier education system.

References

1. These refer to categories of awards given by colleges of advanced education throughout Australia, i.e.
   UG1 bachelors degree
   UG2 diploma
   UG3 associate diploma
2. *Population and Australia: Recent Demographic Trends and Their Implications. Supplementary Report of the National Population Inquiry,* Australian Government Publishing Service, Canberra, 1978.
3. See *Post-Secondary Education in Western Australia: Report of the Committee on Post-Secondary Education, appointed by the Minister for Education in Western Australia under the Chairmanship of Professor P.H. Partridge,* Government Printer, Perth, 1976; *Report of the Committee of Inquiry into Post-Secondary Education,* Government Printer, Melbourne, 1978; *Post-Secondary Education in South Australia,* Chapters 9 and 10, Government Printer, Adelaide, 1978; and *Report of the Ministerial Working Party on Tertiary Education, Tasmania,* University of Tasmania Printery, Hobart 1978.
4. This is a report to the New South Wales Higher Education Board prepared by Emeritus Professor Gilbert Butland.
5. *Sixth Report of the Australian Universities Commission,* Australian Government Publishing Service, Canberra 1975, p. 58.

II
Case-Studies of Current Problem Areas

Chapter 2

Professional Education: Engineering

L. J. Barker

Introduction

A reading of the current debate of Australian technological education suggests that it may be characterised as a further example of the 'Sailing Ship Effect'. According to Ward,

> . . . the sailing ship developed fastest while it was being supplanted. The big merchantman of 1850 was of about 700 tons and had a crew of 25. By the end of the century it was of 6000 tons and had a crew of 16. Clearly there were marked improvements in structural engineering and in ergonomics. These could be brushed aside as borrowings from the steamship, but improvements in sailing qualities could not. In 1848, tea clippers sailed Home from China against the monsoon in from 129 to 146 days; in 1871 the spread of times was from 104 to 127 days.
>
> This is the 'Sailing Ship Effect'; time, energy, intelligence and money are spent in improving a concept, a branch of knowledge or a device that is inevitably being supplanted by the fruit of more original thinking.[1]

History has shown that in science and engineering there has been a persistent tendency by practitioners to invest effort into the refinement of existing concepts and further development of devices that are obsolescent in the technical and/or social sense. Of course, development and refinement are completely legitimate components of technological endeavour because of the many factors that give rise to the necessity to realise in full the potential of discoveries. But to continue to develop the sailing ship when the steamer is already more profitable is wasteful – often grossly so. To educate for a generation or era that is already passing may be even worse. I would

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submit that much of the current professional engineering education presently offered throughout Australia is directly under the influence of the 'Sailing Ship Effect'.

There is no doubt that engineering educators are well aware of the need for change and improvement in their programs. The question is, what changes and what improvements and how to effect these in the current financial and political situation? Change under conditions of steady state or contraction is an entirely different exercise from change in an expansionary situation where mistakes can be digested and threats to vested interests absorbed in organisational growth. Above all must come the recognition that the new must now be seen as a substitute, not as an addition. This alone is sufficient to stir into frenzied activity the ASP that lurks within every educational institution.

ASP – 'Once the social system is set in motion, an increasing proportion of the evolving normative structure and resource structure develops in response to jockeying among the organisational groups for Autonomy, Security and Prestige'.[2]

This does not mean that those who seek to change are engaged in a lost cause. Workable solutions are entirely possible provided that the techniques of systematic organisation and planning review, linked with serious future studies, are properly employed. For far too long, engineering courses have been developed on the assumption that the future will be a facile extrapolation of the past or with little or no future study. Such an assumption of organisational permanence, together with a limited analysis of the future, constrains course development to the extent that it remains largely concerned with revision rather than renewal.

There are a number of ways of analysing the problems of engineering education. The way I have chosen here is to describe briefly the program and papers for a conference on engineering education convened by the Institution of Engineers.[3] This approach was selected because I have assumed such a program should reflect the current state of affairs and provide an overview of engineering education.

The following statement, in the preface to the conference paper preprints, would appear to demonstrate that the problems facing engineering educators are well appreciated.

> It is being said that Engineering in Australia is at the crossroads, a statement requiring little clarification for most engineers.
> The signs are clearly marked by the now longstanding downturn in economic activity, unemployment within the Engineering Profession, stagnation in the building and construction industries, and the traumatic changes in the nature of some areas of the manufacturing industry.
> Where will the future thrust of Engineering in Australia be directed? Will we continue to develop new products or fix up products purchased overseas? Will we be building new machines and carrying out public works or administering procedures which have been developed for us in the financial game? What sort of engineers does Australia really want?
> Given that Engineering is at the crossroads and that engineers are actively questioning the future of Engineering in Australia, then it must be assumed that the very foundation of the profession –Education – needs to be brought under critical review at the same time.[4]

In other words, it is recognised that life for the engineering educator will never be the same again. Careful examination of the conference papers, however, reveals substantial grounds for concern as to whether the reality of the situation outlined above is to be faced in an open and creative manner or whether, once again, the 'Sailing Ship Effect' will exert its constraining influence.

First and foremost, in analysing the topics of the papers to be presented, there is apparently a substantial preoccupation with refinements to existing educational programs – perhaps to be expected, as most papers are the products of practising engineering educationists. Thus, out of a total of thirty-six papers, the majority are concerned predominantly with refining existing educational structures and programs, with fewer than ten addressing themselves to significant aspects of changing needs and circumstances. In other words, the main thrust of the conference appears to be directed towards refining ways to deal with the future of engineering education from the perspective of the present.

Second, there appears to be only passing reference made to the national economic situation and its effects upon production, services and employment. Third, there is no attempt to analyse the engineering profession in relation to other professions (and other work groups) or to formulate a plausible functional paradigm through which the roles and places of engineers can be analysed in

an interactive manner with other dimensions of society. In this context, it might be remarked that the conclusion of the Institution of Engineers' submission to the Williams Committee – 'that rather than dwell introspectively on our profession's problems, we should indulge in far more positive promotion of engineering as a satisfying and rewarding career for above average and highly motivated students' [5] – is hardly likely to engender confidence in the profession's own problem-diagnostic and problem-solving capabilities!

Fourth, and sufficient for the purposes of this paper, the Conference appears to give little consideration to the effects of federal and state government policies on the 'Critical Education Issues', to quote a conference paper. Such policies affect many factors – the number of tertiary institutions engaged in engineering education, and their teachers, staff and resources; the numbers, levels and qualities of the graduates (and drop-outs); the ranges of courses offering and the balance of generalist/specialist/ non-engineering profiles; the levels and types of employment opportunities for graduates, through tariffs, imports/ exports, productivity, industrial relations, and levels of salaries and wages policies; monetary and fiscal matters and government budgets, and international relationships and agreements influencing trade, and manufacturing licensing arrangements. All these are of vital importance to the future of engineering, and therefore are of great concern to the engineering educator.

If the papers of the Conference on Engineering Education can be taken as being representative of contemporary thinking, then it would appear that there are few signs of a firm grasp of the real problems underlying engineering education and that the myopic approach displayed provides little chance of an effective search for valid solutions.

I do not wish to imply that this Conference on engineering education and its papers are not scholarly or important. I have merely used them to analyse the current state of affairs and to illustrate my point that our attitudes and attempts at planning in engineering education are very much focused on retaining current programs and less on future needs.

Let me present a further illustration. While I firmly believe that the papers presented at the conference on engineering education are enlightening and useful, I also believe that this conference

illustrates our propensity to concern ourselves with institutional matters and the mechanics of educational service provision. Vital as such considerations may be, they need to be tempered and analysed within the context of the issues reflecting the dynamics of the total society. Discussion of such issues often remains buried in the journals or is confined to esoteric conversation.

Gatherings such as I have described tend not to concern themselves with societal needs and expectations, the needs of students and employers, national and international politics/trade/ markets, political/social/economic/ technical trends and impacts, and the interdependence of the professions, of groups and of organisations and institutions.

I have identified the 'Sailing Ship Effect', and the tendency to grapple with institutional-based issues and ignore those that are societal-based as two critical deficiencies in engineering education thinking. However, these problems are not insurmountable and I suggest that some solutions may be found through a deep and systematic consideration of the following two sets of hypotheses. Each of the hypotheses is supported by a series of more specific sub-hypotheses which must also be considered. Therefore, each hypothesis stated below is followed by a series of such sub-hypotheses.

Hypothesis Concerning Contemporary Engineering Education

General Statement

Australian engineering education:

(a) is not responsive to contemporary societal needs;
(b) is so structured, both in the organisational and program sense, that it is incapable of timely responses to emergent needs;
(c) is conducted through didactic methodology which is inappropriate in terms of tasks required of Australian engineers.

Sub-Hypotheses Not in Ranked Order

(1) Professional engineering education has often been shaped by inadequately informed political pressures and by influential members of the profession acting within limited self-serving perspectives.
(2) Commonly, scant regard is paid to orderly and systematic processes of engineering educational planning and the implementation of engineering education programs.

(3) Decision-making as to resource allocations in tertiary engineering education is frequently the outcome of macro- and micro-political processes and not those determined by contemporary and future societal needs and expectations.
(4) There is evidence that the methodologies involved in the socialisation and education of undergraduate engineers limit the attainment of appropriate capabilities and hence work performance effectiveness in uncertain circumstances which require creative, innovatory and problem-solving skills.
(5) There is a need for the engineering profession to appreciate fully its interrelationships with other professional groups and the nature of its mission and function in society.

Hypothesis Concerning the Nature of Employment Opportunities for Professional Engineers within Australian Society

General Statement

Career employment opportunities:
(a) are not realistically matched by the capabilities of engineering graduates;
(b) are constrained by national resource development policies;
(c) are limited by current perceptions of Australian technology in the world society.

Sub-Hypotheses Not in Ranked Order

(1) In the past, in many areas, the capability profiles of engineering graduates have not been reasonably matched to the actual work needs and circumstances.
(2) Until recently, the assumption has been made that graduate outputs will be employed in positions where their professional capabilities will be directly utilised.
(3) National resources development policies have, in the past, limited the opportunities for the deployment of engineers in areas other than primary conversion processes. A meaningful national policy on secondary processing and manufacturing of Australian resources has yet to be developed.
(4) There is a need to develop facilities to produce for the mass markets of developing countries, with an emphasis upon *intermediate,* not advanced, *technology* and in so doing to employ

creatively engineers, and others, in such fields as cheap and reliable transportation, primary energy, water purification, cheap housing, and industrial management.

(5) Implicit in the need to match engineering graduates with employment prospects is the need for an operational economic model of the total Australian society which can be used as a basis for meaningful longer-term planning and decision-making concerning the Australian engineering profession.

It should be emphasised that the two hypotheses and their supporting sub-hypotheses are not offered as an exhaustive list but rather as illustrations of some of those elements in an increasingly dynamic social and economic environment that must be considered by engineering educators as they seek to discharge their tasks. Such hypotheses would, I believe, receive wide support and it is important that they be investigated.

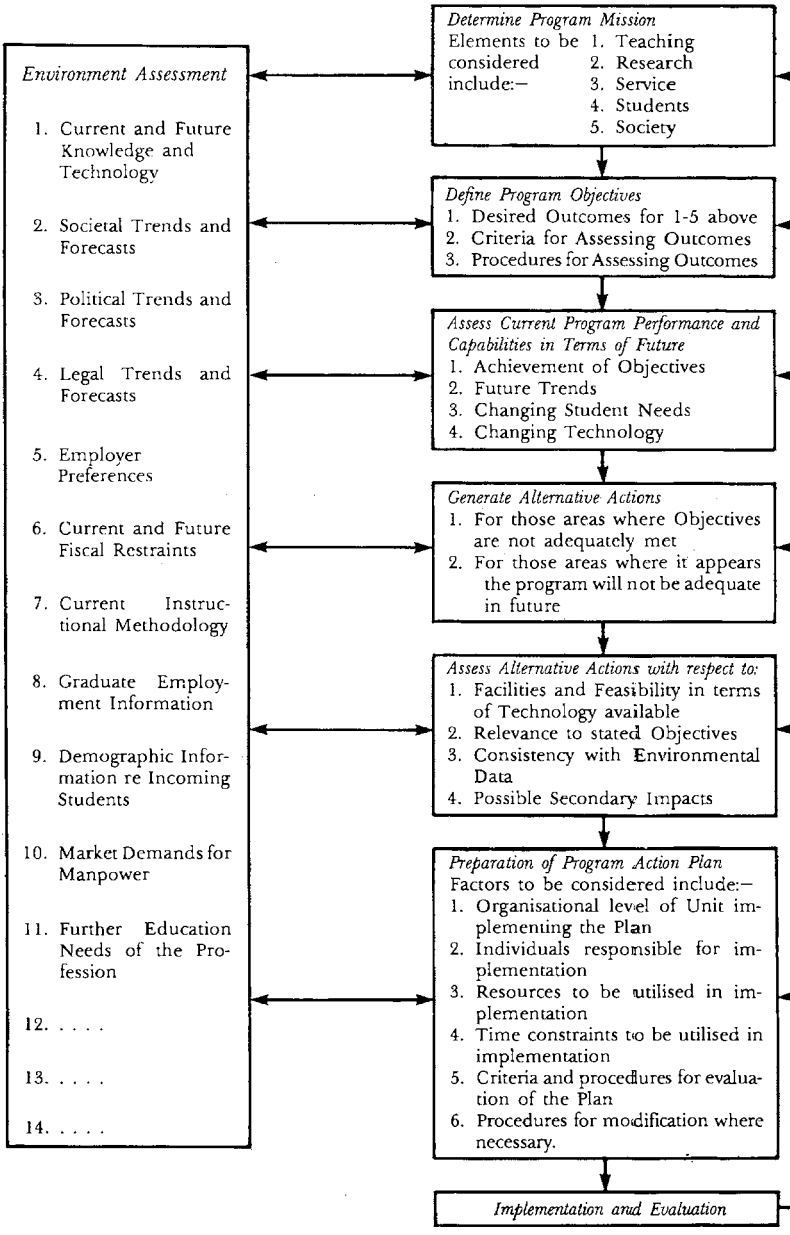
Change Mechanisms in Engineering Education

Program review and planned organisational change can be achieved through the application of basic system concepts. An appropriate process is outlined in Figure 2.1. The process outlined in the figure is simple to articulate and eminently supportable on rational decision-making grounds alone. Unfortunately, such processes are rarely properly used because few of the individuals involved are prepared to submit to the demanding and persistent discipline required.

Engineers are, by the very nature of their training, familiar with systems and it would seem a simple and logical step for the engineering educator to use a system-based process in program development. Unfortunately, however, the engineering mind tends to boggle at the lack of quantifiable data on which decision-making in much of the program development work must be based. In addition, *the environment has to date largely been ignored.* As shown in the figure, environmental information is seen as a vital input to each stage of the process commencing with the determination of the program mission and progressing through to the program planning and implementation. The process also includes an evaluation of program performance, which involves a continuous program review associated with a meaningful feedback of performance data.

Evaluation should be sharply focused on the measurement of program effectiveness in terms of desired outcomes for students,

Figure 2.1 –
Systematic Model for Program Review and Development



research and service. In those areas where achievement is perceived to be below a desired standard, then the nature and degree of change necessary in program content and/or resource support to correct the situation can be determined.

Without analyses of this nature, there is a risk of constantly bringing about changes in programs or in the organisation with little or no understanding of whether the existing structure is achieving the desired outcomes and whether such changes will be any more or less efficient and effective.

Concluding Remarks

It has been postulated that the problems confronting engineering educators have arisen from a persistent attitude of introspectiveness in terms of program and institutional organisation. This will continue until it is recognised that engineering programs cannot be autonomous but must be planned and operated on the basis of a clear understanding of, and response to, their interdependence with the other elements of education services and with the mainstreams of Australian social and economic life.

This task is indeed demanding, but I have suggested that its achievement is possible through the use of a systems approach to organisational and program planning and review. The principles of such approaches have been voluminously expounded in other works. Unfortunately, theories do not carry within themselves the discipline, the resources and authorities necessary for their utilisation. It is for this reason that to date the practice of planning and review has remained largely undeveloped and ineffective and will continue to remain so unless we and our institutions markedly change.

I have attempted to illustrate briefly some of the thinking regarding engineering education currently in vogue. I have suggested some problems associated with such thinking as engineering education enters an era of limited growth and I have presented a process which can be used by engineering educators in adapting their programs to meet the future needs of society. These illustrations and problems are relevant not only to engineering education planning, but planning in most other educational endeavours.

The challenge for us today is to explore further methods for making not only engineering education but all education more

cognisant of the interrelated nature of its endeavour. The various sectors of education should not be planned as separate autonomous programs. Therefore, I would hope that we will become more aware of the interdependence of each topic under consideration and utilise such awareness in our own setting.

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Chapter 3

Some Implications of the Reduced Demand for School Teachers

D. S. Anderson

The decline in demand for teachers will have a greater effect on higher education than reduced demand in any other professional area. This is because teacher education is by far the largest professional field within undergraduate education, and because the downturn in growth is likely to be more severe in teaching than elsewhere.

From colleges of advanced education about 30 per cent of the graduates (50 per cent female, 18 per cent male) have been entering teaching and in a majority of the institutions almost all of the effort has been in teacher education. In the case of universities approximately 26 per cent of graduates have been entering teaching including more than 40 per cent from arts, and about one-fifth from science and economics.[1] The extent to which universities have been influenced by teacher education is not always realised. Teachers have been the largest professional group, aiding the growth of arts and science faculties; their requirements and those of state education departments have influenced particular developments such as the dominance of the three-year pass degree over the honours degree, the provisions for studies to be taken part-time and the growth of external studies. The drop in demand for teachers calls into question the purposes of higher education, the relation between universities and the colleges of advanced education and the relations between faculties within institutions.

Decline In Demand For School Teachers

Between 1979 and 1986 the number of children in primary schools in Australia will decline by 158,000 which is about 10 per

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cent. In some states the decline is proportionately larger; in the government sector of South Australia and Tasmania it is 16 per cent and in Victoria 15 per cent.[2] This drop is the equivalent of about 8000 teachers throughout Australia. At the secondary school level the numbers are declining at present but will pick up again during the early 1980s and will begin to drop again after 1985. By the early 1990s primary enrolments will have returned to present levels and will peak before 2000; at secondary level, however, enrolments will not return to present levels until about 2005.

The effect of the demographic downturn on recruitment in teacher education would not have been too drastic if retirements at 60 or 65 were more or less proportionate to intakes and if movement in and out of the service of experienced teachers was in balance. These conditions, however, do not hold due to the massive recruitment of young people into school teaching during the last twenty years causing the age profile of the profession to be markedly skewed. The average age is under 35; more than half are under 30. Thus retirement at the end of service is much lower than if the age distribution were uniform.[3] Furthermore, the resignation rate of younger teachers has dropped sharply, and applications from experienced teachers for re-entry to the service has increased sharply.

These two conditions – a young teaching service and teachers hanging on to their jobs – have amplified demographic effects and brought the output of teacher education graduates far in excess of anticipated requirements. In South Australia the Post-Secondary Enquiry estimated a surplus of 7700 qualified teachers by 1985; an estimate by the AEC Working Party was near 10,000 or 38 per cent of the qualified teaching force. For Australia the AEC Working Party estimated the surplus of teachers by 1985 as:[4]

	Constant Standards	Improved Standards
Primary	38,800	29,950
Secondary	32,200	23,300
Percentage of teacher workforce	41.7	27.3

The actual surplus will be less than that predicted because publication of the predictions will cause many potential recruits to teaching to seek careers elsewhere. The figures are important, nevertheless, because they indicate the extent of surplus capacity of

universities and colleges for pre-service and in-service courses.

Responses to Oversupply

What should be done about this? One response is that nothing needs to be done to control recruitment into teacher education because market forces will eventually bring supply into balance with demand and anyway, it is said, a surplus is tolerable in other professions so why, if students are willing to risk unemployment, should there be special manpower control on entry to teaching. My own comment on this is that while some surplus of output is manageable, the position has become so out of balance that either quotas should be introduced or the content of teacher education should be varied so that graduates have opportunities in other occupations, or additional employment opportunities for teachers should be created. With respect to the last, the case is being put strongly that there is a need to reduce class size and student-teacher ratios, that teachers require less contact time if they are to do their jobs properly, that time is needed for study purposes and that job sharing and early retirement schemes should be introduced.

Although fairly tough quotas have been proposed it is quite likely that a lessening demand for places will make it unnecessary for the sort of stringent student selection that occurs in medicine.

Another view about the predicted surplus of teachers is that manpower predictions concerning other fields have been wrong in the past and that too much confidence should not be placed on estimates of a vast surplus of teachers. There is a difference, however, between the estimates for the demand for teachers and those made during the past decade or so for other professions. In medicine, law, veterinary science, engineering, chemistry and geology, the predictions have, until recently, been that there would be a shortage not a surplus. Furthermore, in most of the other cases, changes in economic circumstances have had a large effect on demand. In teaching, however, economic circumstances play a relatively small role compared with the drop in birth rates; and for the next five to ten years we are not dealing with estimates alone but with actual births, or rather, the absence of actual births.

Some of the other assumptions in the prediction could be wrong, of course: the retention rates to twelfth grade, at present about 36 per cent of those who start school, could rise; government policies with respect to class size, non-contact time, early retirement and so

on could change; and with respect to the 1990s, the demographers' assumptions about low birth rates and migration could prove to be incorrect.

The South Australian Enquiry calculated that even if the retention rate to twelfth year increased to 50 per cent and if governments allowed much more favourable student-teacher ratios, there would still be a surplus of thousands of qualified teachers in the state through the 1980s. We recommended, therefore, that on top of the reductions already made in recruitment to teacher education courses in universities and CAEs there should be a further cutback of 20 per cent on the 1977 intake. This, we calculated, if introduced in 1979, would reduce the projected surplus in 1985 to about 6000 and thereafter gradually bring the surplus and demand close to an acceptable balance. We did not recommend a reduction in higher education as a whole, the implication being that there would be some compensating increases elsewhere in the system.

The position then is that we are faced with a pretty large surplus of teachers and have the options of doing nothing and allowing the system to bring itself into some sort of equilibrium, of increasing employment opportunities for teachers or of cutting back numbers entering teaching. With respect to the last option, there is the further question of dealing with the excess capacity for teacher education which would result. Broadly the options here are diverting the excess resources to other activities in higher education or closing courses and selling the colleges, as has been done in Britain (which is only a part-solution, because staff remain).

Up to this point the Australian response, judging by the recommendations of the South Australian and Victorian inquiries and statements in the TEC report, is to reduce recruitment, but not permanently eliminate capacity by closing down institutions or converting resources to fundamentally different purposes. Of course more drastic measures are still possible, but these could cause severe problems in the 1990s should the assumptions about population, participation or employment policies prove to be unduly pessimistic.

The effect of measures likely to be taken will be to reduce substantially the opportunity for young people to enter teaching. Figures in the latest TEC reports indicate that the reduction of students into pre-service education courses is already approximately 24 per cent. The impact on higher education is substantial,

representing about 7 per cent of all new undergraduate students.

Effects of Reduced Recruitment of Education Students

I now want to explore the effects of this change on the system of higher education. I use the term system deliberately because the components of higher education are interdependent, such that a change at one point has implications for the remainder. There is an interdependence across the university and CAE sectors as well as between institutions within the one sector, and between faculties and schools in the one institution. The problems in teacher education raise questions about the nature and purposes of teacher education itself, the dependence of multi-purpose universities and colleges on their schools of teacher education, and the respective roles of universities and CAEs in higher education.

Let us take the effect on students first. For the next five to ten years several thousands of young school leavers who in previous decades would have expected to enter teaching will have to go somewhere else. The entrants to teaching were not 'average' students but tended to include more of those social groups who are themselves under-represented in universities and colleges of advanced education: girls, country residents and those from poorer families. School teaching is the profession which has provided, more than any other, for the upward social mobility of students from families not in the professional strata of society. This particular ladder is going to be less available and there are no signs that others will appear. There are no other professional areas where there is a shortage, and for the existing ones, particularly those of high social prestige, competition for entry remains intense. If students who formerly would have gone into teaching are to be provided for in higher education this provision will have to be in the more general arts and science courses, rather than the specifically professional ones.

It might be expected that competition for entry into teacher education courses will intensify and that those who do gain entry will be of a higher academic calibre than in the past. This should be studied carefully. Early indications do not reveal evidence of a rise in academic standards of the entrants, and reports from Britain are that the proportion of students of high attainment has not increased as would have been expected. It is possible that students will be frightened away from teaching because of reports of poor job prospects and that the brighter ones will be more successful in

gaining entry to other courses or in getting jobs.

Teaching has, for many years, attracted more than its fair proportion of students with marginal motivation. In some studies of professional socialisation in four faculties in the 1960s–engineering, law, medicine and teaching – the number with low or ambivalent commitment to their profession was greatest among the students in teaching.[5] This remained so throughout the duration of their studies and teaching had a higher drop-out rate than the others. One reason for this is that the shortage of teachers during the 1950s and 1960s led education departments to adopt somewhat desperate measures in order to keep up the supply. Students in twelfth and even eleventh year of school were enticed into teaching with offers of scholarships; during their degree and diploma studies student-teachers were paid a salary in return for bonding themselves to the employer. Many students accepted these studentships without seriously considering whether they were suited to school teaching as a career.

Unlike other professions, where recruitment is nearly all from new graduates, education departments and schools re-employ a large number of qualified teachers who have been temporarily out of the service. The AEC Working Party estimated that in 1985 there would be about 13,600 qualified teachers seeking re-employment. In South Australia by November 1977, 1635 qualified persons had been processed but only 291 were offered jobs. Establishing the balance between new graduates and returnees in a period of surplus is a difficult issue for an education department in favour of employing new graduates in the feeling of commitment to students who embarked on courses of training with the expectation of employment, and a certain knowledge that those who were not offered jobs would find it very difficult to embark on alternative careers. Those who miss out will in future years not only have to compete with successive crops of new graduates, but with qualified teachers seeking to re-enter. New graduates also offer to departments greater flexibility in the distribution of the workforce across all schools, for few have domestic or other commitments which limit them to employment in a particular locality. If there are not reasonable job prospects for new graduates, able students are perhaps more likely than others to seek careers elsewhere. Failure to favour new graduates would simply add a group of young inexperienced people to the pool of unemployed. The older applicants, on

the other hand, have, in addition to their qualifications, experience as teachers and other experiences which add to their maturity and value as teachers. A large proportion are women wishing to return to teaching after time off for raising a family.

It has been suggested that courses of teacher education should become less specialised, or provide specialties in addition to those needed for teaching, so that graduates have opportunities for employment in fields other than teaching. Journalism, welfare, public relations and tourism are some of the fields where there is some overlap with teaching. Alternatively, it is suggested that students might be allowed to include options which, while unrelated to school teaching, would provide a second vocational skill. Computer programming, advanced secretarial work, conveyancing, are among the many skills which do not necessarily require a long pre-service period of study. The difficulty with these proposals is that the job opportunities in most, if not all fields that one can think of, are limited and in many of them positions would go to more highly qualified applicants than teaching graduates with an optional extra. The suggestion for diversifying teacher education is also connected with the problem of using staff who would otherwise be surplus to needs. It is unlikely, however, that many would be qualified to lecture in other specialist fields. To suggest that they retrain in a new vocational area may have some merit, but on the face of it it seems to be a roundabout method of solving the problem of surplus students for teaching.

A related possibility for students and staff is that liberal arts courses be expanded. Students would acquire a general qualification which could be the basis of employment in a number of fields, perhaps with some subsequent specialist training. Teacher education staff are more likely to have qualifications in the arts or sciences than they are for alternative vocational studies. Extension of this idea to CAEs would, however, run counter to the stated purpose of colleges as strictly vocational institutions and would be resisted by universities who regard general arts and science courses as their exclusive province. Already South Australian universities have registered their opposition to a suggestion along these lines made by the South Australian Enquiry. The issue is a difficult one which will have to be examined by state and federal co-ordinating authorities.

A closely related issue concerns the relative merit of the end-on and concurrent course structures for teacher education. The end-on

arrangement,whereby students first complete a B.A. or B.Sc., with little or no professional education content, and then do a diploma or degree in education, has a number of advantages some of which are important in the present period. It enables students to defer a decision about qualifying as a teacher for three years after starting higher education. By this stage they will have a more realistic appreciation of their own interests and of employment possibilities. The first degree provides the opportunity to major in a field which could lead to employment opportunities elsewhere – in science, psychology, economics, public service, administration and so on. There are, however, strong divisions of opinion among teacher educators concerning the two approaches. The concurrent arrangement is held to provide a better professional preparation and to develop in students a stronger commitment to teaching. There is some evidence to support this, although it appears to be at the expense of developing broader interests and capacity for critical judgment.

Another issue in the professional preparation of teachers concerns the relative importance given to pre-service and in-service education. Recurrent education and the upgrading or updating of skills is an idea which has a good deal of currency in post-secondary education at the present time. It appears to be receiving much more attention in teacher education than in other professions. Indeed there is among teacher educators some dissatisfaction with pre-service courses and a view that in-service training is of more importance and value because learning can be related to practical experience. One is almost led to the conclusion, when listening to discussions on this topic, that in-service education is so superior that it should take place before pre-service education!

One of the difficulties with teaching, compared with other professions, is that there is not the agreed set of skills which graduates must have for professional practice. One sees the effect of this in students preparing for teaching compared with students in medicine, engineering and law. The latter display increasing self-confidence and commitment to their professions as they approach the end of their studies. The education students, on the other hand, are more anxious about their professional role and uncertain about whether they will remain in teaching.

If one were redesigning professional preparation for teaching there would be a good case for shortening initial training to a year or

two and having a substantial amount of in-service preparation which would permit a close linkage between practice and theory. Present circumstances, however, would make it difficult to rearrange teacher education in this way. Indeed, in order that the capacity of initial training institutions be fully used there are some suggestions for lengthening of pre-service training.

There is, however, a good deal of interest in expanding in-service courses, which is seen as a means of making use of staff who may no longer have full undergraduate teaching loads. The extent to which universities and CAEs are able to develop a market for in-service courses for teachers will be influenced by attitudes of education departments, which are in the same business themselves, and who would be required to provide leave for courses occurring in normal working time. Funding authorities will have to recognise courses which are generally much shorter than normal undergraduate studies and which frequently do not lead to a formal qualification.

New Demands on Schools

At the same time as it is having to adjust to reduced demand for teachers the teaching profession is subject to more than the usual amount of public criticism. Sustained pressure from critics in numerous places is demanding that education should re-emphasise the basics – training in literacy and numeracy, greater discipline, and encouragement of the work ethic. Some of the critics assert that there is a decline in standards and blame educational innovations such as open class rooms and curriculum reform for the allegedly poor preparation of students.

Another powerful pressure is for schools to provide students with attitudes, skills and experiences appropriate to work. The response to this pressure is already evident in such things as link courses, work experience programs and careers guidance services. Unfortunately, no amount of preparation for work can create jobs and the brutal fact is that there are not enough jobs for all the school leavers; and of the jobs which are available a large number provide little in the way of work satisfaction.

A third pressure is for schools to play a greater role in socialisation for a society anxious about its own stability. Schools are called on to combat delinquency, provide drug education, teach good citizenship, teach sex-education, eliminate sexism, promote a multi-cultural society, help eliminate social inequalities, assist the handicapped,

etc. Some of these expectations are associated with the view that the family has become an inadequate agency for socialising the young and that the school should assume responsibilities normally expected of parents.

Other changes which place additional demands on teachers are the decentralisation of authority from central departments to the school, particularly in curriculum development; and the move to involve the local community, particularly parents, in school activities.

Some of these demands are, of course, reasonable and schools are responding in a variety of ways; some are contradictory and some are impossible for schools to meet. It is beyond the scope of this paper to begin even a preliminary analysis of what is proper and possible for schools to attempt. What is relevant to our theme is that this unusually powerful questioning of what schools are doing has occurred at the time when expansion of teacher education has ceased. Responses of universities and colleges therefore will have to be by existing staff, because there will be very few new appointments in the next twenty years; and in schools largely by existing teachers because the recruitment of new blood will be greatly diminished.

Early in this paper I assumed that the reduced need for teacher education places in universities and colleges would not, or should not, lead to a reduction in the overall numbers entering higher education. Is this a valid position; should not we face the unthinkable, that there may be too many students in higher education as it is presently constituted? At the present time almost one-quarter of each generation of school leavers enters university or CAE within five or six years after school. Does this proportion of the population possess the intellectual ability and the motivation for the sorts of courses which are provided? Should we be thinking and planning for a much smaller intellectual 'elite to enter higher education, or, alternatively, should we adapt universities and colleges so that they cater better for the enormous breadth of interest and intellect represented in their recruits?

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Chapter 4

External Studies

Max Hopper

The Present Position in External Studies

Australia has experienced a decade of major expansion in tertiary education. We now face the prospect of zero population growth and, perhaps more importantly, changing attitudes in society, particularly among young people in the age group who would normally proceed to full-time tertiary education. There is convincing evidence that we now face a period in which the demand for tertiary places, at least places for full-time students, will level off or decline. It is generally felt that there are too many tertiary institutions in Australia and too many places for the demands which will be made on tertiary education in the future. It is generally held that we should be looking to the rationalisation of tertiary education, to the merging and even closure of some institutions, and generally to the consolidation of the tertiary education system.

The levelling off or decline in demand for tertiary education seems certainly to be true of the age group who would normally be expected to seek enrolment as full-time students. Is it also true that the demand will level off or decline from those who might be expected to seek enrolment as part-time or external students?

The Committee on Open University in its final report in December 1974 stated:

> The Committee is in no doubt that there is a substantial demand for higher education which present arrangements do not meet. The adoption of more open practices, both generally and in respect of off-campus courses, would meet real personal and social needs, and would encounter a large and continuing demand from groups of men and women who are at present excluded.[1]

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The former Universities Commission in its Sixth Report of May 1975 stated:

> Thirdly, a reduction in the general growth of enrolments from traditional areas will provide tertiary institutions with the opportunity to develop into other non-traditional areas and to cater for groups whose needs have not been adequately met under the existing system. In addition to increased opportunities for external and part-time study, as recommended by the Committee on Open University, increased emphasis on professional refresher courses and other types of continuing education will be possible.[2]

These assessments suggest that at least in 1975 the demand for enrolment in tertiary education from adults, either in formal courses or in short courses of continuing professional or general education, had not been fully met. By and large, these people comprise the clientele of courses offered externally. Although there has been expansion in external studies at the tertiary level since 1975, I think we can safely assume that the demand from adults in the community for tertiary education still has not been fully met. Even in the field of teacher education there will be a continuing need for in-service professional education.

There appears to be a trend, since 1975, for a greater proportion of school leavers to elect not to proceed direct from school to tertiary studies. With less certainty now that three or four years of tertiary education will provide automatic entry to a well-paid profession, more school leavers appear to be taking the bird-in-the-hand where jobs are available on leaving school. Perhaps, too, there is a more general disillusionment in the community with what we have assumed to be the benefits of a tertiary education. If this trend continues there may well be a replenishing pool of potential part-time and external students much greater than could have been foreseen for this category by the Open University Committee when it prepared its Report in 1974.[3]

These indications suggest that the expansion in tertiary education has not been of a type which has satisfied the needs of potential adult students and that, therefore, the aftermath will not be as drastic in the area of part-time and external studies. It might well be expected, as the Sixth Report of the Universities Commission proposed, that we will now see a change in the mix of students in tertiary education – a movement away from full-time on-campus studies to part-time

and off-campus studies.

The problem in the area of external studies in the aftermath of expansion seems to be not so much that we have over-provided for those seeking enrolment, but rather the fear that too many institutions are now involved. This, in turn, raises questions about the quality of courses offered externally, whether institutions with relatively small external enrolments can provide study materials of an appropriately high standard, library resources, and other support services necessary to maintain a high standard of off-campus teaching.

In recent years a number of new universities have been established. In 1973 a large number of former teachers' colleges were designated colleges of advanced education. All of these new institutions saw the need to expand their enrolments and, for the former teachers colleges, there was a need to diversify their course offerings. They were all under considerable pressure to grow in size in order to gain the approbation and support of their respective commissions in Canberra. The decision to bring so many new institutions into the advanced education field occurred when there were already a number of small colleges of advanced education which had not at that time attained the magical level of 'viability'. This pressure for expansion came at about the time that the first signs appeared of a decline in demand for on-campus studies. It is not surprising, therefore, that quite a number of these institutions saw their best prospects of growth in the field of off-campus teaching. This, then, has led to a proliferation of institutions offering external studies and to a concern that rationalisation is necessary if we are to ensure high-quality external teaching in the future.

Some Specific Considerations in the Rationalisation of External Studies

There are a number of problems and a number of features in external studies in Australia which deserve careful consideration in any attempt at rationalisation. My list is not necessarily complete.

The Blurred Demarcation between On-campus and Off-campus Studies

External studies, off-campus studies, or distance education, as it is variously called, is no more than a method of teaching. Can we seriously hope to control from Canberra or from a state co-ordinating body the methods employed by tertiary institutions to teach their students?

Those who have been involved in external teaching have repeatedly pointed to the spin-off for internal teaching. The carefully prepared and individualised material for external students is obviously a valuable tool in the teaching of internal students. Ten years ago the Vice-Chancellor of Macquarie University referred to the benefits of external materials for both full-time and part-time students:

> One interesting thing that happened in Macquarie was the influence of the methods of external teaching on full-time teaching. If we are to communicate with the external student and help him to learn, the study guides must be carefully planned and programmed and integrated with assignments, reading and laboratory work. And if the study guides were as well produced as they should be, it was said, what better basic instrument could there be for teaching the full-time student. It was our view, too, that the frequency of attendance for lectures for the part-time evening student could be reduced by the use of the study guide and the regular assignment. When time is short it may not be well used travelling from work to hear lectures whose content could as well (or better perhaps) be put on paper, and then arriving home too late and too tired for independent study. We have thought in this sort of way to help the student make the best use of the time available to him for independent study.[4]

In 1970 Dr Heather Adamson and Professor Mercer at Macquarie University made similar comments about their experience in biology teaching:

> Having to cope with external students certainly resulted in significant changes in our attitudes and approaches to the internal students. The techniques evolved and being evolved to meet the needs of the external student are being found appropriate for the internal student. Indeed, if the trend continues in the future as in the past the internal student may come, eventually, to be a 'full-time external student' attending the campus as determined by his own needs and timetable.[5]

I pursued a similar line in a paper which I delivered in 1974 to the Second National Conference of the Federation of Staff Associations of Australian Colleges of Advanced Education on 'The Colleges and the Community' at Latrobe University in May 1974:

> All students might benefit from the opportunity to undertake

much of their studies at times of their own choosing, at their own pace and in a place of their choosing – perhaps the library, the cafeteria or at home. A timetable largely freed of scheduled formal lectures would allow greater flexibility for the arrangement of less formal staff-student discussions, seminars and tutorials at times and places to suit the different needs of student groups with different occupational, family and community obligations.

Perhaps we have tended too readily to think of internal studies as entirely student-lecturer or group interactive learning and external studies as entirely individual learning. In fact, internal studies involve a very large component of individual learning, and external studies, if decentralised in a number of institutions of moderate size, can involve a significant component of student-lecturer interactive learning. Learning materials designed to assist, promote and facilitate individual learning on the one hand, and interactive teaching/learning on the other, should be components in the learning experience of all students. The actual mix of the two types of learning might then be determined largely by the student himself in the light of his individual needs and circumstances.[6]

I believe that we shall move much more to the provision of carefully prepared learning materials and study guides for our students and to much more flexible attendance patterns. If this occurs, it will become virtually impossible to designate students as on-campus or off-campus students, or to designate institutions which are teaching in the off-campus or the on-campus mode.

It might be suggested that the Tertiary Education Commission could encourage external teaching in some institutions but not in others by weighting external enrolments in its calculation of recurrent grants to institutions. The Committee on Open University recommended that the then Commissions 'should investigate whether additional assistance may be necessary for universities and colleges for the support of educational services to part-time and external students.'[7] The case for additional assistance will become difficult to justify if institutions increasingly provide similar learning materials and educational services generally to both internal and external students. The TEC and state co-ordinating bodies, it would thus seem, can best control developments in external studies through the allocation of enrolment quotas to institutions. This, in fact, is what the TEC has proposed in its *Report for 1979-81 Triennium* in order to allow Deakin University's external enrolments to reach 800 WSU in 1981:

> Adjustments of the magnitude necessary to accommodate the additional student load at Deakin University can be made from within the Australia-wide student load figures set down earlier by the Commission.[8]

This, then, represents the type of adjustment possible in a static situation to meet changing community needs. External enrolments to cater, in the main, for adult students, will be permitted to increase in one university at the expense of enrolments (presumably for full-time students) in other universities.

The Need to Preserve Diversity

The Committee on Open University placed a high value on diversity in tertiary institutions, arguing that

> it is desirable for different institutions to have different educational objectives. This is not to advocate a hierarchy of institutional objectives and values with university objectives and values at the peak of the pyramid; rather it is a pluralistic approach with emphasis on difference and not on rank. Such a pluralistic approach does, however, argue against an acceptance by a particular institution of responsibilities which can be better undertaken by other institutions with their own missions, values and skills.[9]

Any rationalisation of external studies in Australia should preserve this type of diversity. It is important that opportunities for external study should be available throughout Australia from both universities and CAEs.

As well as the diversity of institutions referred to, there is already in Australia considerable diversity in approach to external teaching in its organisation, the teaching methods employed, and in the types of support services provided. Unless it can be clearly shown that one approach is significantly better than another, we would be unwise not to preserve some diversity of approach to external studies. In saying this I am presupposing the acceptance of the conclusion reached by the Committee on Open University that it would be inappropriate in Australia to concentrate all external studies work in a single,national, open university of the British Open University type.[10]

Australia has done pioneering work in the development of external studies at tertiary level. Those institutions that have been engaged in external teaching for a number of years have staff with a

great deal of experience and expertise in external teaching. The interaction between the staffs in these various institutions with their different approaches has contributed significantly to the progressive improvement and sophistication in external teaching methods. Although the approaches to external teaching adopted by different institutions have differed significantly, many have proved successful in practice. I believe that Australia will continue to benefit in the future by maintaining this sort of diversity.

External studies operations range in size from over 4000 enrolments at the University of New England to less than 100 in some former teachers colleges. It is very difficult to convey briefly the range of approaches to external teaching but at the risk of over-simplification and even misrepresentation, I shall mention some of them.

The University of Queensland, which has the longest experience in tertiary external studies in Australia, has a Department of External Studies which provides both teaching and support services for external students. This separate staff is engaged full-time in external teaching, although external students follow the normal courses offered by the university to its internal students.

RMIT also has long experience in external studies. It is now primarily engaged in TAFE-level external programs. At the tertiary level, I understand that no academic staff are appointed with a requirement to teach externally. The School of External Studies contracts out both course writing and the marking of external student scripts. For this purpose it engages for a fee either academic staff within the Institute who are employed full-time on internal teaching or specialists from outside the Institute. This approach, I suspect, would allow staff in External Studies to exercise rather greater editorial control over both content and presentation of external material.

At the University of New England internal and external teaching is completely integrated. New England emphasises the fact that external students follow the same courses, are taught by the same academic staff and are subject to the same assessment as internal students. New England lays particular emphasis on its compulsory residential schools for all external students. It has deliberately avoided the production of elaborate printed learning materials which, out of economic necessity, must be used over a number of years. Rather, it has encouraged its academic staff to revise their

teaching materials regularly.

The regional colleges of advanced education vary considerably in their approach to external teaching but, in general, tend to follow the New England model. In general they, too, lay emphasis on a component of face-to-face teaching at vacation and weekend schools. In all cases they have integrated internal and external teaching and have developed teaching materials for use by both internal and external students. Staff-student interaction in normal internal classes and at weekend and vacation schools for external students encourages and facilitates regular revision and updating of teaching/learning materials.

The British Open University's off-campus methods have attracted world-wide attention. Many of those engaged in external studies in Australia have followed the development of the Open University from its inception. There has been a general willingness in Australian institutions to learn from the experience of the British Open University and to adopt those of its practices which are appropriate in the Australian context. Some Australian institutions are now using course teams in the preparation of external courses and are stressing the importance of careful course planning which is a feature of the Open University approach. There is now much greater use of audio and video tapes, there are more educational technology units, and there is a greater willingness to involve educational technologists and media experts in the planning and presentation of courses. These developments have undoubtedly been influenced at least in part by the practices adopted in the British Open University. But even those institutions with the largest external enrolments have not contemplated the adoption *in toto* of the Open University approach. The use of radio and television as major components in external teaching is not feasible in Australia. For both educational and economic reasons, Australian external studies departments in general have not attempted to produce teaching materials in the expensively printed book form used by the Open University.

Deakin University, the most recent entrant to the external studies field, appears to have adopted the Open University approach much more completely than any other institution in Australia. Deakin University commenced external teaching this year with an initial intake of 300 WSU. In a press release issued on 3 April 1978, the Acting Vice-Chancellor stated:

> We have followed the example of Britain's Open University and made a concentrated effort to provide off-campus courses of the highest quality possible, using the latest developments in educational technology.
> Deakin has set new standards for off-campus studies in Victoria. The quality of presentation of the courses offered this year is recognised as being equal to any in the world.[11]

Within two weeks of commencing external teaching (in 1978) the Vice-Chancellor was reported as saying:

> We say unreservedly that our courses are superior to the external studies courses provided at the Gippsland, Bendigo and Warrnambool advanced colleges.[12]

While those with rather longer experience in external studies might envy Deakin's confidence, they will, nevertheless, welcome the enthusiasm with which Deakin has entered upon its task. We should equally welcome the opportunity afforded by Deakin University to test the Open University approach in the Australian context and to measure the educational benefits against the costs. Their experience will be important to all institutions engaged in external studies. Since it takes a minimum of six years to produce a graduate externally, Deakin University may need six to ten years to assess its operation fully.

The Role of Regional Colleges[13]

Given the distribution of population in Australia, the present declining demand for full-time places, and the ability to cater for a geographically widespread population through external studies, all tertiary education in Australia could readily be provided by institutions in the capital cities. Some have argued that it would be economically and educationally desirable to do so. But state and federal governments have established and supported regional colleges in order to provide at least some tertiary educational opportunities locally in country regions. These colleges have been seen by governments as important in the encouragement of decentralisation and regional development. In general, it cannot be argued that the provincial centres in Australia provide a better environment for a tertiary institution than the capital cities, so that the existence of regional colleges has to be justified on political, social and economic grounds rather than educational. Provincial

centres lack many of the facilities necessary to support a number of tertiary courses – law and medicine are obvious examples. Given the commitment of governments to regional colleges, it is important, therefore, in the rationalisation of tertiary education, that we promote in the regional colleges those activities which can be undertaken in a provincial centre equally as well as in a metropolitan city. Teacher education and external studies, I suggest, are good examples.

In Victoria the Committee of Inquiry into Post-Secondary Education (the Partridge Committee)[14] recommended, in effect, *pro rata* cuts in teacher education quotas in all institutions. If implemented, this would weaken all teacher education programs and may well create a number of unviable courses. If we are to rationalise tertiary education, it is essential that we strengthen and enhance those courses that are to remain in existence even if it means closing down completely similar courses in other institutions. My contention is that teacher education, particularly primary teacher education, should be made strong and viable in country colleges at the expense of metropolitan institutions, which are better placed to offer a range of other courses which country institutions cannot as readily offer. The Tertiary Education Commission, in proposing an increase in external enrolments at Deakin University at the expense of other universities, is approaching rationalisation in the way I am suggesting. In rationalising external studies, I suggest that the same approach should be adopted in the college sector. The Victorian Minister of Education has, in fact, proposed, in a recent press release, that country colleges in Victoria should be strengthened by transferring external studies courses from metropolitan institutions.

All but one of the multi-purpose regional CAEs in Australia offer external studies. As CAEs, they inherited a strong commitment to part-time studies but because they serve geographically large regions, they cannot meet the needs of adult students simply by providing evening classes. From the outset, then, regional colleges saw the necessity of offering external courses as an essential means of meeting the needs of the widespread communities which they were established to serve. (The suggestion in the Partridge Report that these colleges commenced external studies simply as a means of maintaining enrolments in the face of declining demand for full-time places is simply not true of most, if not all, of the multi-purpose

regional colleges.) Over the years they have gained a great deal of experience and expertise in external teaching and they have progressively enhanced the support services they provide for their external students. Although they developed external studies to meet regional needs, their enrolments now include a proportion of students from outside their immediate regions. Many have significant numbers of students resident in the capital cities. Because they all have residential accommodation on campus, they have been able to include a significant component of face-to-face teaching in their external studies courses by requiring attendance at weekend and vacation schools.

Through external studies, a regional college is able to go out to the community it is intended to serve. Through external studies the college is visible, valued and appreciated in areas of the region remote from the campus. In this way, regional colleges have done much to break down the parochial jealousies which have often inhibited regional development. If we are to have regional colleges, and governments quite recently have reiterated that we must, then I suggest that it is essential and inevitable that they will be involved in external studies. It is an activity which regional colleges have demonstrated they can do and, in many cases, have demonstrated they can do quite well. In the rationalisation of external studies, I believe that we should endeavour to encourage and enhance the role of regional colleges. Through rationalisation we can take positive steps to strengthen the external studies operations of those regional colleges where it needs some strengthening.

Size, Cost and Quality

Tertiary external studies operations vary in size in Australia from enrolments of over 4000 to less than 100. There is also some variation in the levels of funding of the various institutions. It appears that some of the smaller universities are funded at almost double the rate per student of that provided for most of the CAEs, but with these exceptions and if allowances are made for the different mix of students in different institutions, the different enrolment measures used in universities and colleges, and the greater research involvement of universities, there is not a very large variation in the level of funding of institutions teaching externally. If external operations, large and small, receive roughly comparable levels of funding, the assumption commonly made is that the

quality of education offered to external students in the very small operations must be very much less than that offered in the larger operations. Quality of education is not easy to measure, so I doubt if there is any hard evidence to support this assumption. Some of the very small operations clearly do not offer their students the support services which are offered by institutions with large external enrolments. Their teaching material may not be as elaborate or as expensively produced but I suggest that we should be wary of attempting to assess the quality of the educational experience of students on such criteria as the weight of paper sent to them, its glossiness, the quality of its binding, or the number of pictures. I have already acknowledged the important impact which the British Open University has had on distance education. Unfortunately it has also had the effect of encouraging too many people who have not had experience in external studies to assume that any external studies operation which does not take a publishing house approach is necessarily providing an inferior service to its students.

It is not my purpose here to defend the very small external studies operations, most of which are conducted by former teachers' colleges as a means of providing limited opportunities to their ex-students to upgrade their teaching qualifications. I do not see that these small operations have a part in a rationalised and co-ordinated plan to meet nationwide needs for off-campus studies. My point is simply that, through the dedication and hard work of a handful of academic staff many of these very small operations provide a very individual and personal service to their external students who, in turn, may well enjoy a richer educational experience than those enrolled in very much larger operations.

In the past the administrative, technical, library and counselling services provided for external students have been generally more expensive than similar services provided for internal students. If, as I have suggested, there is now a tendency for institutions to provide comparable services and teaching materials for both on-campus and off-campus students, there could be progressively less difference in cost per student between internal and external teaching. There are significant savings in capital costs in institutions which use facilities provided for internal students to cater for external students at different times. The capital cost of the most elaborate and sophisticated equipment for the production of teaching materials for external students is very considerably less than the capital cost of

the buildings which would be required to teach an equivalent number of students on campus. The recurrent cost per student of external teaching may be marginally greater than internal teaching but the fact is that a large number of institutions in Australia have been teaching externally for many years under a funding formula which does not recognise any cost difference between internal and external teaching. In the light of the success of these external operations, I find it hard to accept that the enrolment levels necessary for viability in external teaching are of a different order from those necessary in an internal teaching operation. On the contrary, I would argue that there are educational and economic advantages to smaller institutions in integrating the teaching and support services for internal and external students.

It seems to me that there are a number of multi-disciplinary institutions in Australia with enrolments of 2000-3000 students, including 1000 or more external students, which, judged on performance over a number of years, have done a tolerably good job; which, judged on the performance of their graduates, have provided an acceptable quality of education for both internal and external students. None of this is intended to suggest that those involved in tertiary education would not like to have the means by which we might attempt to improve the quality of the education we offer. But it seems to me that it would be imprudent to throw overboard all of the experience we have gained in external studies in Australia in order to promote a completely new approach, such as that of the British Open University, for example, which might prove to be two or three times more expensive than systems which we have developed here and which may be, in any case, inappropriate in many respects for Australian conditions. At least it would be unrealistic in Australia to promote external studies schemes which require 10,000 or more enrolments in order to be cost efficient.

Rationalisation of External Studies

It is not infrequently suggested that distance education should be location-free. Whilst it should be possible for a student to study externally with the University of New England from Bourke or Bankstown, I question whether in a continent the size of Australia, external studies can or should be completely location-free. At least in Australia we cannot ignore the existence of our separate states or their sensitivities. Almost all institutions with a successful history in

external studies provide a component of face-to-face teaching in their external programs. Whilst this is the case, we cannot suggest that external studies should be completely location-free without accepting that we would thereby seriously disadvantage many in our community. Given the emphasis which we have placed on some face-to-face teaching in external studies, and the general paucity of resources available to students outside of our major cities, I believe that we must provide external students with reasonably direct lines of communication with and reasonable prospects of direct physical access to the institution with which they are enrolled. This argument supports the notion of a network of external studies institutions.

If institutions are to be designated members of a network of institutions offering external studies, it will be necessary to co-ordinate their activities. Present offerings will need to be reviewed to remove unnecessary duplication of courses and all proposed new courses should be subject to approval. The TEC has already indicated that it intends to consider any proposal to offer a new course externally. At the same time, the Commission has shown a willingness to delegate course approvals in the advanced education sector to state co-ordinating bodies, subject to a number of constraints imposed by the Commission. Where state co-ordinating bodies have sufficient powers to review existing courses and to approve new courses in all sectors of post-secondary education, I believe that it would be appropriate for the co-ordination of external studies to become primarily their responsibility. If the TEC were to designate the institutions it will support in external studies then I think that state co-ordinating authorities would be better placed to rationalise the actual courses offered by institutions in their respective states. They may well need to establish external studies co-ordinating committees.

The rationalisation and co-ordination of external studies will require more than simply the power to review, approve, or not approve, existing and proposed new external courses. There should be positive encouragement of co-operative arrangements between institutions in both the offering of external courses and in facilitating the transfer of students between institutions. In some fields of study it may be necessary to insist on some comparability in awards. Recently Deakin University, for example, announced that its three-year pre-service course for primary teachers would in future lead to a Bachelor of Arts (Education) which it plans to offer

externally throughout Victoria and beyond. In all other institutions in Victoria, a three-year pre-service course in primary teaching leads to a Diploma of Teaching. Co-ordination of external studies may well require the exercise of some constraint on the freedom of institutions to act unilaterally if their actions have system-wide implications.

I have suggested that the problem facing us in external studies in Australia in the aftermath of expansion in tertiary education is not that of how or where to reduce enrolments but rather one of co-ordination in order to avoid duplication of effort and unnecessary and wasteful competition between institutions. In a period of stability or even contraction in tertiary education as a whole, I have suggested that it may still be necessary to increase external enrolments in order to cater for changing needs of our society. I have suggested that both colleges and universities should play a part in meeting the needs of the Australian community for external studies. I have suggested that non-metropolitan institutions, and particularly the regional colleges of advanced education, should have a special role in the provision of external studies. I have suggested that some smaller institutions, perhaps with only 2000 students and including only 1000 external students, have demonstrated their ability to provide external teaching of an acceptable standard. These suggestions lead me to reiterate the proposal of the Open University Committee that Australia's needs in external studies can best be served by a network of institutions, both colleges and universities.

No doubt there is room for debate about which institutions should form an external studies network, but most of them, I suggest, are fairly obvious. I would propose the following network:

Queensland	- The University of Queensland; - Capricornia Institute of Advanced Education; - Darling Downs Institute of Advanced Education.
New South Wales	- The University of New England; - Macquarie University; - Mitchell College of Advanced Education; - Riverina College of Advanced Education.
Victoria	- Deakin University; - Gippsland Institute of Advanced Education;

	- Warrnambool Institute of Advanced Education.
Tasmania	- Tasmanian College of Advanced Education.
Western Australia	- Murdoch University; - Western Australian Institute of Technology.
Northern Territory	- Darwin Community College.

I have not mentioned South Australia because I am not sufficiently familiar with the pattern which will emerge there in the aftermath of the Anderson Report. I understand that neither the University of Adelaide nor Flinders University are interested in external studies, and that at present a consortium of colleges offer external studies. I would support the continuation of such an arrangement. Deakin University could provide university external courses to residents in both South Australia and Tasmania provided that its offerings were closely co-ordinated with those of the colleges in those states.

In Victoria I have omitted the Bendigo College of Advanced Education, which currently has a very small external enrolment. If necessary, Bendigo College could be involved by the establishment of a consortium of regional colleges in Victoria. They have a history of co-operation and it would not be difficult to work out a co-ordinated external studies scheme involving, if necessary, all four regional colleges. I have not listed RMIT, which could be encouraged either to concentrate entirely on its TAFE external studies operation or to continue its tertiary external courses in a limited number of specialised fields which RMIT is uniquely placed to provide.

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Chapter 5

First-year Programs in Higher Education

A. H. Miller

At a time when Australians are re-considering the place of tertiary education in their society and the relationships between the different forms, it is important to re-examine the assumptions underlying first-year programs in Australian tertiary institutions, as it is the first year of a program that sets the pattern for future studies. With the relatively sudden cessation of growth in Australian higher education, many teaching departments are facing new stresses, not least of which is the threat of falling student numbers. Thus the types of experiences offered to students in their first year may greatly influence the initial enrolments and retention of students in a particular department. Other problems which have recently emerged for designers of first-year courses are the changing nature of secondary education and changes in student populations enrolling in universities and colleges. Because the problems in technical and further education are quite distinct from those encountered in universities and colleges of advanced education, this chapter will concentrate on the two sectors providing 'higher education'.

Changing Backgrounds of Tertiary Students

Until recently, it was a relatively simple matter to describe the entry requirements for various types of Australian tertiary courses. Each state held public examinations, usually at two levels, the results of which could be used to determine entry to tertiary studies. There was also limited movement of students between states, so that the relatively small numbers of interstate students could be dealt with individually. Changes in our society, in school curricula and employment opportunities have been responsible for corresponding

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changes in the backgrounds of students entering tertiary education, and therefore have important implications for the recruitment and selection of college and university students, and for the types of first-year programs offered.

Greater Flexibility in Secondary School Curricula

Instead of a state-wide syllabus for each subject in the secondary school curriculum, with a limited range of subject options constituting the curriculum in any one school, it has become increasingly common to encourage schools to develop their own curricular patterns, often with individual teachers being responsible for developing a syllabus for a subject offered to only a few classes. Thus in any one school there may be many different English courses offered within the one grade, with a similar choice for most other subjects in the curriculum. Provided teachers have the knowledge and skills needed to develop and evaluate these school-based courses, it is likely that secondary school studies will be improved by the new system, but corresponding difficulties are created for tertiary institutions, not only in admission policies but in the design of first-year courses.

Problems of using secondary school results in the selection of students for tertiary studies are likely to be lessened as a result of further research and more refined statistical procedures, but one problem which remains is that of first-year tertiary subjects which depend on previous secondary studies. No longer is it possible for a lecturer to assume that students have a common background knowledge when they enrol at university or college. In some areas, today's students will be much more knowledgeable than their predecessors, but in others they will be totally ignorant. The idea of a common first-year course in subjects such as English, Mathematics, Physics, History, or French is becoming less practicable, as students are likely to be bored with some sections and lost in others. In an institution where large numbers are enrolled in these courses, it is possible to offer alternative programs using diagnostic tests to aid in the placing of students in each program, but where numbers are small, other solutions must be found. One of these is to divide the first-year course into a number of self-contained units, from which students select a smaller number in order to fulfil course requirements. There is no reason why these shorter units or modules should not be available also to students in later years,

provided that where sequential studies are required, this is clearly stated.

In a time of no growth, or even of mild recession, any suggestion that existing first-year courses be replaced by an array of modules needs to be carefully examined for its staffing implications and for the effective use of resources. Some of these implications have been examined in *The Container Revolution,*[1] where the trend towards modular courses in Great Britain is described.

Increasing Maturity of First-year Students

Whereas the changes in secondary school curricula described in the preceding section are very recent in their effects on higher education, longer-term influences on students' backgrounds and beliefs have operated through television, greater opportunities for travel, and a generally increased awareness of cultures other than our own. The impact of these changes in non-formal education is almost impossible to measure, as we do not have comparable data from earlier generations of tertiary students which would allow a comparison with present-day students. Nevertheless, it would appear that future students entering colleges and universities are likely to be more sophisticated than their counterparts of a decade ago. This sophistication will be evident in a broader general knowledge, possibly accompanied by lack of the detailed knowledge which could previously be assumed in matriculants, and an increase in the average age of students.

The increase in age is caused by greater numbers of part-time students, mothers returning to full-time study, and a tendency for students to defer entry to tertiary studies for at least one year. One implication for academic and administrative staff is that students of the future will be even more willing to discuss course content, methods of teaching, learning and assessment. Evidence from North America, Great Britain and Australia suggests that the time for confrontations between students and staff over the above issues has passed, and that future discussions are likely to be more rational and more productive. This certainly became apparent to the author at The Australian National University in 1978,[2] when a series of meetings was arranged to allow staff and students to discuss issues relating to assessment.

The Impact of Part-time Students on First-year Classes

Part-time studies have always played an important part in colleges

of advanced education. They provide an opportunity for 'learning on the job', or relating theory to practice. To a somewhat smaller extent, Australian universities have made provision for evening and external students for decades, thus allowing many members of the community to upgrade their qualifications while earning a regular income. Universities and colleges have also made it possible for adults wishing to explore new fields of interest but not seeking formal qualifications to undertake further studies through centres for continuing education and similar organisations.

Some potential part-time students will be unable to attend classes at certain times during the week, and there will always be a range of preferences for scheduled classes. While it may not be possible to offer a range of times for many advanced courses, first-year classes can often be scheduled for more than one time slot in order to introduce to tertiary studies as many potential students as possible without undue disturbance to their family or employment responsibilities. Students who are thereby attracted to a college or university may be able to find ways of changing their life-styles to undertake more advanced studies at times they would previously have considered impossible. Where an institution is too small to allow multiple scheduling of first-year classes, it may consider offering a particular subject at different times in successive years, thus limiting students' choice in any one year yet making most subjects eventually available at convenient times. Another possibility is for the institution to offer fewer first-year subjects, so that the ones that are offered are taken by a greater number of students.

One other difficulty associated with flexible scheduling of classes should be mentioned, namely the effect on the personal lives of teaching staff. When a teacher is expected to take classes on a number of evenings and yet be available during the day for consultations with other students, with colleagues, or for administrative meetings, the strain can become quite great, leading to physical and mental breakdowns or stresses in the family. Some people are able to cope with the increased stress, but one might well ask whether the cost is justified.

Changes in Employment Opportunities

Lack of ready employment for school leavers influences first-year tertiary enrolments in opposing directions. On the one hand, there is a greater incentive for a school leaver to accept employment if it is

available, rather than continue studies. Some of these people may defer their entry; others will develop a career which does not require tertiary education.

On the other hand, there will be those who undertake tertiary studies with the hope that the additional qualifications will help them to find a job when they graduate. The difference, however, between these students and those of a few years ago is that they can no longer rely on their tertiary qualifications leading to a chosen career. It is still true that graduates have a better chance of employment than school leavers, but the type of employment is not necessarily related to their field of study. This uncertainty about where a university or college course is leading is shown in students' concerns about their goals in life and what they describe as a 'lack of relevance' between their studies and the 'real world'. Current research at The Australian National University shows that among students who cancel their enrolments, a significantly greater number of full-time than part-time students claim that their decision to cancel was influenced by their lack of clear goals.[3]

The fact that graduate employment is unpredictable should be taken into account by first-year lecturers, both in the planning stages of their courses and in their attitudes to new students. Planning should not be on the sole assumption that the course is designed as a first step towards a profession in the discipline being studied. Instead courses should be designed in such a way as to introduce students to the possibilities of enjoying the subject either for its own contribution to their interests and needs or because it can help them to understand better some other subject in which they are interested.

Functions of First-year Courses in Relation to the Goals of Higher Education

The range of post-secondary courses offered in Australia suggests that there are many reasons for students enrolling in tertiary studies. This large range of courses can have the effect of making it more difficult for students to select the type of course that best suits their needs and interests; consequently, many students would profit from more detailed guidance about the choice of courses before they commit themselves to study. There is also a need for a greater degree of flexibility in our tertiary institutions to allow students who have been wrongly advised to change courses without too great a penalty.

Preparation for a Career

Perhaps the students who are clearest in their expectations from tertiary study are those who enrol in trade or professional courses. Unfortunately, for some of these students there is a feeling of frustration when their lecturers fail to demonstrate the relevance of tertiary studies to their chosen profession.

First-year medicine at the University of Newcastle illustrates one solution to this problem. Beginning students are shown videotapes of a woman consulting her doctor about non-menstrual bleeding from the vagina. The students are asked to think how the woman feels about approaching her doctor with this problem, and how the doctor may feel. They are also invited to suggest the types of questions the doctor might ask and the tests or physical examinations that might be necessary. Later tapes show how a vaginal examination is conducted and how microscopic preparations are interpreted. Further discussions focus on medical, social and emotional problems associated with detecting, preventing and treating carcinoma of the cervix, and the cost of instituting a community health program to detect this condition in its earliest stages.

It is not the purpose of a problem-centred approach such as the one described above to teach all the necessary skills in connection with each problem, but rather to show that complex problems can only be solved by combining many different types of skills. Not all first-year courses are suited to this approach, but the technique could well be tested in a greater range of technical, trade, business and professional programs

Production of 'Educated Men and Women'

At Harvard, Dean Henry Rosovsky and a curriculum committee have been developing a 'core curriculum', which is designed to produce 'educated men and women' by inculcating the 'knowledge, skills, and habits of thought that the Faculty considers to be of general and lasting significance'.[4] It is not envisaged that all students will follow the same program of studies, but rather that at some stage students will select courses from each of five areas: Letters and Arts; History; Social and Philosophical Analysis; Science and Mathematics; and Foreign Languages and Cultures.

The Harvard Curriculum is not, of course, the only way to prepare 'educated men and women'. Many teachers of traditional university subjects, even in those universities that allow a high

degree of specialisation, would claim that the intensive study of their discipline results in those qualities of openness of mind, depth of knowledge, and a breadth of understanding that are expected in an educated person. One might well ask whether such desirable qualities are more a function of the personality of the teacher and the type of teaching than of the subject matter that is taught.

Other institutional attempts to ensure that courses are truly educative centre around a broad foundation year in which students are given experiences that will help them with their later studies, whatever their chosen field. The Foundation Year for students undertaking four-year degrees in Arts, Social Science, or Science at the University of Keele in the United Kingdom 'outlines for students the broad context of knowledge in which their later specialised studies will be set, and introduces them to the scope, methods and interconnexions of many of the main branches of University studies'.[5] The program consists of a core course of lectures and presentations which runs for two hours per day throughout the year and to which all departments contribute. The core course is supplemented by other studies designed either to extend students' existing knowledge or to introduce students to subjects they have not studied before.

Apart from its Foundation Year, the University of Keele attempts to ensure that students are given a broad education insisting that students specialising in the humanities or social sciences take at least one subject from the natural sciences and vice versa. While there are good arguments for broadening the type of education offered in many tertiary institutions, there is a danger that when students from dissimilar backgrounds and with contrasting needs and interests are taught in the one course, no one is satisfied. For example, the type of chemistry taught to those majoring in the humanities will be very different from that taught to those with a background of school science who intend pursuing a scientific career.

Development of New Interests

An increasing function of tertiary education is the provision of opportunities for men and women to develop new interests which may or may not be related to their present or future careers. This function has always been recognised by centres for continuing education, and to a certain extent by technical colleges. Some traditional university courses have also attracted students for

interest reasons alone, but the numbers of such students at universities have until recently been comparatively small. If universities and colleges are to attract more students, particularly those of a mature age, who are seeking some new interest, there is a need for at least two quite different types of first-year programs.

For students who are unsure of the range of options in an institution, a broad foundation year similar to the one operating at Keele would be suitable. The core course at Keele claims to provide a broad perspective on the history of Western civilisation up to the present day, including ideas, non-Western influences, arts, sciences and technologies; to give an insight into contemporary problems, and to illustrate the links between different fields of specialised knowledge and their application.[6]

A course such as this is also a help to those who see tertiary study as a continuation of their secondary studies and who have not yet made up their minds about their future careers.

By way of contrast to the Keele approach, there is also a great value for some categories of tertiary students to be offered a first-year program in which they are introduced to a wide range of studies usually included in the one discipline. In later years they would narrow down their studies to one aspect of the discipline, but would also be encouraged to take supporting units from other disciplines. For example, a student may wish to major in English but have no more experience of English literature than was acquired from school studies. During the first year, such a student would be introduced to literature of many types and from most major periods. Later studies would deal with one period and only one or two styles of writing in much greater depth, and supporting studies could be chosen from such fields as philosophy, theology, sociology, history, geography, or another language.

Students planning to undertake a major in a language other than their own might be advised to begin their tertiary education with an intensive course in the language in order to gain the type of fluency expected in an educated native speaker within the shortest possible time. They would then be in a better position to profit from later studies of the literature, language and culture of the country, and might wish to support their major studies with linguistics, history, another language, geography, or perhaps a professional course such as economics, law, or business administration.

Foundation or Service Courses

In the problem-centred kind of first-year program described earlier, there is a danger that students may gain only a superficial knowledge of facts and principles, whereas a more thorough grasp of these is essential for advanced studies. In fact, if Bloom is correct in his assumption that his taxonomy of objectives represents a hierarchy,[7] it would be unreasonable to expect students to analyse a complex situation, suggest possible solutions (Bloom's 'synthesis'), or evaluate other options without a knowledge of facts and principles. It is for this reason that many first-year courses aim to develop in students background knowledge and skills which experienced lecturers believe are necessary for more advanced study.

If a first-year course is listed as a prerequisite for other courses, the resulting 'service course' is likely to have large enrolments with very different expectations among the students. Lecturers and tutors working in these courses should seek to use examples from each of the disciplines in which their students will major. If the numbers are large enough, parallel versions of the service could be offered (for example, mathematics for engineers, or mathematics for geographers); but it is unlikely that such a simple solution will be possible in the average institution. It may be more practicable to offer a common lecture course for all students who need mathematics for some other discipline, but as far as possible to arrange separate tutorials or workshops for each interest group. Mathematics for those intending to major in the subject should preferably be treated in a separate lecture series, as it is likely that both the level and the content would differ markedly from those of the 'service' course.

Whereas the courses just described are mainly advocated for their subject content, a second type emphasises the development of skills, such as the use of library resources or essay-writing. Whether programs such as these should be taught by specialists such as Readers' Advisers or Study Skills Counsellors, or by regular subject lecturers in the context of an academic discipline is debatable. My own preference is for the former, preferably working with students from the one discipline or a group of related disciplines.

The Diversity of Tertiary Institutions in Australia

It is common to speak of a three-tiered structure for Australian tertiary institutions which is reflected in the three councils of the

Tertiary Education Commission, but any examination of Australian tertiary institutions will show that there are many different types of education available to students who have completed their secondary studies. Potential students may enter one of these institutions for quite misguided reasons, and later wish to transfer to another course. Apart from needing much more informed guidance about tertiary studies while they are still in secondary school, students should be given more opportunities for transferring from one tertiary program to another without too much loss of academic status. This section attempts to suggest mechanisms for allowing more transfers to occur.

Major Types of Institutions

It is unnecessary to list here all the variations which exist in Australia between institutions in each of the three major sectors of tertiary education. Although the nineteen universities are more homogeneous than the seventy-two (in 1978) CAEs or the hundreds of technical colleges, it is still possible to detect quite important differences among the universities. Those which most affect first-year enrolments and programs occur when two or more universities, which appear to be offering the same degree (such as medicine or engineering), adopt entirely different approaches to their first-year programs. The extreme versions of these are the problem-centred approach described earlier in this chapter and, at the other end of the scale, an approach where all first-year students in technical faculties are required to undertake a preliminary year of basic science subjects before starting their professionally related studies. While both approaches have advantages, the existence of both within one state system has the disadvantage of making transfers from one institution to another impossible without loss of status.

Again, the existence of some universities which require first-year students to undertake foundation courses before proceeding to their major studies creates difficulties for those students wishing to transfer from one institution to another in later years, even though excellent arguments may be advanced for the foundation courses.

In a time when there is likely to be increased competition between institutions to obtain students, particularly where an institution is thought to be unfavourably placed, or where its staff is too small to allow sufficient specialisation, it is inevitable that some institutions or sections within them will lower entrance standards substantially

below those applying in their more favourably placed competitors. One may then ask whether students wishing to transfer from a course which has low entry standards to one with higher demands will be at a disadvantage compared with those who transfer between courses where entry standards are more or less comparable.

The Smaller Institutions

Among the changes which resulted from the report of the Martin Committee,[8] a number of relatively small, single-purpose colleges gained the status of colleges of advanced education. At the time, teachers' colleges were not included unless they diversified their courses and became multi-purpose institutions, but there were still many quite small colleges, especially those teaching agriculture, which retained their identity, but under new administration and funding arrangements and sometimes a new name. The strengths and weaknesses of these colleges have been discussed elsewhere,[9] but in the context of the present discussion on the future of tertiary education in Australia, one must question the ability of these institutions to cater for the needs of students who are no longer guaranteed employment in the vocation for which they have been trained, or even to prepare graduates for a profession which is changing so rapidly that it is difficult to predict which skills will be required. There is also a danger that these smaller colleges with their restricted range of courses will not give students sufficient background to allow an easy transfer to larger institutions, even where subjects of the same name are taught.

It is unrealistic to expect the more prestigious institutions to accept graduates of the smaller colleges of advanced education as equal to their own, but it may be feasible to structure first year programs in the smaller colleges so that, for example, students completing first year at the Credit level or better would be eligible for admission to the second year of another institution. The implications of this proposal would, of course, need to be considered in detail, including the effect on the smaller colleges, the most effective use of funds for tertiary education, and a system of accreditation. The experience of the North American community colleges shows that the idea is possible.

Comparability Without Uniformity

None of the contributors to this volume advance the case for a

uniform system of tertiary education in Australia, it being generally recognised that a diversity of institutions is advantageous to the majority of the population. Given, therefore, that we are likely to continue with a wide range of tertiary institutions, from the small country technical colleges and single-purpose CAEs to the very large and prestigious institutes of technology and universities, it is important that we seek to develop mechanisms which allow comparability between similarly named but different types of courses. One such mechanism, a system of accreditation for first-year programs, was suggested in the previous section. Other solutions include the establishment of new types of tertiary institutions which embody all three sectors, as suggested in the chapter by Michael Birt, or a more complete adoption of a system modelled on the American community colleges, as described in the chapter by Grant Harman.

The penalty which must be paid if courses are to be more comparable is not that standards might be adversely affected, but that lecturers who have previously been relatively free to develop their own courses or to respond to student requests for changes during a course would have to be more accountable to their counterparts in other institutions. In other words, course documents, methods of teaching, and systems of assessment would need to be more open to public scrutiny. This does not have to be through an elaborate system of accreditation such as is used for CAEs at the moment, although this system might well be adapted to serve such a function by including first-year university courses and some technical education courses. An alternative approach would be to develop the system of self- and peer-scrutiny which is now used in departmental reviews within The Australian National University, and which is described in the chapter by Anthony Low.

Some Proposals for Future Action

Conferences such as the one which led to the production of the present volume can only serve as an opportunity for tertiary educators to share some of their problems and suggest possible solutions. For any useful remedial action to occur, it is important to bring together lecturers from different types of institutions who teach the same subject, not so much for talks about recent research in that subject as to examine ways of planning first-year courses and teaching the subject so that students wishing to transfer from one

institution to another will at least not have to unlearn information they have been taught in one institution before proceeding with their studies in another. There are numerous conferences in Australia for subject specialists, and the Higher Education Research and Development Society of Australasia (HERDSA) conferences usually deal with more general issues. It is therefore heartening to hear of subject conferences where time is devoted to discussing ways of improving the teaching of that subject.

Now that the three major sectors of tertiary education are being co-ordinated by the single Tertiary Education Commission, albeit through its three councils, one might look to the TEC for leadership in the task of seeking comparability between institutions. Perhaps as a first step each council could examine the possibilities for common entry criteria for similar types of institutions which offer courses of the same name. State co-ordinating bodies could undertake a similar survey of courses offered in different types of institutions within each state, possibly with a view to a greater degree of rationalisation of offerings.

Proposals of this nature were made in the report, *Open Tertiary Education in Australia*,[10] for the National Institute of Open Tertiary Education which they recommended. Among the functions envisaged for NIOTE were:

(1) in consultation with the Universities Commission and the Commission on Advanced Education and the appropriate State authorities, and by initiating collaboration amongst existing and future tertiary institutions, and with employers and other appropriate groups:
   (i) to facilitate entry of students of demonstrable capacity, but not necessarily with formal qualifications, to tertiary institutions;
   (ii) to maintain and expand opportunities through part-time study;
   (iii) . . .to arrange surveys of needs of the community generally and of special clienteles for degree and diploma programs for postgraduate training, for professional refresher training and for continuing vocational and non-vocational education of tertiary level, and to identify gaps in present offerings; . . .

(2) to collaborate with existing and future tertiary institutions in establishing procedures for the transfer of students between institutions and the acceptance of credits among institutions, and to arrange for the publication of informa-

tion and the provision of advice to students in that connection;

(3) to provide or encourage the provision of information and counselling services on opportunities for higher education generally;

(4) to facilitate, in collaboration with appropriate institutions, the provision of bridging and threshold courses for those students for whom such courses are necessary;

(5) to promote the application of educational technology by encouraging the development of new programs of study, of innovation in teaching and learning methods, and of the use of modern educational media;

. . .

(6) to arrange the investigation of social, cultural and economic barriers to access to higher education and the means by which such barriers may be lowered.

Even though the National Institute has not been established it is to be hoped that the above tasks will be undertaken by either the TEC or some other statutory body.

Education research units, audio-visual centres, study skills units and individuals whose task it is to recommend changes designed to improve teaching and learning might seek ways of using diagnostic tests more effectively in the placement of first-year students. Assistance could be offered to subject departments wishing to evaluate their first-year programs, and information and guidance supplied about alternative approaches to teaching and learning, such as modular courses, various forms of self-instruction, and peer teaching.

Because the teaching of first year has its own special problems, a strong case could be made for some lecturers to specialise in teaching at this level. There is a danger, however, that persons choosing to specialise in introductory courses could treat their subject at a superficial level, particularly if they do not also have regular contact with senior students. Provisions must also be made for these lecturers to keep abreast of modern developments through either study leave or work experience, particularly as the inflow of new ideas from recently recruited staff is likely to be reduced in a period of no growth for higher education.

Finally, if first-year programs are to serve the functions of introducing students to tertiary study, providing a challenging introduction to new disciplines, and teaching background information and skills needed for more advanced studies, it is important

that tertiary teachers entrusted with first-year courses accept the challenge – a challenge which in many respects is far greater than that presented by advanced courses.

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III
Issues in System Planning and Management

Chapter 6

Demographic Trends and Their Implications

W. D. Borrie

In 1975 the National Population Inquiry presented its *First Report, Population and Australia.*[1] This analysed recent trends in fertility and immigration and attempted an assessment of the implications of these trends to the beginning of the twenty-first century . This was required of the Inquiry by its terms of reference.

The timing of the Inquiry was both propitious and unfortunate; the former because we were able to trace one of the most dramatic demographic changes in our history; the latter because we were left with some major uncertainties as to the final outcome of some of these changes and therefore had to resort to a good deal of guessing about even the short-run future.

Fortunately, the Government and University listened to our pleas for a two-year extension in the life of the Inquiry to allow us to monitor changes a bit longer. The result is the *Supplementary Report* of the Inquiry,[2] tabled in the House of Representatives on 8 June 1978 and now a public document. Our extended life enabled us to carry most data from 1973 (the cut-off point for the *First Report*) to 1976, and in a few cases to 1977. One disappointment was, however, the inability to use 1976 Census data because of the deferment of analysis imposed by the Government's expenditure cuts. What, then, did we find with our increased life expectation?[3]

The subject of this book is education so I cannot stray into explanations of fertility decline and so on, but it is relevant to draw attention to one major conclusion of the *Supplementary Report,* namely that there is no evidence that the present low levels of fertility are likely to change and produce another baby boom.[4] Our

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initial assumptions of our 1975 *Report* that a high proportion of population would continue to marry and have children, with quite deliberate and very efficient fertility control, and with the average number of children born to each woman remaining around two, still seem to hold good. If anything our assumption of replacement-level fertility may be too high rather than too low.

Our 'preferred' projection in the *First Report* [5] was based upon this fertility assumption and a net annual gain of 50,000 immigrants. Currently the target for net immigration is 20,000 higher than this, but for a number of reasons we prefer not to raise our average for the moment. Certainly we do not see a return of the booming days of the late sixties when net annual immigration exceeded the 100,000 mark (126,200 in 1967-8, 112,500 in 1969-70 and 101,400 in 1971).

In short, a reasonable prospect for the future still seems to be a population by the year 2001 between about 16 and 17.6 millions, depending upon the role immigration plays in the future. What does seem to be certain is a steady decrease in growth rates, from about 0.75 per cent to 0.44 per cent a year in the absence of immigration, or from 1.1 per cent to 0.8 per cent with an annual immigration flow of 50,000.

So the heat of growth of the fifties and sixties, when annual rates of increase were averaging around 2 per cent, seems to be over, and the population profile is again assuming some of the characteristics of the 1930s, which are still taken as the low point of economic health and the high point of national misery (Figure 6.1).

As I shall emphasise later, there are some very major differences between the 1930s and today, but for the moment let me concentrate upon the undercut of the bottom of the population pyramid, which is of course a reflection of the decline in births from 276,000 in 1971 to 227,000 in 1976. One of the first 'industries' to be affected by such demographic vagaries is, of course, education.

The undercut at the very young age group which is shown in Figure 6.1 has also to be seen in its relation to the age groups above it which are the products of the 'baby boom' years of the fifties and later sixties. Compared with the *stable* and *stationary* age distribution (here taken as the norm), the age groups between 5 and 30 years are in surplus and this explains the educational shockwaves we have been through (Figure 6.2).

The ferocity and sequence of these waves are apparent in Table

6.1; they doubled the numbers of primary school children in fourteen years after 1947; increased secondary enrolments by 141 per cent in sixteen years after 1954; increased university enrolments by 165 per cent in fifteen years after 1961; and spilled tertiary education over into the new colleges of advanced education with their increase of 85,000 students between 1968 and 1976.

Those waves have now swept by the primary age groups. The population of primary school age is declining, will reach its lowest point around 1986, but will probably lift up again after that in response to the echo effect of the baby boom, to finish the century perhaps 200,000 higher than their numbers of 1,728,000 in 1976. The lagged effect for pupils in the higher compulsory ages (12-14

Table 6.1

Educational Shockwaves Since 1947

	Year	Numbers (000)	
Primary:			
Aged 5-12 years:	1947	788	
	1966	1577	
	Increase	789	(100%)
Secondary:			
Aged 12 years and over:	1954	457	
	1971	1111	
	Increase	654	(141%)
Tertiary:			
University enrolments:	1961	58	
	1976	154	
	Increase	96	(165%)
Tertiary:			
Colleges of Advanced Education:	1968	50*	
	1976	135	
	Increase	85	(170%)

* Approximate, including students at teachers' colleges subsequently incorporated in Colleges of Advanced Education.

years – will be the same – a fall from 761,000 in 1976 to 722,000 in 1991 and then a rise to 814,000 in 2001, yielding an increase of only 53,000 over 1976.[6]

At higher secondary ages (15 plus), the trends will be subject to changing participation rates as well as demographic factors. At the moment participation rates appear to be rising slightly for girls but remaining stationary or even declining slightly for boys. For boys and girls the proportion remaining at school as a percentage of the age groups seems, on the basis of 1976 figures, to be about 59 per cent at age 16 and 31 per cent at age 17. With these rates remaining constant there will be a lift in school numbers over the next decade of about 100,000 or by about 20 per cent, but thereafter some decline will set in and enrolments by the end of the century will be about the 1986 level.[7]

Thus, the patterns which these figures suggest are a far cry from the past but it should be observed that the trend from here to the end of the century is not all decline, but variations between growth and decline – patterns which make forward educational planning (whether for physical equipment or for teacher supply) extremely difficult. To illustrate the vagaries in these patterns, consider the changes in the numbers of young people who will be reaching specific ages in the future. These changes reflect the rise in births to 1961, their fall to 1965, their sharp rise to the record level of 276,000 in 1971 and their sharp recession thereafter.

This background to the future tertiary scene has been included here not only because of its relevance to the supply of future students but because of its relation to the employment of a considerable slice of the future output from tertiary institutions in the form of teachers and educational administrators.[8]

So, what of the tertiary level? In looking to the future in preparing our First, 1975, National Population Inquiry *Report,* and after examining the trends in student participation rates and the growth patterns of universities and the new CAEs, we assumed that the former would absorb after 1973 a constant proportion of students at each age and that the growth derived from increasing age participation rates would go wholly to the CAEs.[9] Our hunch seems to have been substantially right as far as universities are concerned, but we underestimated slightly the rise in participation rates and so underestimated the increase in enrolments in CAEs.[10] In 1976 universities and CAEs enrolled 288,600 students. Our projections

based on 1971, and corrected for teachers colleges which subsequently were incorporated as CAEs in 1974, yielded a total of 283,500 – not bad, but 5100 below target.

When we were preparing the material around 1973 for the *First Report,* we felt certain that some constraints upon tertiary growth were imminent and that these would tend to set limits to participation rates. We also assumed that for sociological and economic reasons, a levelling-off tendency would emerge. Hence we levelled these rates off in our projections, from 1973 for universities and from 1986 in CAEs. Moreover our assumed increases in participation rates were very modest indeed and were felt by many to be too pessimistic. They meant, of course, that future increases in tertiary students would be derived, primarily to 1986 and wholly from 1986, from demographic factors alone. Corrected again for the incorporation of teachers colleges in 1974, and using as a new base actual enrolments in 1976, the pattern shown in our projections, in terms of students enrolled at Universities and CAEs, was:

1976	288,600 (actual)
1986	361,000
1996	365,000
2001	374,000

It is to be emphasised again that these figures illustrate a trend based primarily on demographic factors up to 1986 and wholly on demographic factors thereafter. They might therefore be taken as the reasonable expectation of the rising generation of students if they are to have approximately the same right to tertiary education as the generation currently in our tertiary institutions. But will this be the case? I am afraid not. The rising generation faces not only a tougher employment prospect but the limitations now placed on entry to higher education by government policy. As the TEC *Report for the 1979-81 Triennium* states:

> The levelling out of participation rates is a reflection of deliberate decisions to hold the intakes of University students at the 1976 level and of advanced education students at the 1977 level. The *Report* then concludes, somewhat ominously: If these levels are maintained over the next few years, virtually all growth in universities and colleges will cease.[11]

For the immediate future this policy may not restrict unduly the 'natural' flow to tertiary institutions because the numbers seeking entry will be drawn from the declining numbers of births that occurred between 1961 and 1965. A levelling off in participation rates also seemed a likely prospect for sociological and economic reasons. But a long-term policy of constant inputs will depress participation rates after about 1980 when the very sharp increases in births between 1966 and 1971 come of tertiary age. That hump – the last of the baby boom generation – will be quite substantial.

Clearly, trimming educational policy sails to demographic vagaries will not be easy, and constant, numerical ceilings on entries to institutions may bear harshly at times upon young people who happen to have been born at the wrong time. A more equitable policy would be ceilings – if these are necessary at all – *based upon stable participation rates rather than constant numbers.*

However, the main lesson that emerges from this demographic analysis, which is more fact than projection for the next twenty years, as most of the young people concerned have already been born, is that the great shockwaves of the past twenty years are not going to recur, and almost certainly some of the newer and smaller institutions that saw their future secure in demographic growth will disappear or be merged, as indeed is already happening in at least three states.

The major reason at the moment for imposing entry ceilings on tertiary institutions is undoubtedly economic, but I question their necessity: demographic trends have already been doing the job. I doubt also if any bureaucracy can accurately determine the right limits to place on entries in terms of professional manpower planning. The flood of graduates emerging from our tertiary institutions today looks formidable – between fifty and sixty thousand graduates and diplomates a year, compared with only 3400 degrees conferred by universities twenty years earlier. (Table 6.2). The increase is out of all proportion to the population growth between these years.

These sorts of figures tend to heighten the cry for restraint on entries, simply because they are so much above earlier figures. This is not to say that projections showing the quantitative implications of current and assumed trends are without value. On the contrary, they are to be encouraged because they show where stress points will arise and can serve as a good guide to public investment policy. A

Table 6.2

Students Completing Courses in 1975

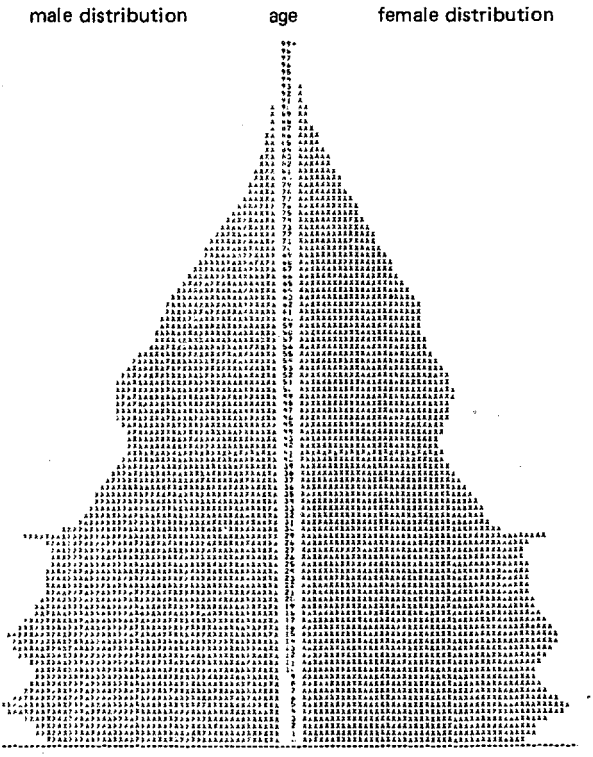
	Universities	Colleges of Advanced Education	Total
Doctorate	796	–	796
Master	1 560	17	1 577
Graduate diploma	4 054	3 814	7 868
Bachelor degree	21 860	3 566	25 426
Other diploma	–	15 238	15 238
Associate diploma	–	2 030	2 030
Total	28 270	24 665	52 935

good example is the recent report of the Australian Education Council Working Party on Teacher Supply and Demand . . .1978-1985,[12] which shows that, *on the basis of their stated assumptions,* the 'surplus' of secondary teachers by 1985 would be 23,300 with improved standards, or 35,200 with constant pupil/teacher ratios. At the primary level the 'surplus' by 1985 was estimated to lie between 25,950 and 38,800. These figures should not be taken as forecasts of what will inevitably happen, but estimates of what would happen given their stated assumptions. The essential question is whether the assumptions look sound. The only one I would cavil at is the assumed retention rate of 90 per cent of trainees in the teaching service, which seems very high indeed; but even a major discounting of this factor, say to 75 per cent, still leaves a substantial surplus. It is to be expected also that, in this situation, market forces would soon operate to reduce intakes, as indeed they already seem to be doing. Nevertheless, the projective exercise surely indicates that investment growth in education can hardly be expected to continue at the rates prevailing through the sixties, even though there may be a strong case for major investments applied to the improvement in quality rather than in serving quantity.

But while I believe investments should be attuned to demographic realities, I believe the notion that we are about to be inundated with unemployable graduates over the whole spectrum of the nation is to be avoided. The Tertiary Education Commission Report for 1979-81 points out that there are at present about 250,000 degree holders

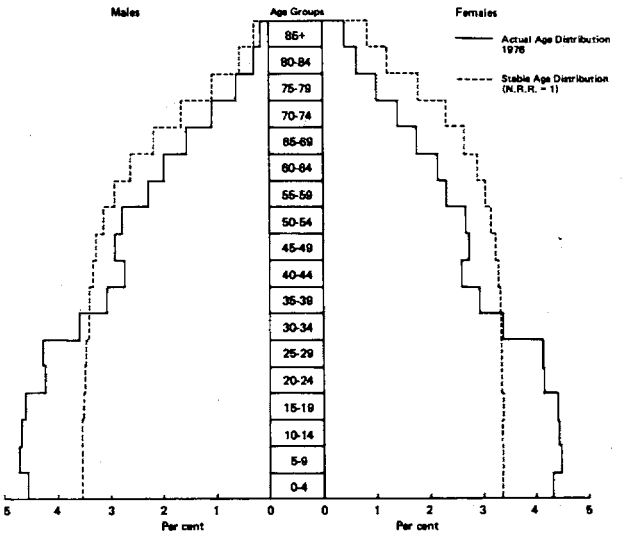
Figure 6.1

Australian Population Distribution – 1976 Census
Adjusted according to the Post-Enumeration Survey Figure



in the workforce, about 4 per cent of the employed population, and that with a continuation of the present output of about 30,000 bachelor degrees a year the figure would 'inevitably rise in the long run to about 1 million degree holders.[13]' I doubt if this is to be feared. There may be grounds for welcoming it.

Figure 6.2
Stable Age Distribution (N.R.R. =1) and Actual Age Distribution 1976



An evaluation of the present and potential situations must be made, I think, against that earlier figure of a mere 3400 graduate output only twenty years ago. Then, arising out of the depressed birth rates of the 1930s, there were acute shortages of skills at all levels in a situation of an almost unsatiable demand for labour. For

twenty years the nation had to import a high proportion of its skilled and professional labour. The evidence is clear in the immigrant component of any inventory of medical practitioners, engineers or architects, and in the staff lists of universities and colleges. We are again heading to the position of *demographic* deficits as a result of the recent sharp decreases in the numbers of births, but at least we have some assurance this time that if we do revive as a trading nation with an expanding economy hungry for labour (which is quite possible!) we will have an inbuilt supply of trained person power which will go a long way to meet the rising demands for labour. And, of course, the output from universities and colleges will also be supplemented by the output from the half million or so students enrolled in vocational courses in TAFE institutions, the area that had until recently tended to be the Cinderella while the universities and CAEs were having an expansion ball.

The conclusion that seems to me to follow from this analysis is that Australia is unlikely to face again the extreme shortages of professional and skilled manpower that plagued the 1950s, even though the rate of increase in the young population ready to enter the workforce will again be slowing down appreciably after about 1981.[14] With the large stock of young professional and skilled people now available and expected to emerge from our tertiary institutions, the years ahead must surely be seen as years of opportunity, for increased efficiency and productivity, rather than as years of surplus. The policy issue now is how to get the pay-off in the future from the investments from the past. This will mean flexibility, initiative and dispersal by graduates through many sectors of the workforce; and equally, flexibility, initiative and receptiveness by employers. But never will the nation have had such an opportunity to improve the quality of its workforce. It would be a pity to throw the opportunity away for the sake of a few bawbees, which will of course be the danger if we keep talking of 'surpluses' rather than of 'opportunities'.

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Chapter 7

Planning in the Context of the Rolling Triennium

K. N. Jones

This paper traces the development and modification of triennial funding arrangements in tertiary education which culminated in the adoption by the Commonwealth Government of the rolling triennium principle. It also deals with a recently announced change of substance in government policy which will operate from 1979. Only brief consideration is given to commonwealth/state financial arrangements.

Origins

Universities

The triennial system of funding began in 1958 in relation to universities following the report of the Murray Committee. That Committee had recommended the establishment of a Universities Grants Committee to foster 'collaboration, cooperation and coordination between the universities, the Commonwealth Government and the State Governments'.[1] The Grants Committee would assess the needs for recurrent expenditure every three years and advise governments on the annual needs of the universities for the next three-year period.*

The three-year period was justified on the grounds that

> To carry out this task more frequently than every three years would reduce the universities' sense of responsibility, would

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*It is interesting to note that the Murray Committee did not propose triennial block grants for capital works but rather recommended earmarked annual grants. Because the sums involved were so large the Murray Committee believed it was reasonable for the Commonwealth to give more specific attention to use of such funds than to the division of recurrent block grants.

> interfere too often with their day-to-day work, would impose excessive demands on the time of the members of the Committee and would deprive the universities of the undoubted advantages of planning on a longer term basis.[2]

The Government accepted the main recommendations of the Murray Committee but included capital grants within the triennial arrangements and established the Australian Universities Commission and not the Universities Grants Committee on the grounds that it had a co-ordinating and not simply a grant-giving function.

Initially no provision was made for the supplementation of programs during the period of the triennium but the Commission's funding recommendations made some allowance for cost increases over the three years. Funds were provided by the Commonwealth and the states on a matching basis whereby for recurrent expenditures the Commonwealth met $1 for each $1.85 of states grants and universities fees combined and for capital expenditures met $1 for each $1 of the state contribution. From 1964 universities received supplementary grants to cover the costs of increases in academic salaries. Subsequently supplementation arrangements were extended to cover cost increases in non-academic salaries arising from national wage decisions.

Colleges of Advanced Education

Grants to the states for CAEs began in March 1965 following the report of the Martin Committee when the Commonwealth agreed as an interim measure to pay capital grants of approximately $5 million in the remainder of the 1964-6 triennium. The colleges were brought fully within the triennial system at the start of the 1967-9 triennium when assistance was extended to recurrent grants. Separate grants were provided in respect of teachers' colleges from 1967-8 but from July 1973 these grants were absorbed into the wider program of grants for colleges of advanced education. By the end of the 1970-2 triennium all states had proceeded to the establishment of a state authority to co-ordinate the development of CAEs in accordance with the Martin Committee's recommendations, and action was well advanced to remove the colleges from the control of the various state government departments and to establish them as corporate bodies under their own autonomous governing councils.

Funds were provided in respect of the colleges by the Com-

monwealth and states under the same matching arrangements as applied to the universities. Supplementation arrangements in respect of increases in academic salaries were also the same as for universities. In respect of these salaries a significant development was the establishment of the Academic Salaries Tribunal in October 1974. A permanent mechanism was thereby created to review academic salaries in both universities and colleges in place of the somewhat *ad hoc* arrangements which had previously existed.

New Funding Arrangements 1974

From 1 January 1974 the Commonwealth assumed full financial responsibility for universities and CAEs. The states, in accepting the Commonwealth's offer to take over this financial responsibility, agreed that estimates of the amounts of expenditures of which the state Governments would be relieved would be deducted from the general purpose funds provided to the states. The 'offsets' amounted to about $134 million in 1973-4 and $295 million in 1974-5.

At the same time as it assumed full financial responsibility for universities and CAEs, the Government decided to abolish fees at tertiary institutions and government technical colleges. This decision led to the provision to the states of recurrent grants for technical education for the first time in 1973-4. The purpose of these grants was to reimburse the states for the loss of fee revenue but special grants directed towards improved planning and support services were also made available. Assistance in the technical education sector for capital works in the states had been provided by the Commonwealth since 1964-5. It was also decided that from 1 January 1974 the approved expenditure programs for universities and CAEs should be fully supplemented for cost increases.

The Year of the Pause – 1975

Triennial programs proceeded without interruption from their introduction until 1975. In that year the Government decided to defer the start of the next triennium, which normally would have run from 1976 to 1978. A number of factors influenced this decision. It was in 1975 that the Government was presented for the first time with four triennial reports, three post-school and one schools. On the tertiary side, the 32 per cent growth in the number of students between 1972 and 1975 and the proposed growth by 24 per cent in the period 1976-8 involved substantial increases in

recurrent funds. Large increases in the capital programs were also proposed. For schools in 1976 increases of over 30 per cent were proposed over the level of funds provided in 1975, with further substantial increases recommended for the last two years of the triennium.

The Government, faced with a mounting deficit and serious inflation, was under considerable pressure to contain the growth of public expenditure. Fixed triennial funding is difficult to sustain in an uncertain economic climate, since it demands a firm commitment three years in advance and reduces the capacity for budget adjustments.

The Commonwealth's outlays on education had been rising rapidly. In 1971-2 expenditure on programs in the three tertiary sectors had amounted to 2.1 per cent of total Commonwealth expenditure whilst total education expenditure had amounted to 3.9 per cent of budget outlays. By 1975-6 these figures had risen to 4.6 per cent and 8.4 per cent respectively. Accordingly, the 1976-8 triennium was deferred and the universities and advanced education Commissions were asked to review their reports and to prepare funding recommendations for 1976 only, in the expectation that normal triennial funding would be resumed in 1977-9. The Government's decision to defer triennial funding for one year also affected the technical and further education sector. A new Commission, the Technical and Further Education Commission, had been established in May 1975 to carry on the work of the Committee on Technical and Further Education. Whilst the Commonwealth's contribution to TAFE was, and remains, basically a topping-up operation, with the states retaining the major responsibility for funding in the area, it had been decided to provide the Commonwealth's contribution on a triennial basis from 1976. The TAFE triennium was also deferred.

The Rolling Triennium

In the present discussion, it is worth remembering that when the Whitlam Government was proposing the amalgamation of the Universities Commission and the Commission on Advanced Education, the panel (the Jones Panel)[5] that reported on the form of that amalgamation proposed that the Government should adopt a two-stage approach to the formulation of future triennial programs for the tertiary sector. The panel recognised that an increasing

proportion of the Commonwealth budget was being directed towards the funding of tertiary education programs, largely as a result of the inclusion of additional institutions and the total funding of approved institutions since 1974. It was considered desirable, therefore, that in the interests of all concerned the Government should indicate its views on the broad principles that would guide development before the Commission prepared its detailed recommendations.

The panel proposed that the Commission, in advance of its detailed investigations for the triennium, should report to the Government on desirable broad policies to be followed. The report would cover such matters as student places and the establishment of new institutions. The Government would then respond by indicating the extent to which it endorsed the general parameters proposed by the Commission. The Commission's second stage report would represent its detailed recommendations in the light of the guidelines it had been given.

With the change in government at the end of 1975, the Fraser Government, like its predecessor, was faced with an unstable economy. Because it was reluctant in a climate of severe inflation to enter into long-term commitments of public expenditure, particularly when it had a policy of restraint in the public sector, the new Government decided not to reintroduce fixed triennial funding for the 1977-9 triennium. There was, however, a policy commitment to the restoration of triennial funding when the economic situation had been brought under control. Meantime, funding was to be provided on the basis of a rolling triennium.

The decision to introduce this modification of triennial funding was influenced by the desire to preserve overall budget flexibility and to enable education programs to respond more quickly to changing community needs. The principle of the rolling triennium is that as each year is completed, plans for the remaining years of the triennium are reviewed and updated and initial proposals made for the new third year. The Commissions are provided with guidelines and within the physical and financial limitation imposed by those guidelines they are asked to submit detailed recommendations for the first year and to make planning proposals for the second and third years on the basis of indicative annual rates of growth in expenditure in real terms.

In the context of the 1977-9 rolling triennium the firm allocation

for 1977 for the tertiary sectors represented an increase of 3.7 per cent over the allocation for 1976 and the Commissions were given indicative planning guidelines for growth in real terms in 1978 and 1979 of 2 per cent for universities and CAEs and 5 per cent for TAFE. In the event, in 1978 growth in the university and college sectors was held at 1977 levels whilst TAFE received a 10 per cent increase. This pattern has been repeated in respect of 1979, where expenditure on universities and colleges, rather than being increased by 2 per cent, has been reduced by a little over that percentage below 1978 levels but for TAFE has been increased by almost 20 per cent.

It should also be noted that from the beginning of 1978 changes have been made in the cost supplementation arrangements to the extent that they now apply only to the salaries and wages of recurrent grants and the fees reimbursement component of TAFE funding. However, whilst cost supplementation during the year applies only to the salaries and wages component of recurrent grants, provision is made at the beginning of the new year for base programs to be fully supplemented in line with cost movements in the previous year. The decision to vary the supplementation procedures at the beginning of 1978 to the extent that they no longer applied to capital programs reflected the more favourable tendering climate which now exists in relation to capital projects.

The fact that neither for 1978 nor for 1979 has the Government been able to provide the level of funds foreshadowed by the indicative planning guidelines for those years highlights both the advantages and disadvantages of the rolling triennium arrangements. The rolling triennium allows the Government to make adjustments in the course of the triennium in the light of prevailing budgetary priorities. On the other hand, when such adjustments are made there is a consequent lessening of confidence on the part of institutions, which may feel inhibited in their forward planning. Furthermore, it is a situation that may lead to a lack of confidence, or even trust, in the Commonwealth on the part of the state treasuries.

It should be acknowledged that the capital works program has suffered considerably as a result of the actual provision of funds being below the levels indicated by the planning guidelines. In each of the last two years the approved program has had to be reviewed, notwithstanding specific provisions in legislation. In the light of

these reviews some projects have been deferred and others cancelled, with a consequent disruption to the orderly implementation of the entire program.

The rolling triennium has created other difficulties. Some of these difficulties have been intensified by changes in the Commonwealth's advisory machinery whereby the three tertiary Commissions have been transformed into the two-tiered structure of the Tertiary Education Commission supported by three constituent councils (see below for more detailed comment on the Tertiary Education Commission). The requirement that the Commission produce an annual report places a heavy work load on the Commission when looked at from the standpoint of the consultations which must take place between the Commission, its councils, the institutions and the states. There is a danger that to meet its deadlines the Commission may be unable to consult in the depth and to the extent it would wish and that is indeed desirable. The meeting of this annual deadline and the tight timetable imposed clearly affects the capacity of the Commission to undertake longer-term reviews.

The process whereby commitments are annually reviewed makes orderly forecast planning difficult and militates to an extent against the rationalisation of institutions and courses, since rationalisation requires notice and careful planning in a secure environment so that it can take place with a minimum of disruption.

In short, the rolling triennium imposes a strain on the processes of consultation, and the confidence of those involved in the planning processes of institutions and authorities may be eroded. This lack of confidence and uncertainty in forward planning is detrimental to implementation of proposals for rationalisation.

Partially-fixed Triennium

In the first volume of its report on the 1979-81 rolling triennium the Tertiary Education Commission elaborated on the difficulties of the rolling triennium arrangements as it saw them and recommended that fixed triennial funding should be restored.[4] The Commission argued that the provision of university and advanced education was unlikely to grow in the foreseeable future. The Commission's view was therefore that the Commonwealth's expenditure on recurrent funds would not be subject to substantial fluctuations. The Commission recommended a return to fixed triennial funding for recurrent expenditures whilst capital programs should be financed

by annual cash allocations. The Government has accepted the Commission's recommendations with one modification. From the beginning of 1979 fixed triennial funding for the tertiary sectors will be reintroduced in respect of recurrent grants, except equipment grants, and annual cash allocations will be provided for capital works and equipment. For universities and colleges, the base programs for recurrent grants, other than equipment grants, for 1980 and 1981 will be maintained at the same levels in real terms as those approved for 1979. For TAFE the base programs for 1980 and 1981 will be determined after consideration of the Report of the Williams Committee of Inquiry into Education and Training.

In relation to capital grants the effect of recent changes to the states grants legislation has been to put the capital programs of the three tertiary sectors on what is essentially an annual cash-flow basis. Before the States Grants (Tertiary Education Assistance) Act 1977 came into being (appropriating funds for 1978) there was no time restriction on the payment of advances to the states and the states and institutions were merely obliged to spend funds 'without undue delay'.

The States Grants (Tertiary Education Assistance) Act 1977 amended earlier legislation by making it impossible to make advances to the states, under the earlier legislation, after the end of 1977.

For 1978, the legislation required that funds must be expended on projects during the year or up to two months after the end of the year in relation to work undertaken during the year.

Future Prospects

There is a need for a period of stability, if effective and generally accepted arrangements are to be developed for triennial planning of Commonwealth activities in support of tertiary education institutions throughout Australia. The restoration of a fixed triennium for the bulk of recurrent expenditure does provide an opportunity for the Tertiary Education Commission to develop effective forward planning mechanisms and to arrange fruitful consultation with state authorities.

The Tertiary Education Commission is itself of recent creation: it was established in June 1977. Even so, its charter and methods of operation reflect the same basic principles as applied to its predecessors. The Commission's role is an advisory one. It reports

publicly and offers argument in support of its recommendations. It acts in response to policy guidelines from the Commonwealth. It is important to note that its charter extends not only to balanced development and co-ordination across the whole spectrum of post-school education, but also to the encouragement of more open access to tertiary institutions.

The present Government decided to include the TAFE sector in the new Commission to achieve better overall co-ordination of the whole of post-secondary education and to ensure that each sector would have an effective input into the advice going to the Government. It is pertinent to note that recently Committees of Inquiry in three States – Victoria, South Australia and Tasmania – have recommended the establishment of similar over-arching authorities at state level.

One unfortunate by-product of the changes in triennial programming since 1975 has been a concentration of the attention of governments on the financial aspects of successive Commission reports, with less than adequate attention to the educational philosophies and objectives put forward by the advisory commissions in their reports.

As we look to the future we need to contemplate not only changes in relationships between the agencies which represent the partners in the Australian federal system but also policy developments in the interaction between educational and manpower considerations. Three examples will illustrate-considerations of devolution by the Tertiary Education Commission to state bodies of course approvals in universities and colleges of advanced education, and of detailed recurrent grants for colleges of advanced education; decisions to be taken by governments following presentation and examination of the Williams Committee's Report into Education and Training; and the future of institutions involved primarily in pre-service teacher education. These issues will provide both an opportunity and a challenge to the Commonwealth and the states and particularly to the Tertiary Education Commission and state co-ordinating authorities.

References

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3. The members of the panel were Mr K. N. Jones (Convener), Professor P. H. Karmel and Mr T. B. Swanson.
4. See Tertiary Education Commission, *Report for 1979-81 Triennium,* Vol. 1: *Recommendations on Guidelines,* Australian Government Publishing Service, Canberra, 1978, pp. 11-17.

Chapter 8

Co-ordination in a Federal System

R. E. Parry

What one must do at the outset in an exercise such as this is to ask what is meant by the expression 'federal system'. The vogue term 'federalism' can evoke a wide variety of perceptions in the minds of those who hear it, and in employing it today we need to know to which variant of this chameleon-like ideology we are referring. Do we mean, for example, the current Canadian form of federalism, in which the financial sovereignty of the provinces is strengthening – even to the point where Quebec has moved to reject federal grants for education in the interests of underlining its provincial independence? Or perhaps the West German variety, where the term 'co-operative federalism' really does have meaning, where the Council of State Ministers of Education has a Secretariat of 180, each state has a permanent office in Bonn and the Federal Minister of Education and Science writes and asks to attend meetings of the Council?

Or, assuming that we are bound to confine ourselves to the Australian product, which model of federalism are we considering? The original 1900 model, or the models as they appeared after successive High Court judgments, such as those in 1926, 1939 and 1957? Or the model announced by Prime Minister Whitlam at the 1973 Premiers' Conference, which marked the beginning of the most intense period of what has become known as 'coercive federalism', using Professor Russell Mathews's definition of that expression as a system 'marked by centralisation of power, unequal bargaining strength and distortion of priorities at lower levels of government'? Or finally, perhaps we mean the 'new federalism', either in the form promulgated by the present government in 1975 or the none-too-recognisably similar form in which it is in practice in 1978.

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To anchor the discussion somewhere, one must make some assumption about the course federalism will take from now on in Australia. Here I am torn between hope and cynicism. On the one hand are the ringing tones of the policy statement of the Liberal and National Country Parties in September 1975:

> The coalition parties are convinced that national objectives can be fully asserted and social reforms achieved and maintained with a more selective use of such grants and without heavy-handed interference and duplication of functions.
>
> Many of the existing Section 96 grants are now part of *well-established and universally accepted programmes* within the States. The moneys for such programmes could be transferred to general purpose revenue reimbursements and *ultimately absorbed in the States' income tax revenue.*

The final sentence of this statement forecasts a significant reversal of the trends of the past:

> Indeed, Section 96 will be used as it was originally intended it should be used, namely to make grants to the States for special purposes and not to make inroads into the constitutional responsibilities of the States.

Over the past two years Government spokesmen have reaffirmed their commitment to these policies. In particular, the Commonwealth Minister for Education (who is also the minister in charge of federal affairs), has consistently reiterated these sentiments in unambiguous language in public statements and when addressing the state Ministers for Education assembled at the Australian Education Council.

On the other hand, at least two factors tend to dim one's expectations. First, some of the states continue to show their understandable reluctance to reject Commonwealth offers of conditional grants under Section 96, maintaining that bitter experience has shown that a sufficient offset in the form of an improved tax reimbursement formula cannot be relied upon and, second, the observable pattern of relationships between the relevant Commonwealth and state bureaucracies still seems to reflect scant variation from the relationships back in the heydays of coerciveness in 1974. Thus, on the whole, I could be convinced that Geoffrey Sawer was prophetic when he said, in the 1976 Robert Garran Oration:

> I do not believe, however, that Mr Fraser or Senator Carrick or any one else is capable of stemming the growth of Commonwealth authority, and certainly the deal on income tax promoted by Mr Fraser in 1976 is far from being a return to cooperative federalism. It is but a difference in the style of Commonwealth domination . . . the drift towards organic federalism will continue . . . .[1]

It may also not be without significance that the Prime Minister was reported in the daily press as having said, at the Premiers' Conference in June 1978 that the Commonwealth's national role in education was important and that it would continue.

Perhaps this is the point at which to mention one or two quick and recent illustrations of the difficulties still to be faced in fashioning an acceptable form of co-operative federalism in education. In Volume 1 of its Report on the triennium 1979-81, the Tertiary Education Commission referred to its desire to reduce the unnecessarily large number of courses coming to it for approval and it foreshadowed new arrangements which would permit 'universities and State advanced education authorities to have a significant degree of discretion in mounting new courses'.[2]

We in the state bureaucracies looked forward eagerly to the manifestation of this long-awaited enlightenment. When the detailed documentation referring to advanced education arrived, however, we were dismayed to find that the Commission had identified no fewer than seventy-one fields of study (or 'teaching activities', as it called them) over which it wished to retain the right of individual approval as a condition of Commonwealth grants. It thus seems that, no matter what the climate set by the policies of the government of the day, the urge to insist that decisions based on Commonwealth uncertainties are of better quality than, and should take precedence over, those based on state ones will continue to characterise federal relationships in education.

A second illustration that actions still tend to speak louder than words is to be seen in the rather unfortunate way in which the preparations have been made for the forthcoming national enquiry into teacher education. Despite their agreement that such an enquiry was timely, the states have, almost without exception, expressed their concern that the exercise was not approached as a joint venture on the part of all seven governments having an interest

in the question. The views of the states were not sought before the Commonwealth determined its position on terms of reference and membership of the enquiry and, although subsequent negotiations have done much to moderate the early tensions, a climate of discontent and even suspicion has tended to prevail in an area where there ought ideally to have been unquestioning co-operation and enthusiasm.

If I have dwelt rather long on this matter of the likely turn of events in our federal system, it is because it is clearly a pivotal question in determining the most appropriate form of co-ordination for the tertiary sector of the future. If there is to eventuate the promised – but as yet only dimly discernible – movement away from coercive federalism to the co-operative variety, then a clearer view can be taken of the roles to be fulfilled by the co-ordinating agencies established by both Commonwealth and state Governments. What follows is based on the stubborn hope that the 'new federalism' will indeed reflect the Federal Government's policy commitment and that the present aberrant contra-indicators are but a transient phase.

This said, I turn to the notion of co-ordination itself. The concept has to be explored in two dimensions. There is the question of breadth of co-ordination across the various kinds of educational institutions that may exist and the question of the number of levels at which co-ordination is attempted.

On the former, I advance the proposition that the wider the span of types of institutions covered by a co-ordinating body, the more effective the co-ordination. Now I know that this generalisation needs some immediate qualification. Special types of institutions need special agencies to safeguard their interests if they are to survive and prosper in the wide arena, and single co-ordinating bodies can become too large, bureaucratic, autocratic, and insensitive if they are not subject to the checks and balances brought by other agencies having a special vested interest. These considerations, one gathers, formed the philosophy underlying the Commonwealth's present Tertiary Education Commission legislation, with its provision for separate statutory councils in the university, advanced education and TAFE sectors. A creative tension was to be an in-built feature.

While some credence must be allowed this reasoning, I judge the doctrine to be false in the long term. The justification for parallel co-

ordinating agencies can be established, I believe, only on an interim basis, when dynamic or unstable circumstances suggest a special, and passing, need. As new institutions mature, as indeed all tertiary institutions must within a decade or so to continue to warrant that classification, the need for special husbandry passes, and with it should pass away the relevant bureaucracy. On this view, one would not see the present Commonwealth co-ordinating structure as a permanent one. Nor, indeed, would one find much to praise in the current Victorian scene, where the parallel existence of the Victoria Institute of Colleges and the State College of Victoria since 1973 has been defensible only on the score that a passing need existed to promote and protect the special interests of the teachers colleges as they emerged from departmental control to corporate status. The contemplation of both bodies continuing their statutory existence in some uneasy triangular competition with the newly-proposed Post-Secondary Education Commission rather takes the breath away. Only the weakest of co-ordination could result from such a structure, and I imagine that early action will be taken to coalesce the three bodies.

Although my plea is thus for comprehensive co-ordinating bodies, it is worth noting that ample opportunity exists, within the internal frameworks of those organisations, for the establishment of special fostering bodies, where these are needed, but they should not be of the kind that can engage in the counter-productive administrative warfare that invariably characterises threatened oligarchies.

While still on the question of scope of co-ordination, I must make at least passing reference to the fact that the problem is not entirely solved when one has reached the stage where all post-secondary education is co-ordinated under one agency. Only the blinkered would fail to see the looming problem presented by the 15-18 age group in Australia and the attendant question as to whether this beleaguered host is best served in the senior years of a secondary school, in a TAFE college or in some new type of institution as yet not devised, though possibly emerging in Tasmania. A problem of co-ordination of some proportions will arise here, and it will go beyond the scope of post-secondary commissions. It is for this reason that I balk at the frequently-heard suggestion that it now behoves all the states to mirror the two-commission structure adopted by the Commonwealth. There is at least some probability

that New South Wales will not do so, given the recommendations of the Working Party on the Establishment of an Education Commission.

How many levels of co-ordination should there be? I do not mean to sound trite when I say that there should be the absolute minimum, and this probably means one at state and one at Commonwealth level. The reasons for postulating one at each level are worth pursuing, at least briefly. It is commonly suggested that, since the Commonwealth is totally funding higher education, co-ordination of the university and CAE sectors could well be confined to the national commission, thus obviating much administrative cost, delay and frustration. One does not have to establish that such an arrangement would be unworkable in order to make the case for state involvement. No doubt a hundred or so tertiary institutions *could* be co-ordinated from Canberra, given a bureaucracy of sufficient size and expertise, though the fate of some colleges, against whom some old scores remain to be settled, is an interesting speculation which need not deflect us here.

The case for co-ordination at state level rests on at least two essential arguments. First, no matter what factors might validly suggest a national interest in post-secondary education (and I allude to these below), the fact remains that the states continue to be responsible for the provision of an effective and articulated educational service for their citizens on a cradle-to-the-grave scale. While state governments continue to exist, their policies and enactments will have social and financial consequences which cannot help but have implications for a service so closely responsive to the changing characteristics of the community as is education. The conurbations of people are in the states, not in the territories, (with the one exception of Canberra), and the complexities of inter-institutional relationships are there, too. It is the states, and only the states, that can resolve the problems arising from these relationships on a day-to-day basis.

If a state government were to fail in the management of the complex social service that is education and allow, for argument's sake, the school and tertiary systems to fall totally out of relationship with one another, or the technical education system to develop a disjointed relationship with schools, tertiary institutions or the employing community, the remedy could only lie, in our constitutional context, with the electors at the state ballot box.

Whatever the influences the Commonwealth might properly bring to bear on the situation, it is the state that, so far as education is concerned, must get things right, and it must, as a consequence, have the machinery to do so.

One of the facts most often overlooked in the discussion of this issue is that the states have never been, and will never be, without a *de facto* educational co-ordinating body in the form of the state Treasury. In the absence of more specialised and visible co-ordinating bureaucracies, Treasuries can, and do, accrue the expertise to exert a major influence on educational standards and practices. Let it not be forgotten that Section 96 grants are grants to *states*, not to institutions or departments, and, albeit they are conditional grants, they are paid into the state Treasuries. The second argument is a less legalistic and a more contemporary one. It revolves around the fact that the rapidly developing sector of TAFE is, at this time, even more obviously in a 'betwixt-and-between' state, constitutionally speaking, than the other two sectors of post-secondary education. While the vast majority of operating funds for TAFE are still provided by the states, the scale of Commonwealth capital grants has escalated greatly and the Commonwealth Government's policy statements suggest that an increasing proportion of its educational funding will go to TAFE, at least for the time being.

In addition, the problems of rationalisation of the activities of TAFE and CAEs in the para-professional and adult education areas have now emerged as potentially the most serious ones of the future. Co-ordination between these two sectors will, on present showing, be a crying need from now on. Even if the Commonwealth were to assume the total funding of TAFE in Australia (an unlikely prospect, one senses, for several obvious reasons), it would be quite impracticable for a single Commonwealth co-ordinating body to deal effectively with several hundred TAFE institutions in addition to the universities and CAEs. Involvement of the state in some form will be essential.

If, as one expects, the ministerial talks on educational funding which are to be resumed ultimately result in some resolution of the anomalies that presently characterise the funding frameworks for the TAFE and higher education sectors, the need for the establishment of state priorities within the post-secondary sphere generally will be even greater.

The task then becomes to define the roles of the co-ordinating bodies at Commonwealth and state levels in such a way that the constitutional rights of both are respected, duplication of effort is eliminated, and the total amount of co-ordination kept minimal in the interests of institutional autonomy.

I am indebted to Grant Harman for a convenient taxonomy of co-ordination, published in an Occasional Paper of the Anderson Inquiry in South Australia in February 1978.[3] In summary, he identifies nine co-ordination tasks:

1. Distribution of funds to institutions and to groups of institutions;
2. Planning, including fixing goals;
3. Determining priorities between and within institutions;
4. Monitoring quality of programs and suitability of awards;
5. Avoidance of waste and duplication (implicit in 1, 2 and 3?)
6. Ensuring adequacy of student places by type of institution, location, field of study and level of course;
7. Ensuring a diversity of course and institutions to meet diverse community needs;
8. Facilitation of student transfer; and
9. Rationalisation of small institutions offering a narrow range of facilities;

To this list of nine items (actually eight discrete ones, I think) I should add two more:

10. The establishment and enforcement of a consistent philosophy on the nature and roles of post-secondary institutions; and
11. Monitoring the equity of the *per capita* resource distribution among the various types of post-secondary students.

It only remains now to identify the tasks on this list that are truly national in their implications. In my view, the charter of a Commonwealth co-ordinating body should include the following.

First, *and above all else,* the setting of the philosophical stage. As a nation, we *must* know whether we are maintaining an orderly tertiary system in which there is a limited number of categories of institutions the roles of which are nationally defined and which are prevented from wandering out of those roles at will; a national body is needed to make the broad appraisals implicit in that task. This is a far cry from a nit-picking disapproval of individual courses that have succeeded in winning the support of state authorities. It involves being alert to and taking an interest in those potential developments

which could result in a *de facto* change in the national philosophy of post-secondary education.

This task would involve, in the current context, keeping a close eye on the long-term implications of such matters as the following recent or speculative developments:

1. The granting of a separate legislative charter by a state government to an individual CAE;
2. The absorption of a primary teachers college into a university, as at Deakin and as sometimes postulated for other provincial locations;
3. The location of the Sydney College of the Arts in the grounds of Macquarie University;
4. The development of self-governing 'post-secondary colleges' in Western Australia;
5. The development of matriculation colleges and TAFE colleges in Tasmania into community colleges distinct from colleges of TAFE;
6. The introduction of a three-year degree course in pre-service teacher education by Murdoch and Deakin Universities; and
7. The evolution of TAFE colleges into 'community colleges.'

Second, the publication of broad planning guidelines based on a national analysis of levels of resource commitment to various types of courses, trends in need and demand, inequalities in educational opportunity, trends in participation rates and comparisons with other nations in our economic peer group.

Third, recommending to the Commmonwealth Government the block funds which the Commonwealth might offer to the states (whether on a total or shared funding basis, according to the political ideology of the day) for expenditure at the discretion of the states on the whole package of post-secondary education, with the expectation that the states would be strongly influenced by the published national guidelines. Significant departures from these guidelines might be the subject of *post hoc* commentary by the Commonwealth body in later published analyses, and recommended grant levels might be amended accordingly.

And that, broadly speaking, would be the end of it. The remaining co-ordinating functions would fall to the state bodies, which can quite effectively distribute funds, determine priorities, monitor awards (to the declining extent that that is necessary), ensure diversity (how one yearns for the day when diversity will

actually have to be *encouraged* in higher education – the public is clearly convinced that there is far too much diversity now), facilitate student transfer, and rationalise institutions.

Apart from representing an acceptable manifestation of co-operative federalism in action, the above division of co-ordinating responsibilities would result in some immediate economies and administrative reforms. Not least would be the saving in air fares spent by college principals heading for Canberra! And it would clearly not be necessary for Commonwealth agencies to undertake the vastly time-consuming and expensive exercise of attempting to visit every tertiary institution in Australia, ostensibly to assess its needs for funds. The first-hand knowledge of the estate of each campus is, and should remain, with the agency closest to hand.

I should like, before concluding, to make at least brief reference to the role of a body which receives scant attention in discussions of this kind. This is the Australian Education Council, which meets once or twice a year and comprises the Ministers for Education from the states and the Commonwealth. With the current establishment of a full-time secretariat for the Council, and the reform of its standing committee of permanent heads of the various educational bureaucracies so that all sectors of education are more properly represented, I believe that a new era has been entered, in which the Council can be used as a more effective means of bringing consistency and order to Australian education without recourse to the offensiveness of coercive federalism. In this connection, one can see it developing along similar lines to the Councils of Ministers of Education in Canada and West Germany.

I suggest, too, that even when the best form of co-ordination of post-secondary education has been established within the precepts of co-operative federalism, Australia will still lack a facility whose absence attracted the comment of the North American group of educators who visited Australia in 1977 under the auspices of the International Council for Educational Development. There does seem to be a need for a national body – perhaps only small – which can stand independently of the governments and the established educational bodies and make a sustained study of where post-secondary education – even *all* education – ought to be some fifteen or twenty years hence. A detached, long-range and continuing view is badly needed. The drawing out of this idea must, however, await another paper, another occasion, and probably another author.

Finally, you will have noted that I have made no reference to the aftermath of expansion. Unless one is prepared to condone financial profligacy in expansionary times, the issues surrounding the co-ordination of tertiary education in a federal system are common to periods of both growth and decline. A greater urgency is lent to the need for good decision-making structures during the latter, that is all. The great test of our systems is how well they maintain their checks and balances and how successful they are in keeping the really difficult decisions about the balance of funding in education out of the realm of sheer politics and in the hands of co-ordinating agencies that are not only representative of the tertiary institutions and well informed about their needs and aspirations, but also skilled in the art of administration by persuasion rather than by coercion.

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Chapter 9

The Amalgamation and Closure of Tertiary Institutions

R. Selby Smith

Ten years ago, any suggestion that a paper with a title such as this could be relevant or useful in the Australian situation would have been greeted at best with surprise or, more likely, with scorn. Some of us, of course, might have been aware of the changes that had already taken place in the western provinces of Canada that had led to the closure of many teachers colleges. But, in this lucky country, our thoughts were still fully occupied with the problems of expansion and development. To help us with the solution of these problems, we were already making use of the device of specially appointed committees or commissions. The history of some of them exemplified very well what Dr Grant Harman has called the Rational or Classical model of policy-or decision-making.[1] As an example, we might look at the work of the Committee on Australian Universities, set up by the Commonwealth Government (or perhaps one might more accurately say, by R.G. Menzies) in 1957. In that case, we can readily identify the five-stage sequence of related steps. First, there was a recognition by Cabinet that a problem existed; and the Committee's enquiries rapidly confirmed this. The universities of Australia were under-manned, inadequately housed, equipped, and financed. Next, the data which would be needed to identify the causes of the problem, and suggest means for its solution, were identified and collected. For example, the relevant demographic factors – chiefly the 'bulge' and the 'trend' – were examined, and their probable effect on the demand for university places estimated, and compared with the resources currently available. Third, the Committee identified, or perhaps clarified, what was generally taken for granted in regard to the aims and objectives of universities in

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Australia. Fourth, it proposed policies for the solution of the problems in the light of the appropriate objectives. It recommended, for example, immediate capital and recurrent grants, and also the establishment of a Universities Commission to ensure balanced development and appropriate funding in the future.

Cabinet speedily decided on its course of action in the light of this advice; the Committee's recommendations were accepted and put into practice. How admirably rational and, as events proved, how effective!

How is it, then, that various governments, in recent and present times, have – after adopting essentially the same procedures – found it so difficult, and in some cases impossible, to act on the advice they have been given?

I reject the suggestion, sometimes made, that the reason is to be found in the inadequacy of the reports themselves, or in any lack of competence, or suitable experience, in the persons involved. The report of Professor Partridge's Victorian Committee [2] or of Professor Karmel's Tasmanian one [3] cannot, I am sure, properly be attacked on either of these grounds. Both identified the problems clearly; both collected the relevant demographic and other statistical data; both considered a number of possible solutions; both gave clear reasons for recommending one set of proposals rather than another.

Yet, in the Tasmanian case, the Government – after an initial acceptance of the report – lost its nerve at the last moment; while in Victoria the outcome, in spite of the recent legislation, is by no means that recommended, and, in my judgment, leaves the position confused and unsatisfactory.

In the rest of this paper, I shall try to answer this question in the terms of its title. The difficulty arises, essentially, because these reports (and others, of course, as well – I am simply using these two as fairly typical examples) recommend the amalgamation and/or closure of existing tertiary institutions. It is not, I believe, because the reports adopt unacceptable objectives for tertiary education or criteria for its effectiveness or efficiency. Essentially, they adopt, sometimes perhaps implicitly, the objectives which we find in the literature on the subject. These objectives are based, to put it in the simplest terms, on the interests of the society in question as a whole on the one hand, and on the interests of the individuals who compose it on the other. The Tasmanian report on the *School in Society,*[4] for example, suggests

> Education is a complex process and requires a complex organisation. It is vital that judgments and revisions be made in the light of aims, and not of economic advantage, administrative convenience or political expediency, to mention some of the other possible criteria. This is not to imply that economics, efficiency and politics are irrelevant to education, but that the basic consideration is the achievement of the purposes set for the school by society.

More specific to the tertiary field is the excellent discussion in Chapter 2 of Volume 1 of the Robbins Report.[5] In paragraphs 22, and those which follow, it identifies four main objectives of tertiary education. First, 'instruction in skills suitable to play a part in the general division of labour'. This was put first, in the Committee's words

> because we think that it is sometimes ignored or undervalued. Confucius said in the Analects that it was not easy to find a man who had studied for three years without aiming at pay. We deceive ourselves if we claim that more than a small fraction of students in higher education would be where they are if there were no significance for their future careers in what they hear and read: and it is a mistake to suppose that there is anything discreditable in this.

Second, 'what is taught should be taught in such a way as to promote the general powers of the mind'. Third, 'the advancement of learning', because 'the search for truth is an essential function of institutions of higher education, and the process of education is itself most vital when it partakes of the nature of discovery'. Fourth, 'the transmission of a common culture and common standards of citizenship'.

Broadly speaking, we in Australia accept this approach. My own experience as a member of the Planning Committee, and later of the Council of La Trobe University, as well as that of being the Foundation Professor of Education, and the first tenured Dean of that Faculty at Monash, and also the first Principal of the Tasmanian College of Advanced Education, confirms me in that view. At La Trobe, for example, we surveyed the place of residence of every matriculating student in Victoria; we looked at the applications for admission to all the existing faculties and departments at Melbourne and Monash (and, in certain cases, in other states as well), and we discussed the need for graduate professionals with the leaders of

various professions such as medicine, engineering, teaching and agricultural science. We assumed – and I believe rightly – that society, through its elected governments, is willing to pay for the education of the professionals it needs – whether lawyers or architects, dentists or teachers – and that, in return, it has the right to demand that this be done as efficiently as possible. It looks, and legitimately so, for medical practitioners who will cure its ills or ease its sufferings, for engineers who will build safe dams and bridges, and for teachers who will enable its children to develop their varied gifts to the full. Now if tertiary institutions can do this, they will also go far to meet not only the needs of society, but also what Robbins called 'the legitimate aspirations of individuals'. Such aspirations are normally legitimated by the individual demonstrating that he or she can be regarded as qualified to undertake the desired course of study. In this way, individuals can be given the key to satisfying careers of their own choice. Now this is defeated if our 'manpower planning' is inefficient, as it often, alas, proves to be.

In our democratic and developed societies, we tend to react instinctively against a too-open or simplistic adoption of a manpower planning approach to the provision of places in tertiary institutions. It smacks, perhaps, of totalitarianism, or of Orwell's *1984*. We happily point out how imperfect such projections have often been in the past, and seem to use such experience (and it has indeed often been unhappy) as an excuse for not trying to do better. Yet at the same time we accept such methods: the Universities Commission, for example, has always done so when considering the need for more or larger medical schools. In the advanced education sector, the Committee and its successor the Commission often made it clear that new courses would be approved if there was clear evidence of adequate student demand and of enough employment opportunities. In other words, they accepted, quite openly, that the needs of society and those of individuals were both relevant.

Nor are these two criteria essentially in opposition. The young person who wishes to become an engineer has surely no desire to be a qualified, but unemployed, engineer. His aspiration is to be qualified and to be employed in a satisfying and useful way in the service of the society of which he forms part.

In times of expansion and development, these general principles cause us few or no serious problems. We can move, if our society is as prosperous as Australia was for the two decades up to about 1973,

steadily towards a greater satisfaction of the needs of individuals and those of society. The fulfilment of some aspirations will be delayed; but there is ground for hope that, in time, such disappointments will be remedial.

But at the present time when the whole demographic pattern is changing so rapidly, and when the economic future is less predictable, this is not the case. Our committees of inquiry make it clear to us that in their opinion we are providing society with persons who have qualifications which it does not need. Hence, they recommend – not merely in Australia, but in Canada, in Britain, and elsewhere – that rationalisation is needed, and that, to achieve this, there must be amalgamations or closures of existing institutions. They recommend this in the light of the objectives I have been discussing above, and on genuine educational grounds. Let us examine a number of examples, and then try to isolate the factors that have been relevant to the success or failure of the proposals in question.

There is one general and important factor that is certain to exist wherever the future of an institution is seen to be threatened. We in Australia have been so conditioned to a process of expansion and development in education that we are psychologically quite unprepared to recognise that contraction may at times be equally right and desirable. Many of the individuals concerned, too, will feel threatened, or will really be so. As always, they will find it very hard to give full attention to, and to accept openly, the arguments that give rise to this situation.

Nevertheless, some such proposals have certainly been successful. In Alberta, for example, some twenty years ago, all teachers' colleges were closed, and their programs and their staffs brought into the university. British Columbia followed that model some years later; Ontario came later, but the last two non-university courses for the education of teachers are, I understand, to be brought to an end in the very near future.

In Hobart, in 1971-2, the Teachers College was closed, and its responsibilities were taken over by the College of Advanced Education. The process was repeated with the Launceston Teachers College in 1972-3. In England, St Luke's College of Education, in Exeter – a large and well-respected Church of England college – is being merged with the Faculty of Education in the university this year.

All these have clearly been, or at least seem likely to be, successful. In each case, the society, in the form if its elected government, had decided that its need for well-qualified professionals would be more effectively met if the change was made. In each case, the students felt that they would become members of a higher status institution, that their courses would be improved, and that they would qualify for a more prestigious award. But there were other important factors. The staffs of the colleges concerned also saw that they would have a chance of becoming members of an institution with a higher status. In Alberta and British Columbia all the academic staff could feel this, as virtually all the them became staff members of the University. In Exeter, as in Hobart and Launceston, this was not the case; a substantial proportion of them would *not* receive appointments in the other institution. But in all these three cases (as in a number of other similar ones), their salaries and future employment were to be safeguarded; and this was known in *advance* of the mergers. Thus, even though some staff members were deeply disappointed, and might have been expected to lead opposition to the changes, their antagonism was very much alleviated by the certainty of continued and equally lucrative employment.

In each case, too, the opposition of the existing staff members in the university or CAE was overcome, or reduced, because they saw the benefits of the additional students which the change would bring.

Nor did the localities concerned feel any strong opposition to the change; trade and employment in Hobart and Launceston would not suffer, because the same, or larger, numbers of staff and students would continue to live and work in those towns; and the new institutions might well require – and be given – new buildings and grounds, with obvious benefit to the standing of the locality and to employment prospects there. Much the same holds true of the situation in Exeter. Hence politicians with local interests were ready to defend the changes and could even hope to gain from them. Similar conditions have helped to ensure the success of many mergers. One could give examples from many parts of the world, but it may be helpful to use some from nearer home. The mergers of the teachers' colleges in Ballarat and Bendigo with the nearby CAEs are good examples, and satisfied most of the same conditions. So, too, did the merger of the two Geelong colleges to form Deakin University. The larger institution might well be more Viable and

more prestigious; in Bendigo and Ballarat no one would lose his job; in Geelong many – perhaps most – could hope to find posts in the new university; and in the event they were not disappointed; the locatities retained their own local institution, and politicians could also point to the possibility of genuine economies and educational benefits. Such facilities as libraries, computers or even canteens could well give a better and more economical service if the number of users was to be significantly increased, and duplication avoided.

It is perhaps invidious to describe actual closures as 'successful'. But at least some have been, or are being, carried out and real benefits have followed. In the United Kingdom, over thirty colleges of education will either disappear this year or will begin to run down their courses so that they will finally close in a year or two; the college in Darlington, or Stockwell College in Bromley, are typical examples. Graylands in Perth, Western Australia, is another. In the United States, too, at least seventy colleges closed their doors in 1977. These closures are basically the result of clear and indisputable demographic trends which are resulting in a much reduced need for graduates, and especially for teachers – trends that occur whatever assumptions one makes about desirable sizes for teaching groups, or wastage rates from the existing stock of teachers. It is possible for the governments concerned to have them closed, in spite of some inevitable opposition, for a number of reasons. First, the statistical evidence for a reduction of places in teacher education is indisputable. Second, virtually everyone concerned can see that the reduction required is on such a scale that, if all institutions are to continue in existence, some will be so small as to be both inefficient and uneconomical. Third, in the United Kingdom, and to a smaller extent in Western Australia, the government has published a detailed and generous code to safeguard, to a considerable extent, the future of those members of staff who will be disadvantaged, or actually redundant. Fourth, the location of each of these colleges and their relative importance in the life of their district, were such that local interests did not feel that the closures posed any great threat to their future welfare. Local politicians, therefore, did not see that any very great advantage could be gained by fighting strenuously for their continued existence.

Let us turn now to some instances where mergers or closures have been recommended, but where the recommendation has either not been carried out or where the decision is still not certain. Tasmania

is an interesting example. When the Karmel Report was published, the Labor Government and the Liberal Opposition alike announced that they would accept it. After much discussion, the Professorial Board of the University of Tasmania also agreed by a small majority to support it and play its part in implementing it; and the University Council took the same view, though with a much larger majority. A meeting of the university staff also supported it, by a substantial majority, in spite of some very vocal opposition. A most interesting feature of the situation, too, was that the staff of the Division of Teacher Education (with only one dissentient!) made public their support of the proposal to discontinue the activities of the CAE in Hobart, to transfer the responsibility for much of its work to the University, and to move the remainder to Launceston in the hope of building up the campus there to a viable size. Some other members of the CAE staff also supported this view; and since the Division of Teacher Education is by far the largest unit in the College in Hobart, this meant that about half of the academic staff of the CAE there were in support of the proposed closure. But other factors had a powerful influence.

A number of members of the College staff naturally felt that their future was seriously threatened. The report had urged the University to give 'sympathetic consideration' to the employment of the academic staff of those parts of the College for which it might become responsible; and it also made clear its view that the Tasmanian Government had some responsibility for those who might become redundant. But uncertainty remained, and some of those likely to be affected made great efforts to discredit the report, and to convince the public that, if it was carried out, the city of Hobart, and its young people, would lose a range of activities and opportunities that were rightly theirs. There was opposition, too, from some University staff members, who felt that the proposed changes would alter the character of the University in a harmful way. It would seem that the publicity gained by these activities caused the politicians to believe that they would lose support in Hobart if they carried out the report; and an election was due soon. Whatever the reason, there was a last-minute change of policy, and it was announced that the College would continue to have a presence in Hobart. The Council of Advanced Education in Tasmania is not an autonomous body; all that it does is subject to the power of the Minister of Education to give it directions, and the then Minister has

used his authority in such a way as to ensure that the College Council will henceforward base its policy on the recommendations of the Report. Thus it is yet possible that most of the changes recommended will be put into effect; several have already been carried out.

But what is to happen in Victoria? Am I not right in assuming that it will prove virtually impossible for the politicians concerned to close the Preston Institute, or to 'downgrade', as it were, the colleges in Gippsland and Warrnambool? The reasons are not far to seek. In these, and in other cases – such as the eventual retention of all of the ten Colleges of Education in Scotland [6] – political and personal issues will prove, or have proved, stronger than the educational and economic ones I have indicated above. Thus we can see that the Victorian Institute of Colleges and the State College of Victoria are to continue in existence, in spite of the creation of the over-arching Commission recommended by Partridge. Parochialism and local business and political interests are surely likely to result in the unnecessary and inappropriate continuance in their present form of the three institutions I have just mentioned; and the absence of any clearly defined scheme for compensating those who may be disadvantaged will do much to ensure that opposition from such persons, and from the professional organisations to which they belong, will be loud and long.

Clearly, closures and amalgamations are prickly fruits; if they are to be successful, they require, ideally, a number of specific conditions such as I have tried to outline. In the absence of these conditions, there is a need for a degree of understanding and resolute courage which those in whose hands the decision lies may perhaps not possess. It will be sad for Australia if they do not.

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6. This seemed to be true when this paper was written. I understand, however, that the waning fortunes of the Scottish Nationalists are likely to result in the closures and amalgamations being carried out after all!

IV
Some Institutional Responses

Chapter 10

Improving Teaching and Learning

Ernest Roe

Lack of Interest?

After the weighty matters dealt with in the previous papers, this one might be subtitled 'From the Sublime to the Ridiculous'. I almost feel apologetic to be concentrating on something as trivial and domestic as teaching and learning. It is, however, a considerable shift from the large issues of tertiary education systems to the quality of experience *within* our institutions. In what follows I shall be concerning myself mainly with universities.

Parry in his paper declared himself torn between hope and cynicism. As I came to grips with this topic I also found myself running a shuttle service between those two, or between similar feelings which I would call utopianism and pessimism. It is no criticism of the editors of this book if I suggest that this topic might have been just as appropriately in the 'Problem Areas' section as in the section headed 'Some Institutional Responses'. Few tertiary institutions, I suspect, yet see the improvement of teaching and learning as a response they might make to the situation described as the aftermath of expansion. Perhaps the problems to be overcome in effecting such improvement are too daunting.

Where the improvement of teaching and learning has in the past been a matter for concern, that concern may have already been expressed by the establishment of a research-and-development unit. Perhaps indeed the establishment of such a unit three or five or ten years ago has led to a *reduced* concern, in the institution as a whole, for the improvement of teaching and learning. The correct gesture has been made; in the case of more recent units, the recommendation in the 5th AUC Report, repeated and reinforced in the 6th Report, has

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been noted and made effective; the unit exists, it is the conscience of the institution as far as teaching is concerned, and everyone else can comfortably leave it to them – that is, the staff of the unit.

Such a summary is probably unfair to many tertiary institutions. It is simply there to make the point that an institutional response *can* be mere lip-service, or an evasion rather than a positive action. We are, in this case, talking about a response which is yet to be made, rather than one which already exists to any significant extent. If the improvement of teaching and learning has merit as a response to the aftermath of expansion, the important questions are: is the improvement of teaching and learning a concept in which tertiary institutions are likely to be seriously interested? Is the change in the situation of tertiary institutions, from expansion to its aftermath, of such character or dimensions as to promote or facilitate increased interest in the improvement of teaching and learning?

To date – and here is another of those unavoidable but dangerous generalisations – there has not been much serious interest (which is a reason why I see it as a 'problem area').

Causes of Lack of Interest

The first and most obvious is that there is little reward for improving one's teaching – reward, that is, of the kind on which most academics set their sights – promotion either within one's own institution or by successfully competing for a higher position in another institution. (I should note here that I am referring to universities; perhaps the rewards are better in other tertiary institutions.) I need not traverse this very familiar territory; there is much lip-service given to the importance of teaching but in practice it takes a place, if any, a long way behind the counting and weighing of publications.

Even if it were true that a promotions committee did rate teaching skill highly, some dramatic demonstrations of this would be needed before academic staff generally changed their present views. The crucial fact is that staffs in universities do not believe that teaching matters much, as far as their personal advancement is concerned. It is this belief, or lack of it, which is central to the status of teaching in the institution.

A second cause for lack of interest in the improvement of teaching is embedded in the foregoing argument. It can be identified by a question: *why* do promotions committees devalue teaching? The

usual answer is that there is no satisfactory way of measuring an individual's teaching competence. By contrast, his research-and-publications competence is easily judged.

There are again very familiar issues here which I will leave aside. I think there are serious questions about the ways in which academics succeed or fail by their publications, and that judgments about research competence are not always so simply made. But while not accepting the typical view of promotions committees that teaching competence involves the nebulous flavoured with the intangible and more than a dash of 'we can all teach anyway, there's nothing to it, so why make a fuss about it?', I nevertheless agree that the assessment of teaching is a difficult problem and I sympathise with those who want to dodge it.

A third reason for lack of interest in the improvement of teaching is the most basic of all. There is a lack of interest because, generally speaking, nobody's interested! It is not a live issue. The attitudes of promotions committees are well-founded in the communities of which they are a part. Staff are not very exercised about the improvement of teaching – they have more important concerns; students are apathetic, and, apart from an occasional protest or minor disturbance, they put up with the teaching they get, whatever it is like; and the wider community is much more concerned about the immoral lives, the dangerous political views, the excessive salaries, the endless holidays of academics than about whether or not they can teach.

A fourth possible reason which I should mention for the sake of completeness is that people believe teaching and learning are not in need of improvement. That would be the simplest reason of all for lack of interest in improvement. Even if some academic staff believe that about their own teaching, they are unlikely to have such complete faith in the standards of teaching and learning of their institution as a whole.

I have deliberately painted the past and present situation in somewhat lurid colours, because the difficulties in the way of tertiary institutions responding to the aftermath of expansion by improving their teaching need to be fully appreciated. We lack, in universities at any rate, a tradition that teaching skill really matters. And the teaching development, research-and-development units, by various names, even where much more than a twinge of institutional conscience, have had little hope of stimulating

fundamental change, because of the formidable difficulties just outlined.

Prospects for Increased Interest

In the aftermath of expansion it seems unlikely that teaching will be rewarded any more than it is now, by becoming a passport to promotion or better jobs. Indeed, the expectation is that rewards of this kind will be very few, with much diminished promotion opportunities and even fewer chances for new jobs. In a perverse way, the fact that even research and publications might not do much for one's advancement may increase the relative status of teaching and teaching may be less obviously the poor relation.

Speculation can go a little further, however. A question already familiar in some overseas tertiary institutions is increasingly being asked here: How is the young academic, getting his first appointment, say, in his mid-twenties, to get 'job satisfaction' in the same job for the next forty years? One possible answer is a series of exciting and absorbing research projects. Another is a commitment to the insoluble, ever-changing problems of teaching and learning – which could be as exciting and absorbing as research for many academics; for far more academics, one might guess, than in the days of expansion, because the incentive to neglect all else in order to concentrate on publication and promotion is likely to be considerably weaker.

Such developments would not by themselves make teaching into a live issue. What are the chances of institutional support for academics who are more concerned than before about teaching efficiency? That ominous word 'accountability' can lead to cautious optimism. What will make our institutions accountable? The concern of academic and administrative staff to demonstrate our worth and to present a good case to governments and public is part of the answer. As evidence of that concern we shall be scrutinising ourselves conscientiously and will want to be seen to be doing so; so that includes scrutinising our own teaching and learning operations.

Students Attitudes

Another factor in our accountability is the attitude of students. Will they, for example, become increasingly militant about the quality of their tertiary experience? At the moment, it seems unlikely that student demand for better teaching will become

significant, unless in some way it becomes official and effective student policy. The present situation is not without its ironies. Tertiary institutions are very anxious to keep up their student numbers since their funding is dependent upon their doing so; *within* institutions, departments are both subtly and blatantly competing for students; this means that students have enormous power which is unused. If there were demands from students for better teaching, the chances of a hasty and positive response would be high. No doubt here and there it does happen. But so far students appear to see little cause for complaint, since pass rates are high and most are thereby getting the most important thing they want from our institutions.

From recent overseas reports, however, it seems that students are taking an increased interest in the processes of teaching and learning and rather less in the outcomes.

In the editorial of the most recent issue of *Studies in Higher Education*, Professor Becher begins by saying: 'There is . . . a long way to go before the majority of academics will come to regard it as a proper part of their job to think as hard about their teaching as they do about their research . . .'. Then this: ' . . . Students are no exception to the trend towards consumerism in society at large. Like medical patients or parents of primary school children, they have begun to see themselves not merely as passive beneficiaries but as active clients. Instead of remaining duly grateful for their privileges, they have inconveniently started haggling about their rights'. He concludes that 'as far as demands for accountability in higher education are concerned, the main emphasis is likely to fall on the means of justifying the quality of teaching and learning processes rather than on the methods of maintaining the standards of academic products'.[1] Maybe in our tertiary institutions, too, with a degree no longer so significant a job ticket and with increased democratisation of tertiary institutions (even if student power is so far generally limited to being consulted about assessment procedures), students will become more critical, more constructively critical, and concerned with the improvement of the quality of the academic side of their own tertiary experience.

Barriers to Rapid Progress

Yet in many respects students are even more conservative than staff, and there is unlikely to be any immediate challenge to some of

the present outmoded practices in tertiary teaching. In particular, the formats we use – tutorial, practical class and especially the lecture – tend to persist irrespective of whether they are appropriate to particular teaching/learning needs, indeed even when they obviously are not. The following snatch of dialogue, authentic I assure you, illustrates the kind of barrier which blocks improvement:

> Student (indignant): 'You can't set us an exam question on that – you haven't done it in lectures!'
> Lecturer (placatory): 'But it's in the textbook as well as in the duplicated notes.'
> Student (unappeased, genuinely upset): 'But you haven't told us about it in lectures!'

Other barriers include widespread staff defensiveness about teaching. Sermons on the responsibility of academics to teach well have not been notably successful in the past, and even rational arguments that a new job satisfaction can be obtained from teaching in the future may not carry all before them. There will inevitably be a special problem with older staff, whose ways of doing things are well established, who are on a long, comfortable downhill slope to retirement ten, fifteen or twenty years away, who may be in many ways valuable and effective members of staff, but who will possibly be oblivious to the exciting future prospects in teaching.

Defensiveness will get in the way of receptivity to agitation (however gentle) about improvement; it will also affect the acceptability of whatever advice, help, or (a more alarming word) training is provided by the institution; and the credibility of those who are doing the helping or training. This last is an important problem to which I will return shortly.

Role of R & D Units

How, in the face of a great deal of discouragement, could an institution best tackle the improvement of teaching?

Many research-and-development units have the improvement of teaching as part of their brief. Its priority, among the diverse activities of units, varies a great deal. The approach is probably much the same everywhere; private consultations with staff members who seek help; a variety of seminars, workshops, small and large courses, some open to all, others directed towards a single department, some of these attempting a wide coverage of teaching

activities, others concentrating on a single topic such as running tutorials or clinical assessment; the publicising through pamphlets and newsletters of teaching problems and solutions from a variety of Australian and overseas sources, and the circulation of home-made material, from practical hints and guidelines to more theoretical discussions of teaching. As a general policy, units work *with* and *through* faculties and departments rather than *for* them, and in this way often achieve a great deal with relatively meagre resources.

I have not done justice to these units in sketching their improvement-of-teaching activities so briefly. But it is enough to introduce some questions. If (in the aftermath of expansion) such a unit is going to implement, or indeed to embody, an institution's improvement-of-teaching policy, should it continue to do what it is doing now? What difference, if any, does the change in the situation of the institution make to the approaches and procedures to be followed by a unit? What else could it do?

The first possibility is to mount a full-scale course of teacher-training for academics. These do already exist in some institutions by various names such as Diploma in Tertiary Teaching. I shall not attempt here to comment on the actual or possible content or method of such courses. They are inevitably labour-intensive and many units do not have the necessary resources. It would not, however, be surprising if some departments and faculties of education relieved some of their present or future embarrassment about their spare capacity by moving into this area. There is a problem of persuading academics to submit themselves to such a course; and there is the problem of whether their actual teaching behaviour is permanently changed for the better if they do take such a course. Such problems raise many other issues concerning both the nature of academics and the nature of teacher-training courses, but I shall have to leave them aside.

Units could make their expertise go further by a deliberate policy of training/instructing selected (but willing) individuals from a number of different departments, equipping them to act as supervisors, helpers and similar kinds of human resource within their own departments with respect to the improvement of teaching. This could be still more effective if material to assist staff to improve their own teaching was partly self-instructional, with the key person in each department or group equipped to supervise his colleagues and fill in the gaps for them.

The notion of recruiting such key people from a variety of departments is important for other reasons. The influence, even the credibility, of a research-and-development unit in its improvement-of-teaching role or indeed any other of its roles is likely to be enhanced if it develops a network of committed and active supporters scattered throughout the institution it serves.

Units can become too preoccupied with teaching and too neglectful of learning. That point is not demolished by an assertion that teaching and learning are the two faces of the same coin. Instructional skills are important, and how to lecture, how to run small groups and practical classes and similar attempts to improve teaching have been and are useful. But ultimately more important is equipping teachers to facilitate learning by students. Units need to concern themselves with the skills and knowledge students need if they are to be efficient and self-reliant students; and then to help staff to develop those strengths in their students.

This implies a shift from instructional *method* towards the management of teaching in the interests of learning; in particular, the management of *resources.* It means greater attention to the resources from which students learn, instead of a major preoccupation with what the teacher actually says and how he says it, in formal classes, and with staff-student interaction.

The significance of external studies as a method of learning which may be appropriate for internal students is also relevant here; the emphasis is on the skills needed for individual learning rather than on the receipt of mass instruction.

Activities to improve teaching and learning need to be discipline-based rather than global. With assistance from units it may be possible to develop individuals as experts in the teaching and learning of particular disciplines, with special emphasis on expertise in the resources of each discipline.

If the climate in an institution were highly favourable to the improvement of learning, more radical steps in these directions might be taken, at least experimentally. Every student could spend his first term or semester in a tertiary institution acquiring the skills needed to be an effective student in whatever disciplines were going to be his major preoccupation; learning how to learn physics or history or psychology or engineering; perfecting discipline-based study methods, information retrieval techniques, getting familiarity with the appropriate resources. Objections that courses with heavy

content could not afford to give up a term for this kind of activity can be countered by suggesting that students with improved learning skills would be more effective students and easily make up the 'lost' time.

There are indirect as well as direct means to facilitate the improvement of teaching. Research is such a means. Some units are active in descriptive or illuminative investigations; their purpose is to demonstrate what is actually going on in the institution as far as teaching and learning are concerned; and the findings of such studies provide evidence which units (and individuals in the institution) can use to emphasise existing strengths and weaknesses and point to needed improvements. Another important though less tangible effect of such research is that it helps to create a climate in which improvement is a more acceptable concept. I think the creation of the right climate is going to be extremely important and units will need to explore and use all possible means towards that end.

Evaluation of Teaching

My final comments on possible changes in research-and-development units arise from speculating whether tertiary institutions, if they officially adopt 'the improvement of teaching' as a policy which is to be actively pursued, will take a greater interest in the evaluation of teaching. At present units are careful to maintain a clear distinction between helping and evaluating. If unit staffs are to be acceptable as guides, helpers, even instructors of academic staff, they cannot be inspectors. They may evaluate the teaching of a staff member, at his request, privately, for his personal edification. They will not report to others, and that includes a promotions committee, on anyone's teaching competence. They are wary of anything that smells even faintly of compulsion. Perhaps it's the ultimate nightmare for a director of a unit to find a staff member on his doorstep saying 'The Vice-Chancellor sent me to get my teaching fixed up'. Of course, no Vice-Chancellor or head of department would do any such thing – I said it was a nightmare.

But if our institutions begin to put pressure on staff to pursue teaching improvement, they might also move towards more systematic assessment of teaching competence. If, in the future, academics have to be more accountable for their teaching, research-and-development units may find it increasingly difficult to resist

involvement in evaluation of teaching. I used 'involvement', but the word which naturally came to mind was 'contamination'. I cannot see how a unit can become even a very little of an inspectorate without being fatally contaminated.

If tertiary institutions in the future do want some kind of inspectorate as part of the process of internal evaluation, such an inspectorate should be entirely separate from units concerned with the improvement of teaching. Altogether, however, this is a more subtle and complex problem than it sounds in this brief treatment of it.

There are few signs in Australia as yet of moves towards the institutionalised evaluation of teaching by students, which is quite common in the USA. It has been argued that university-wide procedures for the automatic or regular assessment by students of the teaching they experience are preferable to random or sporadic use of such assessment because academic staff more readily accept it. If everyone is 'suffering' alike, nobody need feel victimised and overall staff become less defensive about their teaching. Counter-arguments often refer to the personal nature of teaching, to the uniqueness of each teaching/learning event, and to doubts about the validity or reliability of students' judgments, as well as to the difficulties of identifying both satisfactory criteria and appropriate measuring instruments for those criteria.

It is impossible to pursue this controversial matter in detail here. However, if increased concern about efficiency and accountability in tertiary institutions does mean increased concern about *teaching* efficiency and about how to ensure it, systematic approaches may have an appeal. Although research-and-development units continue to avoid sitting in judgment on individual staff, they may increasingly be asked to assist in the development of evaluation procedures; and they may even find themselves acting as consultants to student unions which actually run the evaluations.

Credibility of Units

In all the future possible or desirable activities for units, there is a crucial question of the credibility of the units themselves. It is a problem for units now, at least at some times, with some of their potential clients, the academic staff of the institutions. (The doubters are those who have never been clients, rather than those who have been.) If the improvement of teaching and learning does

increase in significance, voices querying the competence of unit staff to foster or bring about such improvement are bound to be raised.

There is no simple answer to this problem. Staff of units, by any relevant objective criteria, may fully deserve credibility but that is no guarantee that they will have it. Units begin as an act of faith by their institutions; that faith can be strengthened if the unit establishes its presence, earns respect for what it does, and, most important of all, if its staff are respected and trusted. It is peculiarly difficult in that the major achievements of units are intangible or, even more ironical, their greatest achievement is to stimulate or otherwise make possible some improvement in, say, an academic's teaching so that he is unaware of the source and believes that alone he did it. That is the ideal situation – that a unit should facilitate self-help and not be credited with it!

Need for Institutional Backing

In general, I believe that considerable advances are possible, if we use the ancient but valid principle that one must begin where people are, not where one would like them to be. 'Improvement' means the translation of what has been added to an individual's knowledge, skill or general competence, through some kind of formal or informal 'training' experience, into his/her own normal, daily, teaching procedures. Teaching is not improved when receptive academics have accepted assistance; only when their actual teaching behaviour is permanently changed for the better.

But if the improvement of teaching and learning is to be a significant response by an institution to the aftermath of expansion, the notion will need strong and explicit institutional backing. Units may need to be strengthened in the sense of additional human or material resources; but the strength they most need is the backing of the institution, and this would be a major contribution to the creation of the right atmosphere, referred to earlier.

In fact, such backing is needed at the national as well as the institutional level. It is noteworthy that there is a variety of means whereby support is given to research in tertiary institutions; through, for example, ARGC, NHMRC, and ERDC. There is no similar body which provides funding or any other support for teaching and learning in tertiary institutions. The establishment of such a body could do a great deal to encourage academic staff to innovate, to experiment, and generally to improve teaching.

The endorsement by the AUC in its 5th and 6th Reports of the establishment of research-and-development units (which it called Teaching Research Units) undoubtedly had an effect. What is now needed are strong statements, from the Tertiary Education Commission, the Australian Vice-Chancellors Committee, and other such bodies that in the aftermath of expansion tertiary institutions have a responsibility to improve teaching and learning. Similar policy statements should be made by the senates, academic boards, and other senior committees *within* institutions. The need for such statements is crudely realistic. Most academics would probably agree that the improvement of teaching and learning is a laudable objective; but most need a strong lead before they will pass from agreement to action; or to a proper receptivity to the attempts for improvement made by others on their behalf.

The problem is very familiar to anyone who compares the *enrolment* at workshops and seminars on the improvement of teaching with the actual *attendance.* We all often intend to do something, we have a conscience about it, we feel that we should. But we don't do it, or we keep postponing it, because, when it comes to the point, we are not willing to give it a high enough priority among our personal concerns at that time. This is why the strengthening of a favourable atmosphere in the institution is so important. It can provide that significant extra incentive.

Nevertheless, no unit could cope with too many academic colleagues passing suddenly from good intention to action. But that problem can wait until it is encountered.

Conclusion

I hope I may be forgiven for concluding on a moralistic note. A recent study with which I have been closely involved has brought home to me very forcibly something about tertiary institutions of which I suppose we are all aware but which mostly we allow somewhat uneasily to sleep. It is the extent to which the decisions we make *within* institutions are political (in which I include economic), expedient, convenient, and the extent to which they are *not* based on educational considerations. I know there is a score of excuses for this. Indeed when this kind of issue comes up for discussion people say that we are engaged in a struggle for survival, or, to be less dramatic, a struggle for the equitable distribution of scarce resources.

It seems to me, however, that a serious concern in tertiary institutions for the improvement of teaching and learning would be a response to the aftermath of expansion which would emphasise proper educational considerations, even if, by emphasising our desire *to be seen* to be accountable, there were also expedient overtones.

Finally, I am reminded of something David Riesman once wrote which I have proposed on previous occasions as an appropriate motto for those who live every day with the challenges and ambiguities of research-and-development units:

> One must live on two levels, that of practical reform and that of utopian vision, and in the dialectic between these levels, activity on the one may accompany temporary defeat on the other.[2]

It may be that in some of the large areas which have been explored in papers in this book we shall have to console ourselves with Utopian visions. But something will be achieved if we concentrate a share of our attention on practical reform – on putting our own house in order with respect to teaching and learning.

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2. David Riesman, *Constraint and Variety in American Education,* Doubleday Anchor Books, 1958, p. 16.

Chapter 11

Staffing

R. St Clair Johnson

Let me begin by admitting freely that I have no particular qualifications to speak on this topic. I have a certain amount of experience within The Australian National University; a lot of people have had a great deal more experience in much bigger, more complex institutions. All that I aim to do is describe what has been the experience of one institution as it came into the aftermath of expansion.

The Australian National University as a whole is composed of three parts: the Institute of Advanced Studies which is completely concerned with research and the education of postgraduate students; the School of General Studies which is like a normal Australian university with undergraduates, postgraduate studies, a concern with teaching, a concern with research – this is the section that I am involved in; and the third section, the central areas, which includes the library, the computer facilities, the central administration of the university and various other sectors, including ORAM. The School of General Studies numbers around about 5000 students, about 430 academic staff, and 220 general staff.

The School of General Studies had grown quite rapidly through the 1960s and I should think that most of the academic staff in it, by no means all but certainly the majority, had never known any other pattern of university development. We have had this expansion since the late 1950s; in fact, if one goes earlier than that, going into the immediate postwar period there was very rapid expansion then; so that really one has to go back into the 1930s to get a period of reasonably stable conditions, or at least reasonably constant size, in Australian tertiary institutions.

Then we saw the decline of the war years, the extremely rapid

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expansion postwar, some contraction again in the 1950s and then, after the Murray Committee's report, the steady growth which prevailed since that time, so that most academics only knew that pattern of constant growth. This is one of the reasons why there were such problems when the growth stopped, and when it stopped so suddenly.

I made the great mistake of becoming Chairman of the Board just at that time; I came into the position on 1 January 1976 and it was in August 1975 that the triennium was deferred and the first of the frozen budgets began. So 1976 was, to put it mildly, a pretty interesting year in the administration of this institution. We were stuck with salary commitments to people, salary commitments that had been framed in the expectation of continued growth. The only area in which it was possible to impose a sudden halt to expenditure was in the non-salary area and that led to an extraordinary imbalance; in the budget of 1976 the salary expenditure was 92 per cent of the budget.

That was impossible; if that had gone on the chemistry department and some other science departments would have simply had to stop teaching in about July because they would have run out of all their materials; as it was they ran down stocks to a hazardous degree. We emerged from that situation by the end of the year; we had spent, I suppose, about 85 per cent of our money on salaries, 15 per cent on non-salary – we had managed to make that adjustment partly by reductions in salary costs and partly by the supplementation that was still coming to us during 1976 (supplementation for non-salary expenditures), which has since stopped.

The most urgent task therefore was to restore the balance by reducing salary costs, which means reducing staff numbers. The least painful way to do that is by not filling posts as they are vacated. It is not always possible to leave them unfilled, or certainly not always desirable, but in fact we did achieve by late 1977 a fairly stable situation in staff. While I have no idea what funds we are going to be getting in the coming year, nevertheless if things remain round about the same, then the School of General Studies is geared up for it.

I am sorry to have spent so long on financial matters but, as you see, that is the background to the staffing question. We have had to reduce staff numbers equitably; not only painlessly, but equitably, so that the pain is reasonably evenly spread, and is spread in ways

that the institution comprehends. For this purpose we have had to come to some formulae. The School of General Studies has done its academic staffing by formula for over ten years; formula staffing in that area is by now very familiar. We have now made some moves towards formula staffing for general staff, particularly in the Faculty of Science; while people might object to the formula, and might want to see the formula varied, at least it means that everybody understands how everybody else is being treated and there is that sense of equity which is one of the most important matters in staffing in an institution of constant size.

But there are a great many problems; first, there is the administrative problem of flexibility. How can you meet changing patterns of student demand? We have at the moment in the university, for reasons that I do not understand, quite a decline in the number of students wanting to enrol in economics; a considerable rise in the number of students wanting to enrol in fine arts, in prehistory and anthropology, and to some extent in sociology. We get changing patterns between science departments from one year to the next. In a situation of growth that can easily enough be accommodated: the departments that are growing most get most of the new staff. When you have no growth how do you switch posts from one place to another? How do you create vacancies without bringing the Staff Association in arms to your door?

Another problem obviously is immobility, the fact that we have not very much recruitment of staff, not very much export of staff. Our academic staff turnover now is about 1 per cent, which is an extremely low figure. That can have advantages, of course; stability can be a very good thing and too much turnover can lead to all the undesirable effects of instability; but immobility is a considerable problem.

Ageing of staff is another considerable problem. Richard Campbell's paper in *Vestes* in 1977,[1] on the steady state university, looks at the age structure of every department in the School of General Studies; Campbell showed as extreme examples that in the Department of Linguistics and the Department of Pure Mathematics there is no expectation of staff movement until 2001. These are two departments quite young in the age of their staff members; they are, from everything I have heard about them, very good departments academically; the people do not particularly want to

move out of them. That is fine when you have a group of 30- and 40-year-olds who are pretty fired-up; when they are all in their later fifties it might not be quite such an exciting place to be. There is also the fact that these people in those positions for another twenty to thirty years, good as they are, are blocking opportunities for able young graduates. I think we all know that this is one of the real dangers, if not tragedies, in the present situation; there are some extremely able young people coming out of our institutions and unable to get the kind of employment that even five or six years ago they could reasonably have expected. Yet they see people like myself sitting there blocking the way for another ten, fifteen or twenty years, so that I think there is a very considerable problem, not in staffing, but in these people not even getting on to the staff. I have no solutions to that one at all.

There are then problems of promotion. If you go on promoting in an institution of constant size, ultimately everybody is a senior lecturer or reader. This, one might say, has the advantage that it cuts out incremental creep, but that is about the only advantage it has. Our approach to this has been to put a limit on the number of promotions – this is the first time that we have done that, this past year. The Resources Committee, which is the committee that administers the funds of the School of General Studies, notified the Promotions Committee that it would make available funds for ten promotions and the Promotions Committee could do what it liked within that. I have discussed this with colleagues from universities in New South Wales, most of whom are appalled.

Obviously all this bears hard on staff morale; people do not like lack of flexibility, they do not like lack of opportunity through immobility, and especially they do not like lack of promotion and lack of opportunities for promotion. These things have been the consequence of the end of expansion, but that has coincided with a whole lot of other pressures. Over the last ten years or so I should think all of us have been through varying degrees of pressures from students, ranging from demonstrations, some measure of violence and so on, to simple constant moral pressure and argument within the institution, to develop teaching, to develop facilities, to give students more say in this, that and the other. The people in senior positions, heads of departments, administrators of institutions, have faced somewhat similar pressures from more junior staff for greater say in the government of the institution.

Apart from pressures of those kinds, there have been pressures on the time that people have available for work, partly because of the factors that I have just referred to, partly because (I believe) what is being expected of an academic is rising all the time; people are being expected to teach better, to put more effort into things, to undertake more research, to publish more. All these high expectations have come on just at the time when, because of the end of expansion, the constraints of limited resources are placing their pressures on the staff as well.

Add to that the sort of public image that we have had, or that has been created for us, over the last couple of years; I refer to Peter Samuel's articles in the *Bulletin*,[2] those of you who live in Canberra or read the *Canberra Times* will remember John Pringle's article on study leave. I take these only as examples of that whole bad press. That too has a pretty clear effect on staff morale, a feeling that you are not being properly appreciated, that people are not seeing you as you see yourself. It is no great consolation to know that the medical profession has been through this some years ahead of us and there may be a few professions yet to come; it is still no great fun for us.

All of these things have damaged the morale of individuals and of groups of people and in that sort of situation it is extremely easy for rumours and suspicion and resentment to be generated. Recently the Vice-Chancellor of the ANU gave a report to the University. Two years before, in 1976, he had given his first report to the University, about financial stringency and so on; and it was clear from the questions that came up afterwards how much suspicion there was in the university community about what was going to happen to them. That is one of the most serious problems of staffing, this idea that people think they are not appreciated, they are being got at and there is nothing they can do about it.

In all these questions of staffing there have been quite a number of solutions proposed generally to overcome the difficulties of inflexibility and immobility. These include:

- restrictions of tenure
- more limited-term appointments
- exchange of staff between institutions
- early retirement
- more part-time teachers
- joint appointments
- fractional appointments

I am sure you are familiar with all of these because they are ones that you come across any time this question is discussed. In fact, this list is taken from Professor Karmel's address to the Higher Education Research & Development Society last year. I took it from there simply because it was nicely set out and brought together there, but the Chairmen of Professorial Boards in New South Wales have been talking over these same topics for the last eighteen months or two years and I imagine all of you are familiar with all the proposed solutions. There is only one trouble with them, and that is that nobody has made them work on any large scale. The commonest one is restrictions on tenure – the much greater use of limited-term appointments. Now apart from causing very severe human problems, this remedy causes some pretty severe industrial problems, as we see if we look at some of the advertisements from staff associations in the *Weekend Australian.*

Exchange of staff between institutions is often suggested. I think this has always gone on on a small scale. I know of no instance where it works on a large scale; there are a great many complications in trying to make it work.

Early retirement is another remedy that often is mentioned. If we mean really early retirement, people in their fifties, then we run into very severe problems with superannuation. Take from this institution some examples. The thing that gives me pause is the people that one loses. The three people that I know who have retired from the School of General Studies at the age of sixty or very soon after in the last few years have been Professor Manning Clark, Professor A.D. Hope and Professor L.F. Crisp. Now, they are not the kind of people you *want* to retire.

More part-time teachers are also frequently suggested. Certainly that is an option open to many institutions. It has many advantages. But it has the disadvantages that a part-time teacher just is not around as much; is frequently, if not always, not as committed as the full-time teacher; and is less available to students.

Joint appointments have been discussed, but seldom achieved; fractional appointments have been talked about a great deal and again seldom achieved, so far as I know.

Let me turn to the principles that the School of General Studies has tried to work to, or that, to be precise, I must say I have tried to work to in my role within the School. First, attempt to define the real goals of your institution. We have had surveys conducted by

Professor Gibb with the resources of ORAM on what are perceived to be the goals of the institution and what people believe should be the goals; we are using that as the basis for further development of a wide acceptance of specific goals for the institution so that we know what kind of a place we are really trying to be. From that comes the question, what kind of staff do you want for that purpose? What categories of staff, proportions of academic and general staff, types of staff, grades of staff? Again, if you remember Richard Campbell's paper,[3] one of the suggestions that came out of that, at least for the School of General Studies, was that if we are going to pay much attention to the age structure we should not recruit anybody between 32 and 43 years of age, no matter what their qualifications. That is not an approach we have followed but that is a possibility. It is at least a question that needs to be considered. Do you always recruit the person that on paper and in interview appears to be the best, or do you say sometimes what this department needs is a young person, what this department needs is an older person? These are questions related to the goals of the institution as well as to the staff structure. You have to decide priorities in goals and between sectors; this is something that I am hesitant to raise among my colleagues, but it is going to *have* to be raised.

I spoke earlier about formula staffing as a way of being equitable and achieving consensus within the institution. There is of course, at least one case against formula staffing, and that is that some people probably should be backed much more generously than others. If you have an outstandingly good department, or if you have, as we have in our Department of Forestry, a department or a sector of the institution with a specific national responsibility, does that not have a claim on more resources than a more pedestrian, more run-of-the-mill, part of the institution? There is a very severe question to be decided which bears very heavily, not only on allocation of staff, but on the attitudes of staff members. Then you need to decide what new initiatives you are going to support. One of the most dangerous aspects of the end of expansion is the possibility that people will simply give up initiatives, cease to look for them, cease to exercise them. However it is done, resources have to be squeezed out of some sectors to make new initiatives possible, otherwise the institution stagnates, morale again goes down and performance goes down with it. As long as people think that it is possible to do some things, then I believe you have got a healthy institution.

Those are matters that need to be decided in policy; then they need to be transmitted to the staff who must know what the goals and the priorities are, and there must be consensus on this. Consensus is not the agreement of every single person; it is the agreement of most, and especially of the most influential, and it is holding dissent within tolerable limits. That is about as far as you can go, but that is a reasonably satisfactory situation; if there is as much agreement as that the institution can move forward. The administration needs to be open to initiatives and suggestions. It is very easy to get into a frame of mind, especially if you are dispensing resources, where you are generally saying 'no'. Of course you have to say 'no' a lot of the time, but it is an attitude much more acceptable to staff if they make a proposal and you say 'well, let's see how we can do it', rather than to say 'let's see why we shouldn't do it'.

I have tried to reduce the numbers of staff, both academic and general, and to support as generously as possible out of those savings the people who are left. I think it is much more important that people should feel that they are being hard worked but they are being well supported, than that there should be a lot of people, all feeling they are not getting support, so that you have a large body of malcontents. The academic staff and general staff in the School of General Studies have been reduced over the last couple of years in line with this policy.

There are some mechanisms for flexibility in staffing which I know of from other institutions and I would hope to apply here. One of our greatest difficulties is changing patterns of student enrolment and difficulties in re-development of staff. What happens when, for instance, the student enrolments in foreign language departments decline in line with a whole national trend against foreign language studies? How do you profitably use the tenured staff in those departments? I take that just as one example, but one can think of plenty of other examples of changes in patterns of enrolment. The method which seems to have been successful in some other institutions is the creation of courses of interdisciplinary studies, where those people can teach, one might say, at the margins of their professional competence; they can be profitably used and employed and as they retire, then that particular species of teaching does not have to be replaced. Something else can come into that interdisciplinary pattern and out of it can, in due course, grow full viable departments. This is one of the mechanisms that I believe is

possible for the manipulation of staff in an institution of constant size.

The next one is to establish pools of resources of different kinds: positions, equipment funds, travel funds, research funds and so on, which then can be competed for by bids within the institution. Again, that money has to be squeezed out of the total institution. Melbourne University, I have been told, uses a system something like this to give extra resources to departments that are thought to be particularly deserving. In the way that it has been described to me, these resources tend to go to two categories of department, the outstandingly good and those that, for one reason or another, appear badly to need a bit of propping up. The good, sound, conscientious, middle-of-the-road department does not get them.

Within the institution itself there has to be, I believe, communication as open as one can achieve to minimise rumour, suspicion, and again, decline of morale. Within the School of General Studies, we have used a lot of the mechanisms of decentralisation, of devolving the authority to take decisions on expenditure, decisions on use of resources as far down the line as possible. This is a quite conscious change from some years ago when, in a different situation, and with different sorts of pressures, there was a considerable need to have things standardised and centralised so that there were common policies operating. We try to avoid absolutely anomalous policies operating but we do encourage Deans and Heads of Departments to have, within the resources available, as much freedom of decision as can be. You have an instance of this in the recent invitation to Mr Whitlam which was before the University Council at its July 1978 meeting. While that was front page news in the press and was reported to the University Council, it was only reported. It was in fact within the power of the Dean of the Faculty of Arts to have made that appointment.

Another mechanism is the process of constant review of performance of our departments. We have had seventeen reviews of departments in the School of General Studies over the last couple of years. We will be reviewing three or four departments a year for ever. Those reviews are partly for the University to assess performance of the department, but partly for the department to assess its own performance and make suggestions about changes of direction, changes of personnel in type, if not in individuals. While one can't say: 'we would like to get rid of so-and-so and appoint this one', one

can say: 'we don't want to appoint more people of such-and-such type, as vacancies occur we would like appointments to be in another field'.

It will be quite obvious from my comments that I see staff as the critical factor. I do not mean to keep them cheerful, contented and happy in any cosy sort of way; I mean to keep them motivated, keep them full of will, keep them feeling that there are things to be done and that they will be supported in the doing of them; and I conclude with a remark of our present Deputy Vice-Chancellor's when he was confronting some of these problems and what looks like a fairly gloomy future. His remark is simply 'If we are as clever as we are meant to be, this is just going to be fun'.

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Chapter 12

Academic Review and Organisational Flexibility

D.A. Low

I am one of those people who have spent a large part of their academic lives in the era of university expansion. In my own case this has been spread over three continents. My first university position was at Makerere University College, as it was then called, in Uganda, where I spent most of the 1950s. It was the first university in an area which now extends over twenty-two different countries. I then came to The Australian National University when it was still young, and left in the early 1960s to be the founding dean of one of the schools of studies at the University of Sussex. Being at Sussex at that time was a tremendous privilege and experience, since the university was being developed in terms of a doctrine set out by Lord Briggs (then Professor Asa Briggs) in 1960 in a lecture (curiously enough given at the ANU) which was called *The Map of Learning*. In this Lord Briggs argued that the old departmental boundaries were no longer satisfactory and that it was quite vital for educational and research purposes to be able to cross them. Out of that kind of thinking came the schools of studies (rather than departments) which have been characteristic of so many of the new universities founded since that time.

When the era of university expansion began we had little idea how to conduct that expansion. We had no guarantee whether we would get all the students that were expected; perhaps more important we were not sure whether we could recruit suitable staff. To a greater extent than we now tend to recollect, we learnt how to manage

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expansion as we went along; we learnt by experimenting. Now, a generation later, we have the expertise to expand a university system. If we were asked to go ahead with Macarthur University at Campbelltown or the university at Albury/Wodonga we would know what to do.

But the problems facing the Australian universities today are different: the question is not now 'how can you expand the system?' or 'how can you put new inputs into the whole idea of university education and universities?', but rather 'how does one keep lively – as lively and as adventurous and as pioneering as the new universities were – an old university?' Almost by definition, all our universities are now old universities, because nowadays a university is old, it seems to me, if it is ten years old; in some ways as old indeed as if it is five or seven centuries old. Not only are our universities old, but generally they are very much larger and more complex than universities were before the period of expansion started. Thus today we find ourselves in an almost totally new situation, a situation as new as we when younger people, or our predecessors, found ourselves in when the period of expansion was starting. We know very little indeed about how to handle this new situation now confronting universities that are very much larger and more complex than they were before, and have gone through a period of expansion. However, I believe that it presents us with a fascinating intellectual challenge of the same order as the intellectual challenge that confronted us twenty-five years or so ago when we set about the period of expansion.

In this new situation, it is important not to be obsessed by the problems of the day. Obviously we face very serious problems – financial constraints, challenges to our autonomy, flattening of student numbers, and anti-intellectualism (which seems to have got a new lease of life). But we should not let these problems occupy our full attention.

We need much better basic information than we have tended to have in the past, or at least than we have tended to have until recently. At the ANU I have found it of immense value to get new kinds of information. First, there is information about students. In the past we have either known about students as individuals in classroom settings or in the administration as WSUs. But we need to know a great deal more about them at a more middle level of analysis. We need to know, for example, more about what categories

they fall into, where they come from, how many are full-timers, how many are part-timers, and what is happening to these various groups. We need to look more closely at what are the new enrolment patterns that are occurring. In the ANU one of the most fascinating things that is happening is that the numbers of part-time housewives are climbing very steadily. In 1974 and 1977 what we call 'housewives', according to the analysis we made, did marvellously; every one passed every single unit taken, and the 'housewives' category on more that one occasion had a higher percentage of distinctions than any other identified category. That is an important trend to be monitoring. We need also to know what is happening to pass rates. In the ANU we have a 'progress and performance study' being conducted and this is enabling some essential information to be collected and teased out. As Vice-Chancellor, I find the reports of this study enormously valuable. You can see what the shifting sands are, and get below them.

We also need to know what is happening to our staff. The prime information here relates to the difficult problems of tenure/non-tenure ratios. In the ANU's School of General Studies approximately 26 per cent of the academic staff are in non-tenured positions, and this gives a degree of flexibility; it also allows for rather longer-term non-tenured appointments to be made than if it was a smaller percentage because there is more chance of a turnover.

In the ANU's Institute of Advanced Studies we are attempting to achieve a 50/50 ratio of tenured to non-tenured staff. This, of course, has implications for career opportunities for non-tenured staff. Moreover, it is now clear in at least one of our Research Schools that to hold to that kind of ratio is presenting very difficult problems because in certain areas it is desirable to have staff who will continue longer than for three to five years, the ordinary period for non-tenured appointments. I see the possibility of appointments that would not be tenured until 65 years of age, but would run for eight, ten or twelve years, and then be renewable.

The other matter with respect to staff that we have looked at is retirement profiles. In the School of General Studies there are two departments where, if there were no changes and no resignations, the first vacancies will not occur until next century. However, the general picture is that there will not be many retirements in the next five years, but that there will then be a steady trickle of retirements until the end of the century, roughly at the rate of, for example, one

chair vacant a year. In the Institute of Advanced Studies the situation is somewhat different because larger numbers of current staff were recruited before 1960. Over the next five years there will be few retirements, but from then on the retirement rate will be relatively high. However, this rate will not fall evenly across Research Schools, and will consequently cause considerable difficulties for some Schools.

We are at the same time conducting academic reviews. A number of these are at Research School and Faculty level. Here we are asking questions about where the institution is going and what kind of pattern for the future we should really be trying to work out. But in addition, academic reviews are taking place at micro level – at the level of courses and departments.

Take our Institute of Advanced Studies with its seven Research Schools, four of which were founded in the late 1940s or early 1950s. They had never been scrutinised widely until the last few years. The first review of a Research School was initiated following the establishment of an electoral committee for the appointment of three professorial fellows in the Research School of Physical Sciences. Out of this developed a committee to review the activities of the whole School. This review committee consisted of five persons from within the University and five persons from outside, with the Director of the School being the only person from the School. It agonised over how the School was performing and looked at its departments and so on. Its report led to trauma in the Faculty Board and in the School, and there were prolonged discussions about what the committee suggested. In the end, there were some substantial changes. One department was split; a new plasma research laboratory was established; while the Department of Astronomy, which was on the way to leaving the School to become a separate Observatory Centre, is now back associated fully with the School as the Mount Stromlo and Siding Spring Observatories. Further, as a result of this review one or two of the departments about whose work there was some doubt are now back in the international league.

More recently the John Curtin School of Medical Research had a review conducted by four major international medical research figures, none of them from this country. The review committee came for three weeks, and carefully considered the work and focus of each department. As a result of the establishment of this review,

we now have a university policy with regard to reviews of the Research Schools. Reviews will be conducted by committees with a majority of members from outside the University; indeed, in the cases that we now have in hand, every single one of the members of the committee comes from outside the University and a majority from outside the country. The committee is established by the Vice-Chancellor and reports to him. Its report is referred to the Faculty Board of the School concerned for its confidential consideration and comment, and then the report of the Committee and the School's comments together are presented to Council by the Vice-Chancellor. In addition, the review committee is authorised to let the Vice-Chancellor have a confidential report. In the case of the John Curtin School, there have been two reports, an open one, which is being discussed within the Faculty Board and within the School, and a confidential report to the Vice-Chancellor and the Director. The details of the latter have been discussed with heads of departments. What I can say about these reports is that the School is viewed as highly satisfactory. It is thought to be of international calibre and several of its departments are judged to be right at the forefront of their fields in the world. However the report then says 'but', and it goes on to say 'but' for about ten pages. Out of that, I think, is quite clearly going to come a number of important developments.

Shortly the review committee for the Research School of Social Sciences is to arrive in Canberra. It is to be chaired by Dr Clark Kerr, formerly of the University of California and now of the Carnegie Council for Policy Studies in Higher Education. Its other members are Professor Gardner Lindzey, Director of the Center for Advanced Study in the Behavioral Sciences, Palo Alto; Professor A.R. Prest, Department of Economics, London School of Economics and Political Science; and Professor John Poynter, Deputy Vice-Chancellor (Research) of the University of Melbourne. Shortly thereafter a similar review committee for the Research School of Pacific Studies will arrive. That means that by the end of this year all four of our original Research Schools will have been reviewed by largely outside committees. Of the one that has been completed (which was very much of a prototype, but whose character we have built upon and developed) I think the results have already shown its worth.

In the School of General Studies by the end of 1978 over a period

of about three years seventeen departments have been reviewed. The policy here, which has been laid down by the Board of the School, is that departments will be reviewed on the vacancy of a chair, or at any rate within every decade. The committees here are rather differently composed from those for the Research Schools. They are chaired by the Vice-Chancellor or his nominee, and include the Deputy-Chairman of the Board of the School of General Studies, the Dean of the faculty, two members of the department, two students from the department, a member of the academic staff from an unrelated department and two people from outside the School of General Studies (that often allows for a senior person from the Institute to be included). The committee usually has three or four meetings. It sees the head of the department and has some discussions with the departmental committee. In one or two cases departments themselves have conducted their own internal reviews and presented a document which the review committee has then commented upon. That has proved a quite useful way to proceed and indicates that there are various ways in which reviews can be conducted.

The committee usually seeks information about enrolments, cancellations, and success rates, and gets information about student response. Two sorts of information have proved particularly useful. One is what is called the departmental profile. The profile of the Chemistry Department, for example, is that of a very large first-year enrolment tapering quickly to much smaller second- third- and honours-years enrolments. In contrast in some other departments the profile is that of a substantial group of students beginning and going through to at least the third year. The other sort of information which has proved important is a picture of the combinations of units which students are taking. When the committee was looking at the Chemistry Department it found that most chemistry students take biochemistry, but that few take physics.

Some important developments have emerged from these reviews in the School of General Studies. The Department of Psychology was reviewed on the resignation of a professor whose particular interests were in the physiological area, but it was decided that it would be appropriate to seek a replacement in the social psychology area. As a result the focus of the department was somewhat shifted. In the History Department review the committee considered that there

was too much of a smorgasbord of courses. As a result it suggested to the department that there should be some core programs for all students in the department. The Philosophy Department review was significant in two respects. The department had gone over to a system of first-year 'workshops' in a wide range of different philosophical fields, and the review committee initially was very sceptical about whether this was the right way to start the study of philosophy for undergraduates. But in the end the committee was persuaded that the department's way of handling first year was very satisfactory. At the same time, the committee was critical about the publication record of the members of the staff of the department. They were writing, but their papers tended to end up in their bottom drawers. The message of the review committee about this has begun to get through. One member of the department who has been away, noticed the difference on his return. He told me: 'my people are sending their drafts to editors now'! And then to take another example, the review of the Germanic Languages Department suggested a major change in course offerings. The department had a very strong emphasis on scholarship of a traditional kind; the review committee suggested a shift to a more modern-oriented, Germanic languages program. This is now being achieved.

At the moment we are involved in a number of other reviews in the School of General Studies. For example, we are just about to undertake the first review of a whole faculty – the Faculty of Asian Studies.

One of the things we have learnt from these reviews is that it is most important to get members of departments involved in the review process, and to get the desire for change coming from within. But it is also clear that considerable help can be offered by external committees assisting people to look at what they are doing. Changes, of course, in most cases will be only incremental, but on many occasions they are well worth achieving.

We are still learning what to do along these sorts of lines. We are still learning whether, in fact, it is going to be in the long run worth all the effort that goes into it. But we are taking the program seriously and I think we are beginning to see results. It certainly is not a time to be giving the idea away. In fact, the most gratifying and interesting thing is that departments in different parts of the University are themselves now asking to have review committees instituted.

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Looking to the Future

Chapter 13

Universities and the Next Twenty-Five Years

L.M. Birt

It is a bold man who is prepared to attempt to look twenty-five years ahead to the likely situation of the universities of Australia in the year 2001. Recall the situation twenty-five years ago (in the early 1950s) and imagine the reaction to suggestions that by 1975 the changes described in Table 13.1 would have occurred: the number of universities more than doubled, university enrolments almost quintupled, and a new tertiary system of education almost equal in size to the university system established.

Two features are apparent in this record of changes. First, so far as they concern the universities directly, they have been largely quantitative – the quality or nature of university work has not changed very significantly. It is to be expected, of course, that an educational system with a long history of 600 years or more will change slowly. The system is an evolutionary one which adapts as the ripples from changes in the core of information and knowledge spread through its structure; thus, for example, it took 200 years for the scientific revolution of the seventeenth century to influence European universities markedly. The internal arrangements of modern universities have reinforced this tendency to slow change; individual teaching programs may extend over almost a decade, staff have contractual rights to tenured positions, and work in clearly defined, widely accepted disciplinary groupings, and so on. If it is true, as Sir Eric Ashby has remarked, that the university is 'a mechanism for the inheritance of the Western system of civilization', it shares with the hereditary apparatus of living things an innate 'conservatism'.

The second feature to be noted is that the expansion of the university system in Australia was the result of socio-economic

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Table 13.1

Growth of the Tertiary System of Education in Australia Since 1950

	1950	1975	2000
Number of universities	8	19	not more than 19?
Tertiary student numbers			
universities	30,630	147,754	approx. 165,000?
colleges		125,385	approx. 155,000?
technical			approx. 1,000,000?

Sources: 1. Universities Commission, *Report for 1977-79 Triennium,* Table 3.1 (number of students)
2. TAFE Commission, *Report for the Triennium 1977-79,* Table A29 (enrolments).

pressures for more university education, reflected in the provision of more funds by government. The universities were not the initiators of the demand, but they responded to it by multiplying themselves in kind. Their expansion was clearly encouraged by the Murray Report on Australian Universities. The Report stated that:

> High intellectual ability is in short supply and no country can afford to waste it; every boy or girl with the necessary brain power must, in the national interest, be encouraged to come forward for a university education, and there must be a suitable place in a good university for everyone who does come forward . . . Apart from any desire for the pursuit of knowledge for its own sake, university research is recognised as indispensible to the welfare of the nation . . . a good university is the best guarantee that mankind can have that somebody, whatever the circumstances, will continue to seek the truth and will make it known.[1]

The emphasis is on higher education for the intellectually most able, and on the economic and social benefits that will flow from the increased opportunities for university work.

These convictions – shared widely enough then for Australia to join in a world-wide expansion of the university system (and of higher education generally) – appear to have lost some of their force. Very recently we were told that 'the tertiary education system has grown so fat, and so fast, that academia has become an enormous island of privilege, populated in considerable measure by drones and parasites'. Whether that proposition commands general assent

or not, it seems clear that government has concluded that the present level of provision for higher education is adequate for any foreseeable future. What then for the next twenty-five years of university development?

Let me begin my gazing into the crystal ball by setting down the assumptions that I make about possible future developments. First, I assume that the unique responsibility of the universities is to promote scholarly investigation of the nature of mankind and the world it inhabits. In their research, they extend man's knowledge of the world and his place in it and, in their teaching, they train graduates to acquire and make use of information and knowledge. I intend this definition to include both the notion of the conservation and the transmission of that learning which underpins our civilisation (that is, the 'hereditary function' described by Ashby) and also an 'adaptive function' which is certainly of equal importance. All living things have developed adaptive mechanisms to assist them in meeting changes in their environment, and mankind is no exception. Our evolutionary development in the face of rapidly changing environmental conditions is conditioned as much – or more – by 'cultural evolution' as by 'biological evolution'; and, within society, I see the universities as the primary 'adaptive mechanism', responsible for preparing new generations of scholars and scientists who will generate the insights into the nature of man and his world on which our survival depends. Universities have themselves evolved as the 'adaptive mechanism' for many centuries, and have been shaped by human needs during that process. It is fundamentally for this reason that, like all evolved structures, they cannot rapidly be changed. They exist now in recognisably similar forms throughout the entire world, so that, in general terms, modern Australian universities constitute part of an international community and match their activities and standards against those adopted widely within that community.

Second, I assume that the universities can only continue to flourish if they are able to demonstrate that they are 'efficient' in carrying out their characteristic activities and if society maintains its commitment to the value of their distinctive contribution to its life. Today it seems that universities face increasing difficulties in attracting this general support. I suppose that there is a widespread agreement about the value of the universities' work, both teaching and research, in many professional areas – medicine, law,

engineering, and the like – although even here there is some questioning as to whether universities are the most appropriate vehicle for this training. There is, however, less ready acceptance of the worth of the natural sciences, the humanities, and the social sciences. There are also anxieties about the extent to which universities seek to restrict entry to students who have already exhibited academic ability. As I assume that the universities' responsibility is to cultivate the intellectual skills of the most able, so that they can contribute in the future to society's needs, I assume, too, that entry is properly restricted to this group, and that their university education will always emphasise *preparation* for the development of specific skills in later life, rather than training as 'practitioners'. Thus it is that much of this education is seen as 'irrelevant' to the immediate needs of society at large, and universities inevitably face problems in discharging their educational responsibilities with any adequate measure of public understanding and support. This is dramatically illustrated by the problems currently experienced by the universities of China, where it is now being recognised that there are significant costs to society in overemphasising immediate 'relevance' in university training. Briefly, these costs are incurred by interfering with or downgrading the specialised education of those most able to contribute to the social, cultural, technological and industrial development of the country.

Next, I assume that any attempt to preserve characteristic university functions will produce further changes in the organisation of post-secondary education. If universities behave as I have suggested they should, they will not be able to meet the egalitarian educational aspirations of a mass democratic society. I assume, therefore, that there will be a planned move in Australia in two directions. The first will be to develop a small number of the existing universities as 'universities' of the kind I have defined. They will be regarded as 'high level' institutions, active in teaching and research in the humanities and the natural and social sciences, and in educating candidates for those professions which depend heavily on these sciences. Entry of students will increasingly be selective, perhaps requiring a first post-secondary qualification. There will be an important sense in which these universities are seen as being 'outside' the state or even the national educational system; they will be part of the international family of universities with responsibilities

to the whole of mankind.

The second planned move I foresee is enlargement of the range of work in the smaller universities, carried out in such a way that, wherever local circumstances make it possible, there is a close interaction and collaboration with other post-secondary bodies – either colleges of advanced education or institutes of technical or further education, or both. This development might lead to the emergence of multi-purpose post-secondary institutions which would retain 'university-like' activities somewhat on the model of the American 'liberal arts colleges', together with para-professional, vocational, and technical training, and bridging remedial and general interest courses. They would provide opportunities for students to move between various levels of post-secondary education – for example, into university-style work – from a variety of educational backgrounds including (most importantly) those who failed or were unable to continue their formal education on leaving school, but who are now interested in and have a capacity for higher education. Thus, these institutions could provide the means by which the desire for 'general access' to all levels of education can be met. Where their work ends at first degree level, they would be in a position to send suitably qualified graduates to universities to undertake specialised postgraduate work of various kinds. I believe it would be possible to bring about movement towards such a binary system by what is essentially an evolutionary process, and suggest that such a change may achieve a satisfactory level of social acceptance. The system in its totality could both meet, and be seen to meet, the longer-term and shorter-term needs of society, could respond to intellectual, technical, and practical excellence and could offer opportunities for appropriate higher education to every student with the requisite ability. I suggest that such an organisational development would do much to restore public confidence in the value of higher education, including tertiary education.

I further assume that these changes will take place during a period in which (a) the number of students seeking access to tertiary education (whether in universities or 'multi-purpose institutions') will increase little, perhaps by no more than 10,000, and in any event by not more than 100,000 and (b) there is no likelihood of significant increase in the real value of funds available to the tertiary sector of education.

Consequently, without the changes I have described, we face a

prospect of seeing a large number of small tertiary institutions (many too small to be educationally effective) competing for limited resources. In these circumstances, the combination of smaller institutions into larger ones, and the widespread sharing of resources, become virtually necessary to maintain and develop their educational activities adequately.

I shall now attempt to draw out some of the implications of my assumptions and of my definition of the particular role of the universities:

(1) Even if there is a general broad acceptance of the need to maintain 'universities' and 'university-like' activities in the tertiary education system, it will still be necessary for the universities to respond to requests for analysis of the efficiency of their operations, and for estimates of the balance between the costs and benefits of university education. Their most satisfactory response is likely to be based on direct comparison between the performance of universities in Australia and sister universities within the international community. 'Performance' can be assessed by measuring such functions as the period of study required for graduation in particular fields, costs per graduate and per EFTS, student-staff ratios and the like.

While the costs of university education can be measured, the attempts at quantifying benefits have not produced any satisfactory solution. Perhaps the crucial consideration here is to establish that all interested persons of suitable ability can enter the university system – the 'benefits' of university education (however measured) are then known to be available to all qualified students. I have already suggested that restructuring post-secondary education might assist in this matter. Community recognition of the 'rewards' – education and training in the professions, economic and social benefits of research, and the deepening of man's understanding of himself and his world – will follow more readily once this 'openness of access' is assured.

(2) As university entrants will be drawn increasingly from the intellectually most able, and will move into a system where academic standards are determined largely by an international community of institutions, further thought will need to be given to the nature of pre-university education. Some restructuring of the senior years of secondary school would be necessary to prepare students who are committed at that stage of their education to seeking entrance to universities. To me, the value of establishing

some form of 'academic streaming' in the schools seems considerable. For those students – 'mature age' students – who enter by routes other than direct from school, the binary system which I have described offers many different possibilities for suitable preparation.

(3) The teaching functions of university staff will become more demanding, as they are dealing with a group of students selected for commitment and outstanding ability. I believe that this will demand a clarification of the interactions between scholarship, teaching and research in university work. For my own part, I see scholarship – by which I mean the well-informed critical analysis and creative evaluation of a body of knowledge – as being the source of both effective teaching and effective research. It is essential that university students be taught by scholars who have a deep love for, and an analytical curiosity about, their subject; and it is the development of a scholarly and inquiring mind which permits the emergence of effective research – that creative response to present concepts and new information which can make a significant addition to the development of a particular discipline.

(4) The interaction between universities and other organisations will become more extensive, and in both teaching and research more collaborative activity will be necessary. Thus:

(i) In professional education, the university will collaborate with professional bodies which will provide the training for practitioners; for example, with hospitals, the royal colleges and the health service in the training of doctors; with professional institutes in the training of engineers and accountants; and with multi-purpose post-secondary institutions and the school system in training teachers.

(ii) In continuing education, the special contribution of the university will emphasise the upgrading of qualifications or the application of new knowledge to the professions. This might best be done through postgraduate course work programs, including postgraduate diplomas. In addition, the universities could collaborate effectively with other post-secondary institutions in the provisions of bridging, remedial, and 'general interest' courses in many fields.

(iii) In research, interaction between different universities and between universities and the CSIRO, state government departments and industrial research groups will grow in importance as the cost and complexity of research increases. University staff

will often find themselves working as members of research teams, using specialised facilities (such as library collections, complex equipment, or computers) located in particular institutions in 'research centres'. The benefits will be the ability to concentrate the activities of specialist researchers from various institutes, the increased possibilities for interaction between professional colleagues, the availability of adequate equipment, and the visible contribution by university staff to research problems of national importance. It will, however, be necessary to avoid raising expectations during the recruitment of university staff that a university post offers the certainty of being able to develop an individual research program. It should, of course, remain open for all staff members to contribute towards the decisions about the development of particular fields of research.

(5) There will be advantage in defining more clearly the purpose of various kinds of postgraduate training. It seems to me that it may be valuable to regard the Ph.D. as the normal preparation for academic work, whether in universities, other post-secondary institutions, or in secondary schools as subject masters. Such postgraduate training would be seen primarily as an opportunity to heighten the sensitivity to scholarship, gain experience in the methods of scholarly inquiry appropriate to particular disciplines, and develop a knowledge of the literature of particular disciplines. Its importance would not, therefore, lie in the contribution made to the furthering of a particular research inquiry, nor would it demand of the student the demonstration of a fully independent capacity for innovative research. The emphasis in the program would be on intellectual training, albeit training at a high level.

Masters degrees (either by research or by a combination of research and course work) would be seen as the normal preparation for employment in industry, commerce or government service. Some masters programs could be offered with advantage in research centres. Masters degrees by course work alone would emphasise the upgrading or diversification of qualifications, largely as in-service programs.

(6) As a consequence of a virtual cessation of growth in the tertiary sector of education, reorganisation of staffing structures may be desirable. In particular, I suggest that the continued employment of full-time 'sub-lecturing' staff may become increasingly unsatisfactory.

We have, I think, for a long time assumed that such staff were serving a period of academic 'apprenticeship'; but, increasingly, they find themselves, after completing that apprenticeship, with nowhere to make use of their training. This situation is unsatisfactory – it is unfair to the staff concerned and bad for the morale of the institutions in which they work. It may, therefore, be appropriate to regard the Ph.D. candidate as the academic 'apprentice'; to regulate the number of doctoral scholarships accordingly, and to rely more heavily on part-time tutorial staff and on contributions from senior staff to undergraduate teaching.

(7) If, as I have suggested, the number of 'high-level' universities decreases, some existing universities become part of large multi-purpose post-secondary institutions, and collaborative research centres are developed, it is likely that there will be concentrations of excellence in particular academic disciplines in particular localities. If this happens to any extent, students pursuing their own particular interests in undergraduate or research programs will need to move more frequently to enter universities providing the appropriate opportunities. As the student population as a whole becomes more mobile, there will be increased pressures on universities to provide some form of residential accommodation. It may even be that there is some reawakening of interest in the concept of the 'residential university' which, it has been suggested, offers considerable advantages to able students by facilitating the development of genuine 'community of masters and scholars'.

(8) I have suggested that greater demands would be placed on university staff members, because of shrinking real resources and changes in teaching activities and staffing arrangements. These pressures may demand that the contribution of academic staff to the internal government of the university be reduced and that the internal administrative arrangements be simplified. Staff may be able to devote much less time to committee and administrative work, and the universities will perforce rely more heavily on professional administrators. In these circumstances, I believe that it is essential to ensure that, despite diminished academic involvement in administrative operations, the definition of the purposes of the university remains largely in the hands of the academic staff. I mean by 'the purposes of the university' its objectives in scholarship, teaching and research (subject to collaborative agreements about joint projects), and the organisation, presentation and

assessment of undergraduate and postgraduate courses.

(9) It seems possible also that universities may wish to surrender some of their already limited autonomy in regulating the employment of academic and non-academic staff. This might be contemplated in the interests of achieving greater uniformity of conditions, thereby avoiding an increasing involvement in legal and industrial disputes, which can consume an inordinate amount of academic and administrative resources.

In this paper, I have attempted to define the unique functions of universities, and to set down my own guesses about the development of a modified binary system of post-secondary education and the criteria which might be used to judge its performance; and I have drawn out from these statements what seem to me to be a number of significant implications. I conclude by reaffirming my belief in the unique importance and the unique responsibilities of the universities as the 'hereditary' and 'adaptive' mechanisms of our civilisation. University work is based on the cultivation of the intellect, that is, on the rational exploration of the nature of mankind and the world it inhabits, expressed in the information and the conceptual schemes which make up knowledge. But I also wish to recall that effective action both in the world outside the universities and within them requires not only information and knowledge, but also wisdom – the understanding of how, when, and in what way knowledge can be applied to the solution of particular problems. Wisdom cannot be *taught* by universities (or, indeed, by any other formal educational institution); it is a product of personal judgment, and judgment is a distillation of the experience of the whole man – of his intellectual endeavours certainly, but also of his social, political and religious experiences, and his sense of values and moral development. The trained intellect contributes *importantly* to the shaping of the whole man, but its contribution is not *all important.* Consequently, universities as the guardians of the intellectual life of mankind must not make unrealistic claims about their contribution to society; but within their own sphere of responsibility, they must continue to press for full recognition of their unique value.

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Chapter 14

Colleges of Advanced Education and the Next Twenty-Five Years

D. G. Beswick

The most significant change in the pattern of higher education in Australia in recent years has been the development of colleges of advanced education. After some ten years of exceptional growth, especially in that sector, it is time to review the pattern of Australian higher education and to try to anticipate possible future changes with particular attention to the function of different kinds of institutions. In my approach I have chosen a speculative style rather than the statistically based empirical study.

To appreciate the extent of past changes and the difficulty of imagining the future it might be instructive to enumerate some of the mistakes we would probably have made looking forward from the early fifties. I would imagine these would include: a failure to recognise the increasing diversity of higher educational institutions, a failure to foresee the degree to which decision-making would be transferred from autonomous educational institutions to government authorities, a failure to anticipate the increasingly hierarchical differentiation of the system, a failure to recognise the degree of increased participation and the increasing proportion of women entrants to higher education, a failure to recognise the part that would be played by institutions of teacher education and the consequent problems of system integration and oversupply. We would almost certainly have missed the importance of the whole area of rapid information processing and the role played by computers. We might possibly have foreseen the increasing attention to the physical sciences and related technologies into the sixties; it would be hard to imagine that we would have foreseen the almost complete collapse of popularity of these sciences in the

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attitudes of students in the subsequent decade. It would be difficult to imagine that we could have foreseen the extent to which education and higher education in particular would have become a significant component of the Federal Government budget. On the other hand, we would probably not have considered the development of a rhetoric, if not of the reality, of community participation. We would certainly have had no basis for expecting the increase in adult enrolments, we would have been unlikely to expect the development of sandwich courses or of the practice of students taking a year off between school and further education. It would have been difficult to have foreseen the degree to which public attitudes to large institutions and to economic progress have become ambivalent. We might have made some guesses about the impact of immigrant groups and their expectation of progress partly through higher education but without allowing for rising expectations for other minority groups such as Aborigines. It is impossible to enumerate all of the significant changes we would not have foreseen: it is even more clearly impossible to understand the effect of our not having anticipated such changes or to know what effect our having anticipated them might have been.

With the recent establishment of the Tertiary Education Commission by the Commonwealth we have, in a sense, a single system of higher education. It is loosely integrated and federally rather than centrally co-ordinated. It is very diverse in character, with some nineteen universities, over seventy colleges of advanced education and several hundred colleges of technical and further education. I will be suggesting that the present division into three sectors will not continue to be very useful and that at least seven different types of post-secondary institutions can be identified. Of course, when we divide a broad spectrum the number of categories tends to be 'the magic number seven, plus or minus two', and the category boundaries, while useful for our current purposes, could be quite arbitrary when viewed from another perspective.

In reviewing the present pattern it is useful to consider seven types of institutions:

Two kinds of universities: loosely grouped into the older, more traditional, research-oriented, and the newer, less academically competitive and more community-oriented groups;

Three kinds of colleges of advanced education: the central institutes of technology; the multi-purpose regional colleges; and the single

vocational mono-technical institutions including former teachers colleges, agricultural colleges and para-medical institutions; and *Two kinds of colleges of technical and further education:* those which compete with colleges of advanced education in offering middle-level courses and those which function more in parallel with other post-compulsory education or compete more with senior secondary schools.

Contextual Contingencies

Before discussing some of the particular problems and possibilities which appear to lie ahead for each of the present types of institutions, we should take note of some of the assumptions which could lead us into serious error.

In all that we say about future educational development a great deal depends upon the state of the national economy. There are broadly two types of errors one might expect to be made in making judgments about the future of the educational system which are contingent on general economic conditions. We could grossly underestimate the rate of expansion or decline of the national economy. On the other hand, we might not make disastrous errors in estimating the capacity of the community to support higher educational institutions or demand for their services in total, but we might fail to see how radical changes in types of education might be required by structural changes in the economy. Even laymen must wonder about the consequences for certain fields of study which would follow from a reduction in the use of energy, even from a reduction in the use of petroleum, which appears to be unavoidable. Is it possible that there might be a substitution of information processing and communications efficiency for the use or transformation of energy? Such a general change would have significant implications for the modes of higher education as well as the balance between fields of study. Could external studies be much more commonly chosen as the mode?

In most of what follows I have assumed there will not be a collapse of the economic order or of the willingness of the community to support higher educational institutions. If some highly-coloured recent criticisms can be dismissed as ideological hot air or cynical justifications for a raid on resources, there should be an expectation of continuing support to a degree not grossly different from that which prevails at the present time. I do believe,

however, that we must allow for the possibility that professionalism in many fields will come under increasing criticism, that it will be somewhat more difficult to justify exclusive claims to knowledge and rights of practice, and that paper qualifications might be not so much degraded or inflated as disregarded.

In relation to the last point it should be recognised that the pragmatic, vocationally-oriented attitudes of students are of about equal importance to those motivations for further education which relate to personal development of a more general kind. Both factors are usually present in the same individual, although it is not uncommon for one to be much stronger than the other. We know a good deal about how these two factors are distributed across the various types of courses and how they are associated with other attributes of students. There is a tendency for the students who enter colleges of advanced education to be somewhat more vocationally oriented than those who enter universities. However, personal development, often coupled with intrinsic interest in the subject matter, is a strong theme in all types of institutions. It is a gross mistake to think that there are two types of students, those whose interests are fundamental and theoretical and are properly placed in universities, and alternatively those whose interests are pragmatic and vocational and who are properly placed in colleges. In fact, students in both types of institutions have both types of motives although statistically the more pragmatic orientation tends to be found more often amongst those in the colleges. We can assume these motivational tendencies to be reasonably stable, but unforeseen social changes in such factors could have pervasive consequences.

Another important assumption as we look at the future is the size of the system. Projections have been based on population growth and participation rates. The population projections do not give grounds for anticipating any significant change from the present situation. Small deviations that have been projected over the next twenty years or so are of little practical importance. Participation rates require further examination. My guess is that there will be a further increase, but at a slower rate than recently.

More important questions are attached to the type of participation, especially changed preferences and transfers between institutions and changes in the period of a person's career development when major engagement with higher educational institutions occurs. A very complex pattern of work-study interaction and exchange is

developing as seen in our current longitudinal study of career development. Simplistic models of transition must be avoided. This is one of the areas where we are most likely to make serious mistakes, although of course a gross error in our expectation of modest increase in participation rates could also be disastrous for planners (among others).

Hopes that the students will be seeking what the colleges are designed to offer are reflected in the statement by the former Commission on Advanced Education, that 'the people who attend college courses expect to find the level and nature of their education relevant to the practice of their chosen careers'. Apart from the broad two-factor understanding of students' motives which appears to be ignored in that statement, the idea of students entering college courses with a chosen career clearly in mind is simply contrary to the facts. A large proportion have only a very general idea of the career lines which may be suitable to them and many have no idea at all. Changes of course and institution are much more common than is realised. Critical decisions are often made within a few days after receiving the results of the matriculation examinations, and many are not made until some time later after experiencing the first year or two of one or more courses. Recent data in our career development project indicate that it is the norm, not the exception, for students who have performed satisfactorily in a higher school certificate examination to proceed by various combinations of work and study (full time or part time), by taking a year off here or there, by changing courses, by returning to study after having declared an intention never to take any further formal education at all, and by dropping out or transferring to another institution. In our work we have found that more than 90 per cent of the students who were in matriculation classes in school in 1973 had participated in some form of further education at some time during the following three years, but on the other hand fewer than half of them had made a simple transition from school to higher education and continued to study full time without a break or without holding a regular job. Continuing full-time participation in a chosen career track without change of course is unusual. A great deal more evidence of this kind is necessary before the myths of previous planning can be tested by the reality of the behaviour of individuals whose interaction in defined roles makes up our institutions.

These and other uncertainties form a context of cultural-social-

economic changes which will further shape and be shaped by a changing pattern of higher education. The increasing differentiation of the system has been noted in the suggestion of at least seven loosely categorised types of institutions each with somewhat different functions. The development of new roles and perhaps types of institutions can be expected. Evaluation of new forms leading to an improved adaptability of the system is much more likely to develop from the basis of a diverse and partially differentiated system than from a set of relatively uniform institutions or organisations. It should be helpful then to look more closely at some of the differentiation which has occurred, especially in the CAE sector.

Diversity and Identity of the CAE Sector

The CAEs as we know them are creatures of the last decade. One of the biggest questions facing us now is whether this particular type of institution is to be seen as a temporary or perhaps an emergency response to conditions of rapid expansion, or whether the colleges represent the establishment of a stable and long-term development in the alternative forms of higher education in Australia. There are many reasons for doubting their permanence. The CAEs comprise a group of educational institutions which cannot as a whole be differentiated from others by any functional definition. There is no sharp dividing line between the universities and the colleges nor between these colleges and the institutions of technical and further education. On the other hand, the colleges do not have a clearly defined character which is common to all of those institutions which were funded by the Commission on Advanced Education (or more correctly of those institutions wherein courses were funded by the Commission). The wide range of institutions within the advanced education sector raises many questions about the coherence of the concept and any administrative arrangement based on it.

As we have suggested, one can identify several main classes of colleges. There are, first, those large institutions which have identified themselves as DOCIT colleges (i.e. colleges whose heads belong to the conference of Directors of Central Institutes of Technology). These are multi-purpose or multi-vocational institutions, usually with a fairly long history, offering degree and diploma courses, often with higher degree students as well, and are geographically and functionally properly described as central

institutes of technology.

Second, we have small multi-purpose colleges known as regional colleges. This term has been applied primarily to those outside the major metropolitan areas of the state capitals, but can be extended for our purpose to include some metropolitan colleges. These institutions offer a common range of basic arts and sciences leading to, or associated with, a number of vocational qualifications. They usually include both degree and diploma courses together with some preliminary or transitional courses for students who have not had an opportunity to enter through the normal processes of matriculation. In some respects the non-metropolitan regional colleges carry out some of the general education functions of a university, which are not required of central institutes or perhaps of those colleges that would otherwise be regional colleges were they located outside a metropolitan area.

Third, we have a class of single-purpose or single-vocational institutions which may be divided into at least three sub-classes. First are colleges which were formerly entirely or almost entirely devoted to initial teacher training and which were commonly part of a state education department's training program. To some degree these colleges have now developed alternative courses using the same basic training in humanities and social sciences, but by and large they remain teachers colleges. Agricultural colleges might be regarded as a second sub-class of this group, especially in so far as they were previously related to and funded by state departments of agriculture. It may be noted, however, that just as teachers colleges in some regional centres have been converted into or integrated with regional colleges of a multi-purpose character so there has been some movement in this direction by agricultural colleges, whilst on the other hand some agricultural colleges are seen to be more in the field of the TAFE institutions. A third sub-class of single-purpose institutions comprises for the most part the paramedical institutions, but there is also a number of other smaller colleges with single vocational purposes. The training of nurses raises special problems, but might be seen in some respects to lie in this sub-class. Colleges of the arts, music and drama might constitute a fourth sub-class of single-purpose institutions.

The difficulty of drawing a sharp line between the colleges and the universities on the one hand and TAFE colleges on the other, and the clear differentiation within the college system suggest that the

sector may well not continue to be defined as it is at the present time. If a differentiation occurs within the university sector and already existing differences in the TAFE area are recognised then it is possible that the Tertiary Education Commission, if it should continue to be the principal funding body, or the co-ordinating body at the federal level, may well find it appropriate to work with some other structure than its present three councils. The sectors being differentiated into smaller sectors could give opportunities to develop mechanisms for quite different processes of policy development and oversight which are appropriate to the different functions and situations of a greater range of types of institutions. The meaning of autonomy and the function of state and regional co-ordinating bodies may well differ among the more highly differentiated types of institutions.

Regional Colleges

The multi-purpose non-metropolitan institutions have a very significant future in Australian higher education. If the demographic trends indicating an increasing popularity of residence in medium sized cities is to continue, then these institutions will be one of the catalysts for the development and enrichment of such centres. They must, however, be regarded as institutions of a different type from those which occur in large centres of population. If there is to be lack of choice between institutions there must be a comprehensive range of basic arts and sciences provided within the local college with possibilities of transferring to more specialised university and college courses at a higher level. There should be opportunities for non-standard, or unusual, or adult, or delayed entry which need not be allowed in all the institutions in a metropolitan area. Open entry might even be desirable where the style of a community college is adopted.

It will be necessary that in the non-metropolitan regions, work of the regional college should be able to be carried on without destructive competition from either the TAFE or university sectors. If, as one can see happening in certain localities such as Gippsland and Ballarat at the moment, the local regional colleges are threatened on the one hand by opposition to development of middle-level courses from the TAFE sector and on the other by the offering of external university courses with local study facilities, then the comprehensive offering of the local college will be undermined

and its viability will be questioned. There should therefore be strict controls by a state authority, which would limit such competition.

The mere limiting of competition so that there is only one major tertiary institution in a region with a population of, say, less than a quarter of a million would not be sufficient. Colleges which are reasonably comprehensive need to attain a size of between 2000 and 5000 full-time students or their equivalent on campus. It is not sufficient that these numbers be made up by external studies. For such numbers to be attained in some areas it will be necessary for the regional colleges to be able to attract students from metropolitan areas. A program to encourage students from metropolitan areas to enrol in regional colleges might be viewed as socially desirable as part of the kind of assistance which governments give to other decentralisation projects. It could be accomplished fairly easily by allowing a more liberal interpretation of the rules regarding independence of students living away from home if they were to attend designated institutions, and thus be eligible to receive TEAS allowances when they might otherwise not were they still living with their parents in a metropolitan area. There are other alternatives including some assistance with housing and the development of special interest courses.

Regional Colleges in a Network of External Studies

The means by which external studies are co-ordinated, the policies which are adopted with regard to the number of production and distribution centres, the ways in which courses may be integrated and related to each other, how the staff of regional colleges can be employed in their own internal teaching and in servicing their own and other institutions' external studies will have very important implications for the future of regional colleges. It would seem to be appropriate that the colleges be seen as part of a polycentred network, in which each regional college has an opportunity to make some contribution to the production of course materials and whose staff will participate in course committees which might be multi-institutional or centred on one college or university. It is important that small colleges do not attempt to cover a full range of courses or course units for a degree program by external study. It would appear to be necessary that colleges function as study centres or distribution centres or field stations for many more course units than they themselves produce. There will

need to be tight control and some cutting back in the proliferation of external studies arrangements. The best means of controlling this at the present time would appear to be through the state boards, but an overall Commonwealth policy in general terms would be necessary to maintain balanced development having in view the difference between the provision of external studies in the past in the north and the south.

Problems of transferability are inherent in the notion of a polycentred network and the suggestion of a National Institute of Open Tertiary Education which could provide the means of co-ordinating course units and perhaps of accrediting combinations for a degree, would appear to have merit. The function of such an institute in providing specialised resources would appear also to be important for the regional colleges.

In the suggestion that regional colleges should be regarded as a protected species there is an assumption that there will be a state body with significant powers. Such a body with teeth will have to be able to control the activities of universities as well as colleges. I say this with considerable reluctance because I believe that one of the distinguishing characteristics of universities must remain that of taking initiatives in the development of new courses and new procedures without external bureaucratic control. In some respects funds should be conditional and limited and the means to provide external studies should be limited to those institutions which co-operate in a national network.

TAFE and Regional Colleges

If it is necessary to limit universities in some respects to protect colleges which otherwise would have doubtful viability, it is equally necessary to restrict the development of TAFE colleges or alternatively to make a TAFE college the only college within a region. It is at this point that the concept of the community college or the 'long faculty' requires further examination than it has received in Australia. One can only guess at the outcome but it would appear that there is a limit to the range of levels (certificate, associate diploma, diploma, degree, higher degree, etc.) which can be contained within one institution. It must be recognised that many TAFE colleges offer education which is essentially not post-secondary, certainly not tertiary in any accepted sense, but alternative secondary education. The TAFE college can be viewed as

part of a system of post-compulsory education. It has been recognised in the reports of the TAFE Commission and the CAE Commission that it is inappropriate for two institutions to be developing middle-level courses in the same area geographically in such a way as to compete for students. At the present time the mechanisms of control are quite inadequate to effect that result. The TAFE funds flow directly to state bodies which have decision-making powers without restriction on the establishment of middle-level courses. Indeed one of the most difficult questions in the interface between TAFE and CAE sectors lies in the quite different methods of control that are employed by the states in the two sectors and in the different conditions under which the funds are provided by the Commonwealth. Under the present conditions it is possible for the Commonwealth to limit developments in the CAEs with reference to particular courses or buildings, but such specifications are not made in the case of funds granted for the TAFE sector. If we are to have effective community colleges which provide some of the services now found in CAEs together with some of those found in the TAFE sector, then a single integrated state co-ordinating body will be necessary and that body must have power to grant or withhold funds, at least under some conditions.

Regional colleges could provide or participate in some means of co-ordination between TAFE institutions and courses of a TAFE character within the region. They could also contribute to processes of accreditation of students seeking to enter the tertiary system generally by other than the standard external examination route. We have already seen in Victoria the development of the 'tertiary orientation year' in technical schools and colleges, and have become aware of some of the difficulties associated with it. We must face up to the problem of the relationship between technical and other teaching at the senior secondary level. It would appear that degree-granting colleges will need to be seen as the central point of a regional educational system and that co-operation between the college and the state regional directorate of education may become one of the most important means of promoting decentralisation and of integrating what would otherwise be competing elements.

A supervisory, co-ordinating or accrediting function for the colleges will presuppose some limitation on the autonomy of other institutions. Perhaps the regional college will have only study centres or remote campuses in other than the regional centre whilst

no TAFE institutions offering truly tertiary work or tertiary orientation courses would remain. This would not mean that some of the trade and perhaps non-tertiary further education might not be made available by other means. Here again the role of the state department of education and the regional director would be important. A great deal more work needs to be done at this point but no progress will be made while TAFE institutions have an expectation of becoming significant competitors with regional CAEs. The alternative to these restrictions would be to disband the regional CAEs, and to put some of their components into TAFE institutions and others into the external studies programs of universities.

Regionalisation of Post-compulsory Education

If I could push through the implications of my thinking about regional colleges and the organisation which would be appropriate outside of the major metropolitan areas, I think I would like to see only one degree-granting institution in any area with a population of say 250,000. This institution should be limited to first degree work together with appropriate diploma courses. It should incorporate middle-level TAFE courses and it should have supervisory and accrediting functions with regard to all tertiary and tertiary orientation work within the region. The college, together with a regional education authority, would be responsible for certifying all matriculation examinations or other methods of assessment for purposes of tertiary entry in co-operation with state authorities.

My preference would be to see the higher secondary aspects of the work of schools detached from the current secondary schools and treated as in the ACT and Tasmania in separate colleges. I would imagine that the separate secondary colleges could in some places be community colleges, perhaps along the lines of what is now being investigated in Northern Australia, especially for places like Alice Springs. Indeed, some of the colleges in Tasmania are now developing a community college character. Given secondary colleges of this kind, the need for heavy reliance upon external examinations would decrease provided that there was sufficient consultation, shared examining and relatively relaxed oversight by an accrediting authority. I cannot see how we can proceed with such developments, however, if TAFE and the secondary colleges are separate and competing systems. A mistake was made in this regard

in the ACT. The non-tertiary aspects of TAFE should be seen as part of the same post-compulsory system as the senior secondary schools. The function of the regional CAE or other degree-granting institution in the area would be critical, maintaining standards for transfer of students to institutions outside the region. It is most important to provide by some such means for the increasing proportion of students who enter tertiary institutions by other than the 12th year high school type of preparation. Such oversight is likely to be most effective when given on a regional basis.

I would imagine that some of the schools or colleges functioning at the matriculation level or in parallel trade courses would commonly have courses which overlapped into the tertiary area. There ought not to be a sharp distinction here, but the upper level of work should always be accredited by the degree-granting institution in co-operation with a state authority. Within the region, if there should develop a regional educational council or a regional government with responsibility of education, the regional college should retain autonomy with its own council although it would probably share some common membership with the regional authority. It is my feeling, and it cannot be much more than a feeling, that during the next twenty-five years we will see significant regionalisation of government in Australia, and that education will be one of the most significant services to be co-ordinated on this basis.

Regional and Specialised Institutions in Metropolitan Areas

We might now consider the metropolitan areas in the light of the previous discussion of regional development. An obvious question is whether similar concepts can be applied to sectors of metropolitan areas. I believe that they can, but not with the same protection for the particular degree-granting institution which may be seen as the regional college.

It is not possible to discuss the regionalisation of higher education within the metropolitan areas and its associated interface with secondary education without considering the special role of the central institutes of technology and the major universities. One must also consider the place of single-purpose or single-vocational colleges. The great difference between metropolitan and non-metropolitan areas is the range of choice of types of institutions which are available within commuting distance. The argument in

favour of regional colleges offering a broad range of programs, at least at the lower levels, does not apply in the metropolitan area where students could go to another institution if the local college does not offer what they require. Comprehensiveness need not be emphasised to the same extent in any metropolitan regional colleges.

The institution which takes the role of 'regional college', whether in a metropolitan area or elsewhere, might be a university. I see the distinctions being blurred, but not removed altogether. It would appear to be inappropriate to prohibit universities from offering higher degrees, whereas regional colleges which include middle-level courses should be limited to four year programs or to shorter courses.

Most of the universities, the central institutes of technology and certain specialised colleges can be expected to continue to draw students from across metropolitan areas whilst other multi-purpose institutions tend to have mainly local enrolments. These patterns of recruitments should be recognised in any regionalisation of higher education within the metropolitan areas.

Universities Old and New

Considering universities in the context of changing roles for colleges, I find it difficult to proceed without some reference to two issues. First, I find some of the new universities functioning in much the same way as some of the major multi-purpose CAEs. On the other hand, I find it almost unavoidable not to recognise a distinction between the older, more traditional and more research-oriented universities on the one hand, and those newer institutions on the other. One is tempted to consider the possibility that we might at some future time have a small number of national universities (as in Japan) and other state or regional universities. There would seem to be a need to maintain by whatever means, at least in some places, an emphasis on academic excellence, research and higher degree work. It is difficult to see higher degree work being reduced in any university, given the kinds of charters that have already been granted. I would expect that we would see universities all retaining some rights to offer higher degrees but that resources would be very limited except in a few centres which had shown some special aptitude for this work. An associated difficulty is that we might not need more than two other major post-graduate

institutions in addition to The Australian National University in Canberra. At the present time, in terms of the hierarchies that have been established primarily by competition for entry, the universities of Melbourne and Sydney would appear to have been selected. It is likely that the much larger proportion of very able students entering these institutions will result in higher concentration of honours students and in the gradual attraction of staff more committed to research. That is, we can expect to see a reversal of the flow from these older universities which occurred during the period of rapid expansion of the university sector, so that a proportion of the more able researchers move from the newer to the older universities where there are greater opportunities with more able students and facilities for research teams.

If it is the case that only Sydney and Melbourne would, at some time in the future, justify substantial investment in postgraduate research centres, problems could arise if there appeared to be a lack of fair dealing between the states. Yet we can hardly expect equal treatment without defeating the purpose of making such a distinction. In the short term a careful development of the kind proposed as 'special research grants category B', which has not yet been funded, might provide an opportunity for initiating some development which could be studied more closely. Similarly, an increase in ARGC funds could be coupled with a policy of funding some continuing programs as well as short-term individual projects. Hard decisions and continuous reality testing are necessary. Postgraduate activities should serve the development of higher education in Australia as a whole and, indeed, the world of scholarship universally – and not the special interests of particular institutions.

The Central Institutes

Those large CAEs which have become known as the central institutes of technology provide a major part of the total service given by the sector. There does not appear to be any serious challenge to their principal role. They are critically important bodies in being able to offer a very wide range of courses and of having the capacity to mount courses in highly specialised fields where numbers of students in any locality may be very small. It ought not, however, to be accepted without investigation that all of the colleges which have banded together under the DOCIT banner should be

recognised as having a broader constituency and an associated different function. The colleges to which I refer would need to be central institutes, not only in the sense of being mutually recognised, but also in that they should clearly be of a size to have sufficient administrative depth to function as autonomous institutions, related to a state authority in the same way as the universities.

When considering the capacity of the central institutes of technology to function as more autonomous bodies, like the universities, undue weight should not be given to size. It would be necessary to examine the internal structure of these institutes to discover whether they have satisfactory means to control the allocation of resources, and whether there are effective processes of internal review of courses and course proposals where the institutions now depend on external assessment. There have been changes in these matters over the years which would need to be taken into account together with differences between the states. Large size does not guarantee the required administrative depth. Neither should it be permitted to influence unduly the formation of policy on the type of work that might be undertaken.

Available evidence indicates that the average general ability of students entering the central institutes is not higher than the average ability of those entering the non-metropolitan regional colleges, nor are the members of staff more highly qualified. Opportunities for more specialised work are created by the size and complexity of those institutions, but we should not expect that they will have the same capacity for advanced study and research as should be found in universities.

The extent to which the central institutes should be engaged in higher degree work should be limited. It ought to remain one of the distinctions between them and the major universities, but it is very difficult to foresee how present tendencies could be reversed. My own prejudice is that doctoral degrees ought to be restricted entirely to universities but that within the college sector the central institutes should offer appropriate masters degrees.

The need to offer general arts and science courses, not leading to a specific vocational qualification, is much more clearly established in the case of regional colleges than the central institutes. Otherwise, apart from limiting higher degree work, I cannot see very much justification at this stage for considering any major changes from

present practices in regard to the central institutes. Even this limitation may be relaxed in time. One expects that they will be subject to the same kind of review as universities in their accountability for the number of graduates produced in the various professional fields, but they should enjoy a good deal of freedom to explore possibilities for new development.

Regional or Community Colleges in Large Cities

In many respects both CAEs and TAFE colleges offering middle-level courses could function as community colleges providing both terminal and transfer courses. This is an area of great potential for development over the next decade or so.

Within the metropolitan areas, regional colleges of advanced education serving a geographic sector might be seen to have similar functions to those in non-metropolitan areas, but there is less need to require integration and limit competition. Community colleges of whatever type of origin can be expected to provide for work to associate diploma level, and transfer and trade courses as well as terminal non-vocational further education. Considering only these functions of community colleges there is no reason why they should not be developed out of the TAFE system; with regard to the matters raised when considering the interface with the post-compulsory area of education as a whole, however, it would appear that in order to have a system adequately representing higher education at large the degree-granting colleges would necessarily have a special role. To the extent that regional accreditation supplements, or replaces, the higher school certificate as a means of entry to other tertiary institutions, one could not expect that colleges which extend only to the second tertiary year would be recognised as a sufficient authority. One imagines it would take a very long time before the secondary system is changed in the large metropolitan areas to provide for the kinds of alternatives to the upper two years of secondary schools which we have envisaged. Changes to the process of matriculation with less reliance on external examinations are already well under way. Without bringing senior secondary education under the control of tertiary institutions, some form of regional co-ordination involving degree granting institutions should nevertheless be expected to develop in the medium short term.

It has been suggested by Grant Harman, among others, that a community college might be developed as part of a closely co-

ordinated system and perhaps as part of a multi-campus single institution in a state. Such colleges would give significant new opportunities through open access, counselling and remedial programs, a closer relationship with employers and through mutual recognition and transfer programs would help to overcome some of the artificial divisions between the university, CAE and TAFE sectors. Harman sees such colleges developing in several ways: By selected TAFE colleges adding new courses, by selected CAEs developing TAFE courses or taking over TAFE institutions, by senior secondary colleges of the Tasmanian type expanding into the tertiary area, by new institutions being established along the lines of US and Canadian community or junior colleges, with some approach to the concept being achieved alternatively by selected institutions 'hosting' courses from other sectors or by the development of multi-purpose, multi-level institutions including university functions.

Single-purpose Institutions

The single-purpose or single-vocational institutions raise special problems. The difference between the teachers colleges and the other single-purpose institutions are important. It would seem that the 'others' might continue to function adequately if co-ordinated by a body such as an institute of colleges, as originally conceived in the Martin Committee. The co-ordinating body need not be the same as that which co-ordinates the regional colleges. That is to assume a two-tier system of co-ordination within the larger states. At the higher level universities and central institutes would be co-ordinated with federated groups of colleges.

Some institutions are much more in need of external supervision and support than are others. For the most part the smaller colleges do not have the staff or experience to justify the degree of autonomy that is appropriate to universities and probably to the central institutes.

An alternative solution for the single-purpose institutions other than teachers colleges is that they should be affiliated with central institutes or universities. How far affiliation extends towards the point of complete integration could be a matter for future review. When we consider that courses which in one state are offered in separate institutes are offered as part of a multi-purpose institution in another state, it is hard to avoid the conclusion that complete

integration is possible and probable.

One planning advantage in retaining separate institutes is that it might then be easier for a state or federal government body to change the allocation of resources between programs in different professional fields than if they are contained within a single, relatively autonomous multi-purpose institution. The ability of the Universities Commission to influence rates of development of particular fields of study within the universities would seem to suggest that this need not be a major worry for state planners.

It is entirely possible that some of the special purpose institutions could be integrated with the universities. If we take an example such as pharmacy at Melbourne, and compare it with the situation in Sydney where pharmacy is within the university, and we know that students entering the pharmacy college would qualify for entry to science courses at the University of Melbourne, then the reasons for a separate existence would not appear to have much generality. On the other hand there could be some loss in closeness of relationship to industry by the incorporation of specialist colleges within multi-purpose institutions.

Former Teachers Colleges

Teachers colleges have been converted into colleges of advanced education which sometimes include courses other than teacher education. For the most part however, the former state teachers colleges in the metropolitan areas continue to function very much as they did before in providing a trained workforce for a particular employer. Now that the colleges have become autonomous under a state board of some kind (but in Victoria separate from the board which co-ordinates the other colleges), the possibilities of diversification exist. The early hopes of college staff have been limited by available funds and the general problem of over-supply of higher educational services in some areas. The former teachers colleges have the capacity to offer general arts and science courses but it is doubtful whether the need for such courses is great enough to justify devotion of all the resources released by a reduction in teacher training of the order of 20-40 per cent.

Studies have been undertaken of the probable extent of the oversupply of teachers. It is very difficult at this stage to gain an accurate picture of future needs, but even if adjustments are made in other ways such as by giving exit students preference over former

teachers seeking to return, we must inevitably face a serious problem. During the period, roughly the last five years, during which some of us have foreseen this oversupply, the size of the system has in fact doubled. It has been highly resistant to any presentation of the facts of the case. It is nevertheless true that projections of the probable future rates of overall participation in higher education do not give reason for any expectation of a general decline but rather of a slight overall increase with a substantial increase in the study of the humanities and social sciences. Much of that additional study, however, would be non-vocational or only tenuously related to vocational training, which might be undertaken subsequently. It is a matter of major importance for governments to make some determination on the priority they will accord to such study. If such programs are to be supported extensively, they ought to be placed for the most part in multi-purpose colleges and in universities.

Expansion of liberal studies in multi-purpose institutions would be preferable to similar development in the former teachers colleges partly because so much of what they teach has been closely tied to teacher education and because the existence of general arts and science courses within multi-purpose institutions provides opportunities for transfer internally into a range of vocational programs and the addition of (PG1) diploma work to the basic liberal arts degree. If this policy is adopted and there is indeed a serious oversupply of teachers, then the most severe forms of rationalisation would appear to be inevitable for at least some of the former teachers colleges.

Any rationalisation which includes direct incorporation of teachers colleges within the universities, whether in metropolitan areas or in those regional centres where some attempt has been made to move in this direction already, must meet with very strong resistance from the staff of both universities and colleges. University staff feel with some justification that former college staff will be gaining by direct transfer relatively high status university positions which those who have remained within universities have been unable to attain or have achieved only as a result of passing tests which have not been applied to those who have been transferred in. College staff naturally feel that they have a right to continue in what they had understood to be continuing appointments. For this reason it may be better to consider, where possible, incorporation of

the teachers colleges with regional colleges from the advanced education sector. Alternatively, staff not transferred to universities might well be transferred to those regional colleges which are offering courses in liberal studies. The conditions of employment might very well make such transfers difficult. However, states have the necessary powers.

No such structural changes could be undertaken without a strong determination to carry through the changes thoroughly to a satisfactory conclusion; but heavy-handed external imposition of the means of integration will almost certainly raise more problems than it solves. For this reason it would appear to be advisable for a firm policy determination to be made for integration between certain institutions and for the institutions themselves to propose in detail the means of integration. Only if after a reasonable time no progress was made should the critical decisions be made by an external body. Where integration with a university appears to be the rational solution it might be necessary to provide an extended period of preparation which would give an opportunity for adjustment of courses and for staff to upgrade qualifications or to seek employment elsewhere.

Mixed Levels and Academic Drift

A serious problem concerning the number of different levels which can be accommodated within a given institution is necessarily raised by blurring the distinctions on the one hand between CAEs and TAFE colleges and on the other between CAEs and universities. This problem could be tackled by limiting the number of levels which can be offered for accreditation by internal means, while the wider range is covered by participation in an external studies network. If colleges which currently offer mainly degrees and higher diplomas enter more into the middle-level courses, then they should certainly not offer any higher degree work, and their degrees should be co-ordinated with, if not subject to, those network considerations which seem to be necessary for external studies.

The introduction of the CAEs can be seen as a means of introducing diversity. Alternatively one might regard it as evidence of the failure of universities to respond to changing needs. The experiment has not been evaluated systematically, but it would be hard to deny claims of considerable success. The major failing is likely to be seen in the academic drift of the colleges towards the

pattern and values of the universities. The high cost of longer courses has also been noted with concern by the Commission. To the extent that smaller, multi-purpose colleges are changed into community or regional colleges including middle-level work and with tight control of developments at the higher level, some of these difficulties might be overcome. Conversely, if TAFE colleges are expanded to provide more middle-level courses and to take on the broader roles, then the problem of academic drift could be increased. If regional (CAE) colleges are unable to move into the middle level, they will seek to become campuses of universities, while the alternative community colleges move into the field they have vacated. The trend is clear in many countries.

The place of research in colleges might be seen as part of the problem of academic drift, but policy in this area should be based on broader considerations. I have argued that higher degree work should be discouraged in colleges and excluded from most. Course work masters degrees should be the limit for most because research degrees normally represent relevant experience in a major research institution. The costs are very high and commitment to such programs would tend to divert attention from the primary responsibility of the colleges. But staff research is a different matter altogether.

It is simply not true that staff who devote themselves exclusively to teaching are better teachers at the tertiary level than those who are active in research. The evidence we have indicates the opposite. Limited research facilities should be expected to be justified in all tertiary colleges. Staff of the colleges should be encouraged to enter into co-operative arrangements with universities for research. Special research funds for universities should be conditional on realistic arrangements being made for such co-operation. Many colleges have given extensive service to industry through applied research and consultancy. These activities should be expected to expand.

Encouragement of research (by staff only) in the colleges would imply reduction in the often excessive student contact hours, without necessarily changing the staff-student ratio.

The Need for Policy-oriented Research

There has been very little systematic study of the system. Apart from the Regional Colleges project (which was not brought to

maturity in the published report), there has been no large-scale study of the characteristics of the student population or of the academic staff in CAEs. It is still possible for sweeping claims to be made without reference to data. The work of the former (CAE) Commission only began to set out the characteristics of the colleges in the broadest terms and some of the statements contained, for example, in the Fourth Report, cannot be understood as anything more than fond hopes. Planning for the future is limited by the inadequacy of educational statistics and the lack of comparability between states. We simply do not have an adequate data base, category definitions are unclear, important statistical series have been discontinued, census questions have been changed apparently without understanding the possible consequences or without understanding current changes in educational practices and processes. We do not even know how many students are in the TAFE colleges. The context in which we work is one of lamentable ignorance.

It would hardly appear to be rational to suggest any radical revisions of current practices without making an evaluation of the effects of past policies in terms of outcomes. The practice of educational evaluation at the tertiary level is almost unknown in Australia, except for some very small-scale work on particular courses within particular institutions.

Evaluations of the kind which would require attention to be given to the capabilities of graduates have not been attempted except in surveys of graduate employment. In general, why do business and industry employ a much smaller proportion of graduates than is the case in comparable overseas countries? If we look to the attitudes of students, we find that there is a clear indication of a predisposition to avoid employment in private business and commerce with a preference for the self-employed professions and government employment, but there is no evaluative study which would allow us to discern the causes of this unsatisfactory relationship between private employment and higher education.

The assumption of a slight increase in the rates of participation in higher education is too important to be accepted even in the short term without further study. Participation rates will be unevenly distributed across the nation. The greatest scope for increase appears to be in Queensland, but a good deal more detailed research is required before we can make reasonable projections.

Such projections are almost always wrong in any case and must be continuously revised.

Policy-oriented research has hardly begun in the Australian higher education scene. The opportunity to put together and retain a multidisciplinary team of academics and experienced practitioners in a continuing program is unlikely to occur without a special initiative being taken by the Commission or by the Government on some other advice. The Commission on Advanced Education and the TAFE Commission allocated funds for research. For the most part, these were for particular and limited studies. The Universities Commission did not provide such funds except in so far as it funded research activities within the universities which might sometimes be relevant, but it has done so only as part of its normal funding of research work.

Summary and Conclusion

I expect to see further differentiation of the higher education system as a whole together with the blurring of distinctions between the three sectors which are now included in the Tertiary Education Commission. We need significant revision of the TAFE area which allows a separation of tertiary work in the TAFE colleges from close supervision by a state department and its incorporation within the same system as the regional CAEs. I would suggest that a good deal of the work which is parallel to higher secondary study should be administered as part of a post-compulsory system, not as part of a national or state tertiary system, and that the two systems should be co-ordinated to some degree at a regional level. On the other hand, the colleges need to be related to the universities by way of some state control of the allocation of resources which brings universities and colleges together in a relatively loose federation at the state level. Within this system I would envisage the further blurring of distinction between universities and colleges and the development of some further differentiation within the university sector. Colleges of advanced education as such will disappear. They will become or merge with several different parts of a diverse tertiary system.

Chapter 15

TAFE and the Next Twenty-Five Years

H. K. Coughlan

The Background

In this paper I shall be using 'TAFE' to mean technical and further education irrespective of where it is provided. TAFE is more than the programs offered by state Departments or Divisions of Technical and/or Further Education. It is provided by a range of institutions and agencies. For simplicity it might be regarded as post-school education other than that provided in universities or at advanced education level in colleges of advanced education. This means that TAFE is concerned with:

(a) preparing people for entry into a trade, technical or other skilled occupation, or to progress, specialise or update knowledge within such occupations;
(b) preparing people as necessary with the basic requirements to enter courses of a kind set out in (a);
(c) preparing people to re-enter the labour force, or to change jobs, in trade, technical or other skilled occupations; and
(d) providing courses for the purpose of personal enrichment, including the creative use of leisure.

The size and nature of TAFE enrolments have been set out in the TAFE Commission's report and submission to the Committee of Inquiry into Education and Training. In summary, there were in 1977 809,294 enrolments in the major TAFE authorities. Putting aside approximately 5000 enrolments in professional courses, this total comprised 160,000 enrolments in middle-level or para-professional courses, 141,000 in trades courses, 149,000 in other courses leading to skills comparable to the trades and 107,000 in a wide range of preparatory and remedial courses. These 562,000

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enrolments were in courses directly related to vocational ends, the main fields of study being engineering (27.4 per cent), business studies (24.5 per cent), building (8.6 per cent), applied science (2.2 per cent), general education (16.3 per cent) art/design (4.4 per cent) and a range of courses in industrial and personal services which together make up 12.7 per cent of vocational enrolments. There were in addition 222,000 enrolments in adult education courses, the most popular fields of study being general education and art and design.

The age distribution of these students is interesting. Of those following vocational courses, approximately 47 per cent were under twenty-one, but more than 20 per cent were thirty or more. In the adult education courses 17 per cent were under twenty-one, 33 per cent between twenty-one and twenty-nine and 42 per cent were thirty and over. As you might expect, the proportion of older students is much higher in TAFE than in universities and CAEs. This is reflected in the fact that while of total TAFE enrolments, 39,000 were full-time, the other 94 per cent were of either part-time or external students.

These statistics have been presented here for two reasons. First, there could still exist preconceptions and stereotypes which do not reflect the real nature of TAFE. Second, they illustrate the extent to which TAFE reflects the characteristics of society itself.

If, therefore, one is speaking of what might happen in a sector of education like TAFE during the next twenty-five years one must begin by stating one's assumptions on what might take place in the country at large during this period. To use the jargon, what is the scenario within which TAFE is likely to be operating?

I begin by making three assumptions for which I have little evidence, and which probably reflect wishful thinking. These three assumptions are that Australia will avoid destruction as a result of an international crisis; that in the year 2002 those of us still alive will identify ourselves as Australians first and Queenslanders, Victorians and so on second; and that governments, both federal and state, will begin to adopt policies directed towards providing as high a proportion of the population as possible with satisfying jobs. My third assumption is probably the most dangerous to make, but I personally believe that the future cohesiveness of Australian society will depend very much on the extent to which governments not only adopt broad manpower policies, but also relate a wide range of

other policies – in education, in urban and regional planning, as well as in economic matters – to broad manpower objectives. It is to be hoped that such improved co-ordination will at least reduce some of the contradictions between existing policies, e.g. activity to improve the lot of women in the workforce independent of measures to reduce youth unemployment.

Within this broad scenario it will be necessary for TAFE to respond to both a society and an economy that will continue to change rapidly. Enough has been said in other places for it to be unnecessary for me to describe the pace of change and the impact on the economy of such changes in fields like the informational sciences, electronics and so on. It could be that the next twenty-five years will see a slowing of the pace of fundamental innovation. Such a slowing will have little impact, however, on the rate of change as it affects individuals and sectors of education. The pressure will be irresistible for the application of improvements and innovations which may be merely an extension of more basic innovations of previous years, but will affect quite significantly the work place and the home of many Australians. It is probable that most of the new machines that will be introduced into Australian enterprises during the next five to ten years have already been developed. We know enough to recognise that those new machines will represent a significant change from what is there at the moment.

Most of what I am referring to as innovations will affect Australians irrespective of what happens with regard to more basic shifts in the economy. I am not competent even to guess whether the trend of past years for the emphasis in employment to shift from the primary and secondary sectors of the economy to the service sector will continue or will slow down. No matter what happens, it seems to me that TAFE will be affected by factors including the following:

(a) *Increasing automation of routine jobs.*
There is some evidence that even in periods of relatively high unemployment it is difficult for industry in the advanced countries to fill boring or unpleasant jobs. We have all read of some of the experiments being carried out by large enterprises in countries like Sweden. I understand that the Japanese Government has allocated considerable resources to planning of MUM – an acronym for methodology for unmanned manufacturing. Japanese planning assumes that

the first fully automated factories will be in operation in the early 1980s.

(b) *The type of manufacturing that survives and develops in Australia.*
If Australia retains a manufacturing base, a major issue will be whether this occurs by recourse to automation or by the development of relatively small enterprises using highly skilled craftsmen to produce articles that compete on the basis of quality rather than price.

(c) *Attempts to achieve greater efficiency in agriculture.*
TAFEC has analysed the occupational distribution of the workforce in one or two non-metropolitan regions and related this to the educational level of components in that workforce. Such an analysis suggests that the sector of the workforce which has received to date least benefit from formal education and training is that in agricultural management.

(d) *How the country adapts to increased productivity.*
Will the long foreshadowed increase in leisure occur, if only to spread the available amount of employment over a larger number of people?

(e) *The extent to which recurrent education moves from concept to reality.*

What I have referred to so far are possible changes on which we have little firm evidence to make predictions. I have referred to them because I believe that irrespective of the nature of any change in the matters I have mentioned, there will be implications for education and for TAFE in particular.

TAFE will be affected also by changes on which we do have some hard data and a range of projections. I refer to trends in the national population structure and its labour force. Most of the people who will enter post-school education and/or the labour force in the years up to 1991 have already been born. On the latest projections of the Australian Bureau of Statistics, assuming a net migration rate of 50,000 persons a year, the Australian population in 1991 will be slightly more than 16 million. Combining population and labour force projections it seems wise to plan on the following assumptions:

- the labour force will grow at a declining rate, but that rate will continue to exceed the rate of growth of the total population;
- female labour force growth rates will continue to exceed those for males for the next few years at least;
- for the next decade the labour force will be dominated by the

under thirty-fives but by the year 2000 the median age of Australians will be about five years older than at present. These changes taken together suggest that the labour force will decline in skill and mobility unless steps are taken to counteract this. Significantly higher proportions of females than males in the adult population lack post-school qualifications and therefore, since much of the growth in the labour force will comprise females, particularly older females, the skill level is likely to drop. Such older females are a less mobile sector of the workforce for obvious reasons. At the same time, there will be less opportunity for the labour force to replenish its skill, through either the entry of young people or through immigration. For these and for other reasons which have been argued at greater length in the TAFEC Report for the 1977-9 triennium it is likely that the demand on TAFE for the provision of workforce skills is more likely to increase than decrease.

It seems likely that in any consideration of labour force trends, or of broader economic and social development, youth unemployment will continue to be a live issue for some years to come. In most western countries, the higher rates of unemployment among young people are ceasing to be regarded as merely cyclical and are being recognised as structural, to some extent at least. The speed with which the longer-term imbalances in the economy and the labour market that have caused youth unemployment are overcome is difficult to predict.

A 'round-up' of policies in Western Europe and the United States does not provide any obvious grounds for optimism. A quick analysis of measures being adopted in these countries to reduce the impact of youth unemployment suggests that the education system and TAFE in particular will have a major role to play. The most demanding part of this role will be to devise programs of relevance to young people who have so far found little of relevance in our educational offerings.

Changes in TAFE

The emphasis within TAFE must continue to be responsiveness to change. Much of this responsiveness will need to be built into traditional areas of educational concern like the curriculum. It will be more, however, than devising better ways to do what TAFE is already doing at present, important though this may be. It will be necessary for TAFE to work even more closely with industry than it does at present, if it is to respond sensibly to the changes taking

place in the work place and the workforce. Some very important matters of principle will have to be faced. For example, in a number of craft occupations the shift in the work place has been from application of general skills (e.g. carpentry) to the application of specialised sub-skills (e.g. form fixing, partition erecting, frame cutting). Will TAFE's role be to amend its curriculum to provide only the specialised skills? In the narrow sense this might be more efficient. There are strong reasons on the other hand why TAFE should assert the general educational objective of preparing the individual for a range of specialised skills, on the grounds that this is better in the long run both for the individual and for the nation because of the greater flexibility and opportunity for self-fulfilment that it provides.

The next twenty-five years will demand of TAFE, therefore, major revisions of curricula at both detailed and fundamental levels. Such revision will become entangled in a range of industrial and even political issues. Irrespective of TAFE's response to these issues it will be necessary for it to improve the teaching techniques it uses. Once again it will be not only a narrow question of making better use of the teaching aids which facilitate self-paced learning, of providing better libraries and resource centres and of training TAFE teachers in the improved techniques. There will also be the deeper issue of the extent to which TAFE acts as an educational supermarket, responding to needs as the student formulates them rather than in ways structured by the educationists. Recent developments like the School for Independent Study at North East London Polytechnic and the successes of some of the informal adult education programs in Australia suggest options that TAFE may have to encompass.

How TAFE responds to these questions will have implications for the forms of institution within which it becomes available. I would expect that the less formal alternatives to the traditional technical college will continue to develop as providers of TAFE. The learning exchange, the informal adult education courses, are playing such a valuable role that they will continue. The changes in educational practice that I have touched upon will have implications, however, for the form of those colleges which will continue to be the main vehicle for provision of TAFE. They will affect the fabric. One might expect the college nucleus to become very much a resource centre with a number of relatively simple buildings, not always on the same site, used for classroom and workshop space. Equally important,

this nucleus would increasingly become a resource centre for TAFE programs which the college would not itself provide. It is to be hoped that the territorial jealousies which bedevil education would decline sufficiently for the educational resource centre in a TAFE college to service both the informal further education activities and the training programs of industry in the region. Such a trend would be a stimulus to recurrent education in its full sense.

Changes in educational practice will also affect the organisation of TAFE activities. I would hope that the experience of the advanced education sector will enable TAFE to avoid the trap of believing there is a simple dichotomy between the departmental college and the autonomous institution, and that certain desirable or undesirable characteristics are exclusive to each. The trend will probably be for increasing delegation to the local class and institutional level of decisions which can be more sensibly taken at these levels, while functions more sensibly organised at the centre, which would include major resource allocation decisions and curriculum development, would be exercised there. A parallel development I would hope to see would be the development of machinery at regional level which would parallel the physical changes I have just mentioned and would provide a co-ordinated program of post-school education irrespective of whether that program is offered in a departmental TAFE institution, another educational institution or by any other agency.

If concepts like recurrent education and education for leisure become accepted policies, there will be increased pressure for more flexible forms of technical and further education and for closer integration of the programs of various agencies. If TAFE is to respond adequately it will be necessary not only to broaden its curriculum but also to devise more effective methods of curriculum evaluation and revision. Many staff in TAFE will find difficulty in coping with a situation in which student needs affect directly what is being taught. The staff development task in TAFE in future years will be a large one.

The 'opening up' of TAFE will take other forms. TAFE's relationship with the employment sector is already good, but it will have to be strengthened. To some extent, the trend to distinguish between education and work will be reversed. The pressure for more and more of education and training to move from the firm to the college will continue, but the value of that education and

training being linked to the work situation will also be recognised. Trends already emerging in TAFE in some states lead me to be optimistic that this apparent contradiction can be resolved. For example, despite the present problems of the building industry it has been possible for the New South Wales Department of Technical and Further Education to become a building contractor to the Housing Commission. A number of students following pre-apprenticeship courses in the building trades are receiving their practical experience on-the-job constructing actual cottages.

The importance for many people of the link between education and work, the apparent fact that many people seem to prefer to learn at the same time as they are working, brings me back to the point I made earlier of the high proportion of present TAFE students who are studying part-time. Within education we have discovered the inefficiencies and difficulties of part-time education as expressed in higher attrition rates and lengthened periods of training. We have, therefore, tended to argue that it would be more efficient if many of the people at present receiving their education through part-time courses could be enabled to follow them full-time. In other sectors of education this process has been extended to the active discouragement of part-time studies. Once again the trend is not unique to Australia. The United Kingdom, for example, has adopted policies which have had the effect of reducing the proportion of certain students in further education studying part-time. Industry and government have discovered in Britain that the drop in numbers seeking ordinary and higher national certificates by part-time studies has had ill effects and measures are now being taken to reverse the trend. I would expect that over the next twenty-five years TAFE will continue to offer a significant portion of its programs for part-time study. I would hope that existing patterns of part-time study, which frequently make unfair demands on students, would be improved. It should be possible to devise better patterns of part-time study which are manageable in terms of their costs to the community. The narrow inefficiencies of such part-time studies will be counteracted by the increased opportunity for access to further education so provided.

Conclusion

The trends within the economy, within society at large, and within TAFE itself would suggest a continued expansion of TAFE's role in

post-school education. Restrictions on the rate of growth of universities and other institutions of higher education will increase the pressure for growth in further education. There is a general assumption that TAFE will remain the most 'open' of the sectors. Before any predictions, however, are made on the size and the nature of any future growth in TAFE, two questions need to be answered.

The first is whether TAFE is really in education at all, or whether its main focus is training. A business executive with whom I was discussing TAFE some months ago asked: 'Why is it TAFE and not TAFT – technical and further training?' Those of us with a direct concern for TAFE tend to bridle at the question, but it is an important issue in planning for the future. A major part of TAFE's resources is used to prepare people for employment. In some countries in recent years machinery outside the education system has been developed to provide certain elements of that preparation which are not now provided by the employer.

During the past century the education system has taken an increasing responsibility for preparing people for employment, predominantly by teaching the principles underlying trades and professions but also to some extent through practical instruction within teaching institutions. Most of the theoretical aspects within vocational preparation now lie within the education system and there has also been an increasing shift of responsibility to that system for practical instruction. The evidence is that there is now a limited capacity within industry to provide the wide range of systematic training required by the community. It is difficult to see how these trends will be reversed. Given that the present forms of vocational preparation that take place within TAFE continue to be provided there, what is the justification for those programs being regarded as educational ones?

The basic justification was set out at length in the Kangan Report,[1] and has of course been argued frequently both before and since that Report. It is that TAFE, like the other sectors of education, is concerned with the personal development of individuals. That personal development will be most effective in the longer term both for the individuals and for society if it develops the individual's understanding as well as his or her skills. The development of understanding is necessary if opportunities for recurrent education are to be availed of and recurrent education offers the best hope

whereby the community can cope with changes in work and changes in itself.

TAFE has staked out this claim to be part of education but has still to develop the claim if it is to retain the lease. Proper development of the claim will be reflected in the way the particular disciplines in TAFE are taught. It will take more than exposing students in Panel Beating I to some English literature, valuable though this might be on occasions. I believe TAFE has already done sufficient to demonstrate that it knows what being in post-school education should be about, but continued development is necessary and will be expensive.

If TAFE's development over the next twenty-five years is as part of post-school education, another question arises – whether there is a longer-term need to distinguish three sectors of post-school education. Some writers have distinguished two traditions in post-school education – the 'autonomous' tradition and the 'service' tradition.

The autonomous tradition, epitomised in our universities, emphasises academic rigour in the selection and evaluation of students and staff and in the content of courses; the advancement of knowledge for its own sake, usually within the framework of specific disciplines; and hence, attachment of as much importance to research as to teaching. While institutions in the autonomous tradition prepare people for vocations, the form of that preparation differs from that of the other type of institution – the institution which lays claim to the service tradition.

TAFE is fairly and squarely within the service tradition. This tradition is characterised by responsiveness to demand, concentration on vocational education with the transmission of clearly defined skills. Institutions in this tradition are teaching institutions with any research clearly subservient to teaching objectives. Such institutions are open in their admission policies and should encourage innovation in both teaching methods and course content. Their task is to meet specific community needs as speedily and efficiently as possible; they have no ends within themselves. This is why this paper has emphasised the economic and social context within which TAFE must operate.

The members of the newest sector of post-school education in Australia, the colleges of advanced education, were established in the service tradition. The last decade has shown that at least for the

level of courses on which the CAEs have concentrated it is difficult to draw a rigid line between the autonomous and the service. It is also difficult to draw a rigid line which makes sense in all locations between what is appropriate for a CAE and what is appropriate for a TAFE institution. One cannot but wonder whether in some parts of Australia our attempts over recent years to place educational programs within particular pigeonholes, and to make the barriers between these pigeonholes increasingly difficult to surmount, have been to the advantage of either student or taxpayer.

The problems of sensible pigeonholing make the present financial arrangements between the Commonwealth and the states for post-school education difficult to justify. If one is trying to prognosticate what is going to happen in TAFE over the next twenty-five years, one faces the difficulty of trying to assess the likelihood of rationalisation of present financial arrangements. In the present political climate one cannot be optimistic. Continuation of the present financial arrangements will continue to distort decision-making in post-school education and hence affect the nature of TAFE over the next twenty-five years.

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Chapter 16

Reshaping Organisational Structures to Meet Changing Societal Needs: Some Notes on Possibilities for Multi-level Institutions

G. S. Harman

It has already been shown in various earlier chapters in this volume that tertiary education in Australia faces a future that is by no means certain and easy. In the next two decades almost inevitably it will be called on to adapt to quite fundamental changes in economic and social life. Most likely these changes will be even greater in degree and more rapid in rate than those Australian society has experienced over the past two decades or so. But unlike its experience of the past two decades in coping with change, tertiary education between now and the year 2000 will in all probability be required to adapt to changing needs, demands and tastes without any substantial growth at all, either in student numbers or in levels of financial support. The difficulty of adapting to and coping with rapid change in a 'steady state' is considerable. But in addition, tertiary education in this country lacks much of the required expertise to deal with this problem; the experience of most of our senior administrators and academic staff has been entirely in a period in which innovation and flexibility were achieved essentially through expansion.

It is not the purpose of this chapter to explore the full scope of the problem of how tertiary education can cope with change in a no growth situation, and acquire skills and expertise to do this efficiently. Instead the chapter is concerned with only one narrow

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part of this problem, that of innovation with regard to institutional structures and arrangements. If tertiary education is to cope with change in a 'steady state' situation, it will, among other things, need to constantly review existing organisational arrangements and structures and ask whether existing physical and staff resources can be employed differently in order to serve society more efficiently and effectively. I take the view that at the present time tertiary education is not coping well with changing conditions and that there are good reasons for seriously reviewing existing structures. Further, I see multi-level institutions as *one* of a number of options that appear to deserve serious consideration. By multi-level institutions I mean tertiary education institutions which offer a greater range of levels of courses than do most present universities, CAEs or TAFE colleges.

The chapters by Birt and Beswick in this section of the book on 'Looking to the Future' question three fundamental aspects of the present organisational arrangements for tertiary education. These are:

(a) the current segmentation of tertiary education into three distinct and separate sectors;
(b) the current division between secondary and tertiary education; and
(c) the present arrangements whereby generally any tertiary education institution offers courses at only a limited number of levels and only from one sector.

Both authors see the possibility of blurring or varying the current strict regimentation into three sectors, and of developing multi-level institutions. While their positions show a considerable degree of similarity, the views are by no means identical. These differences in views are not only to be expected but, in my view, they are to be welcomed. We need much more open discussion and debate about possible options for change. Unfortunately, in the past, there has been too little serious discussion of many fundamental matters of policy within Australian tertiary education. In the hope of helping to promote discussion concerning possible structural innovations in tertiary education, this chapter thus provides a further perspective on multi-level institutions.

Two important points need to be made about this chapter. First, the chapter attempts to provide a discussion of multi-level institutions from a current perspective. Possibly with different

circumstances and different needs, I would take the view that some very different kind of arrangement was necessary to that I suggest here. Further, by suggesting changes to achieve a particular kind of arrangement, I do not mean to imply that this arrangement should then become fixed for all times. Rather, whatever changes in structures we move to should in turn be subject to constant review and, when necessary, to modification.

The second point that needs comment here is that my discussion of multi-level institutions and the specific proposal I put forward are based on what I see as current weaknesses in the present arrangements – weaknesses which I consider spring largely from the inability of current structures to meet already present and emerging needs and demands. However, because of limitations on space it is not possible here to spell out explicitly what are these weaknesses in structures, although some reference to specific weaknesses is made in the discussion of various options.

The organisation of the chapter is simple. First I briefly comment on past interest in and discussion about multi-level institutions. Second, I review some of the main options currently advocated. Finally, I make a proposal for a fundamental system-wide reorganisation of tertiary education, based mainly on the idea of multi-level regional colleges.

Interest in the Idea of Multi-level Institutions

The idea of multi-level institutions, in the sense I use the term here, is not new in this country. For example, in the past a number of the older universities offered undergraduate diploma courses in particular fields (such as public administration) as well as their current range of levels of courses. Again, in Victoria a small number of VIC colleges for many years have quite successfully combined TAFE courses and advanced education courses within the same institution, although in recent years, for various reasons, the two types of courses have generally been run separately, often on different campuses.

However, over the past two or three years interest in the notion of more comprehensive institutions has increased decidedly. This interest has sprung mainly from interest in and discussion about the North American community college model, and its possible relevance to the Australian scene. In a surprisingly brief period the term community college has secured a firm place in our vocabulary

of tertiary education, and many individuals and organisations are urging that community colleges on the North American pattern should be established, or that existing institutions should be adapted to become more like community colleges. This interest in community colleges can be viewed as a product of various factors and influences, but particularly recognition of structural problems in our system of tertiary education, disappointment with the development of CAEs (and particularly their upward 'academic drift'), growing concern about access to tertiary education and about equality of opportunity, and uneasiness about the future of particular CAEs in view of the current bleak forecasts concerning enrolments and funding. In addition, it can be attributed to the publication of various reports and papers relating to or dealing with community colleges, and in particular to the publication of a report prepared in 1974 by Professor John Dennison of the University of British Columbia for the Federal Government Commission of Inquiry into Poverty.[1]

Moreover, it must be recognised that this interest in community colleges has already gone further than mere discussion and the urging of action. In Darwin the Federal Government has established a community college which offers a range of higher education and TAFE programs.[2] The Technical and Further Education Commission, before its absorption in the Tertiary Education Commission, discussed the community college idea in its reports and argued that multi-level community colleges, 'carefully planned to meet community needs, could become an important feature of moves to rationalise the post-secondary area'.[3] Committees of inquiry into post-secondary education in Western Australia and Tasmania both have recommended in favour of developing some form of community colleges,[4] while in South Australia, Victoria and New South Wales definite moves have been made to plan and establish community colleges for particular country regions.[5] Further, in South Australia selected TAFE colleges have been renamed community colleges.

Despite the high level of current interest in community colleges, the North American community college idea is still widely misunderstood in Australia, even by educators and higher education administrators. Further, the term 'community college' is being very loosely applied, to mean anything from an institution modelled closely on a North American community college to particular

desirable characteristics or goals for any tertiary education institution, such as strong emphasis on non-credit adult education, an open admission policy and extensive community use of college facilities.

Elsewhere I have set out in detail my understanding of the North American community college model and have discussed the possible relevance of this model to the current Australian scene.[6] In brief, I see the North American community college as an ingenious organisational device. It provides for completely open access for adults, programs of counselling and remedial help, close relations with employers and a high level of community responsiveness. It places strong emphasis on teaching as the first responsibility of its academic staff. But in addition, it provides what in fact is a 'multi-level' and 'multi-strand' curriculum arrangement. Courses are offered in many fields and at different levels; in the language of Australian tertiary education, a community college would offer a wide range of TAFE certificate courses (professional, para-professional and trade), but in addition two-year CAE associate diploma courses, and the first two years of study for many CAE and university degree programs (students may then transfer with full credit to a 'four-year' institution). But while the North American community college is such an attractive institutional arrangement, it is dangerous to think in terms simply of transplanting the model or even its key components here. Despite the large number of similarities between our society and culture and that of the United States and Canada, there are significant differences which make replication here of particular North American organisational devices an extremely risky enterprise. At the same time I consider that we can clearly benefit from the North American experience with community colleges. In the first place, the different variations of the community college model provide a useful set of 'benchmarks' to help evaluate our system as a whole, and its various components including structural arrangements. Second, the community college system highlights what I regard as important and desirable characteristics for any tertiary education system in an industrial democracy; examples are completely open access admission for adults, appropriate support systems to help weaker students, provision for relatively easy transfer at the end of two years' full-time study to a four-year institution. Third, the community college model suggests alternative ways of structuring

our system of tertiary education and new forms of institutional arrangements at campus level. In particular, in my view, it prompts review of our current segmentation of tertiary education into three sectors and the existing division between the secondary school and tertiary education. It also prompts exploring possibilities for combining in new kinds of institutions courses now found in two or more different sectors, or courses now found in a high school with current tertiary type courses.

Some Options Suggested

Already there has been quite substantial discussion of a number of possibilities along the lines of multi-level institutions, although I would hope for much more discussion, and discussion involving a greater number of scholars and administrators, before any firm decisions on change were taken. Six main options, or combinations of them, have received the most attention. Briefly these six options are as follows:

(a) *Selected TAFE colleges will broaden their base by adding additional programs and functions*

Generally advocates of this option have in mind the addition to selected TAFE colleges of non-credit adult education and possibly professional refresher courses. It is this type of development which is in the planning stage for particular regions in Victoria and New South Wales. But as well, it has been suggested that new colleges of this type could in time develop a substantial commitment at the advanced education level (of course, some TAFE colleges already offer UG3 courses), and it may also be possible to establish a transfer arrangement whereby students complete a number of units of a bachelor's degree program before transferring to a CAE or university. This option, then, basically is to develop something like a North American community college from a TAFE base. In many respects it is an attractive idea. TAFE facilities are widely spread throughout the whole country, and there are certainly a number of localities and regions (in more than one state) which at the present time are not well served with regard to both advanced education and university courses. On the other hand, there may well already be an over-provision of advanced education places (or at least spare capacity in many CAEs). Two further problems or difficulties also have been suggested. One is that because of its technological and practical emphasis a TAFE college may not be the most desirable base from which to develop advanced education and university-type

courses, especially in non-technological fields such as the humanities. This objection should not be rejected out of hand, since work in the humanities and social sciences probably is best done in environments which place a high value on debate and argument, and on a plurality of points of view. On the other hand, the North American community college has demonstrated that lower division university courses in fields such as philosophy and literature can be taught quite effectively in institutions which also offer courses in welding, secretarial studies and auto body repairs. A second problem sometimes suggested is an administrative one: if new colleges of this kind are developed, will they remain attached to state TAFE departments or TAFE divisions of education departments, or will they come under the same kind of arrangement as CAEs? My view on this is that we should not worry unduly about possible administrative problems; decisions about structural innovation should be taken primarily on educational and social grounds, with proper attention being given to costs in relation to possible benefits, and then subsequently efforts should be directed towards devising appropriate administrative arrangements to cope with any changes planned or instituted.

(b) *Selected CAEs will be allowed or encouraged to develop TAFE courses, or to take over adjacent TAFE institutions*

This option already is being seriously explored by many CAEs in more than one state. A number of people have seen this to be a particularly suitable development for smaller and less viable CAEs, particularly those located in non-metropolitan areas. In Victoria the Partridge Committee appears to support development along these lines for a number of smaller country colleges, and for some metropolitan colleges too.[7] One difficulty with this plan is that in some cases there is an understandable reluctance among academics in some smaller colleges to include TAFE courses, since they fear that their colleges would soon be regarded in the academic community simply as 'techs'. There are other problems too. For example, state TAFE departments understandably object to the idea of loss of territory, and the co-ordination of TAFE courses within a state would certainly be more difficult if TAFE courses were the responsibility of one or more government departments, and also a number of autonomous CAEs. (This, of course, is already a problem in Victoria.) Still, this proposal has merit. It could enable particular smaller CAEs to become much stronger institutions, and it

promises to provide better for the tertiary education needs of the regions concerned. Moreover, as already mentioned, in the past, particularly in Victoria, the idea of combining TAFE and advanced education courses in the one institution has worked reasonably well.

(c) *Matriculation colleges or senior high schools will expand their functions and offer appropriate adult education and tertiary education courses*

This line of development has been mentioned for the new Canberra secondary colleges, while for Tasmania the Karmel Committee of Inquiry into Post-Secondary Education suggested to both the Tasmanian and Federal Governments that in Burnie the matriculation and technical colleges should be integrated to form a new community college.[8] This proposal too has considerable merit. The existing division or barrier between secondary and tertiary education is probably far too rigid, and the facilities of matriculation or senior secondary colleges in many cases could be used for TAFE courses or put to good use for community education enterprises, particularly in the field of non-credit adult education. Beswick, in his chapter in this volume, suggests that a mistake was made in Canberra in developing the TAFE and the secondary colleges as separate and competing systems. On the other hand, since matriculation or senior secondary colleges cater mainly for non-adults inevitably they assume some custodial functions. Further, it may be asking too much of an institution to combine successfully the rather disparate functions of senior high school, a technical college and higher education institution.

(d) *A number of completely new institutions would be created on the lines of a North American community college*

This proposal is appealing. In many localities a new college offering both TAFE and advanced education programs, and possibly including a transfer arrangement to a nearby CAE or university, would clearly be a valuable community resource. But in view of the likely funding possibilities and enrolment prospects, it seems unlikely that there will be opportunity over the next decade or two to develop more than a handful of completely new institutions.

(e) *Selected institutions in each sector would 'host' courses from one or more other sectors*

With this idea, a TAFE college could host some advanced education courses, or even university programs, while a CAE could add some TAFE and university work, and a university could offer

both selected CAE and TAFE courses. In each case, the hosted or added courses would be kept separate and not integrated with other courses in the host institution, and the host institution essentially would retain its existing character without changing significantly at all. The added courses would be funded on the same basis as other courses for that sector, and the usual administrative and co-ordinating arrangements would apply. Thus, if a university offered some CAE courses, these courses would be funded on the same basis as other advanced education courses and the normal accreditation procedures would apply. This scheme could be particularly attractive for country areas. Unlike the proposals for particular TAFE colleges to add CAE courses, or for CAEs to pick up TAFE courses, and so quickly become different kinds of institutions, this proposal would not affect the current three-sector arrangement and the present administrative and funding patterns. But it would be necessary to look closely at the basis on which an institution could host courses (who would appoint and control academic staff? What would happen to students in a host course should a host institution decide to terminate the arrangement at short notice?) and in time in any institution where this arrangement worked well there would be almost inevitably some pressure for integration of the added activity within normal academic structures.

(f) *Development of a number of multi-purpose institutions embracing existing universities, CAEs and TAFE colleges*

This option has been put forward by a number of people including the Hon. Neil Batt (until recently Minister for Education in Tasmania, and now Deputy Premier)[9] and Birt (in this volume). Batt is highly critical of Australian universities (he asserts 'they have been devices for maintaining the children of middle class parents firmly in the middle class or perhaps a notch or two higher up that class') and argues for the creation of a number of multi-level institutions 'embracing universities, colleges and technical colleges' and having 'open access and a close relationship to the manpower needs of the Australian community'. He explains that with his plan

> The new universities should be concerned to teach values and attitudes necessary for the proper progress of Australia. Research should be strengthened but be community directed. There is a place for personal research idiosyncracies, but the thrust of research ought to deal with problems of disease, pollution, energy, hunger and the quality of urban life . . . The

resources of the new universities ought to benefit its local community or State.

The idea of combining university and other tertiary education functions in the one institution of course, is not new. At one stage an institution more comprehensive than either a university or a college of advanced education was proposed for Albury-Wodonga, and a similar kind of institution was also considered for Geelong. The Federal Government committee which reviewed the Victorian Government's proposal for a fourth university commented:

> . . . it would be possible to conceive of a university adding to the normal range of university activities, courses which have become the exclusive province of the colleges; for example, two and three year diploma courses of a vocational kind . . . Where the only tertiary institution is a university, it may be desirable for that institution to develop a wider range of teaching than at present exists in Australian universities.[10]

The notion of multi-level universities is certainly appealing on social, educational and economic grounds. Institutions of this kind could well be suitable for regional cities such as Wollongong, Geelong or Townsville, as well as for outer suburban areas in the state capitals. But as Batt admits, the development of such institutions will present problems of considerable magnitude.

These six options all deserve careful consideration, and it is to be hoped that they will be subject to even greater scrutiny by academics, administrators and others. But in many respects they are all fairly conservative proposals with regard to the existing tertiary education system. Most of them involve changing the emphasis and scope of selected institutions in one or more current sectors, and not necessarily producing any fundamental changes across a single sector or the whole system. Another problem is that if a number of these options were followed simultaneously, we could easily soon have one or more additional sectors or sub-sectors of the tertiary education system – say, of TAFE colleges which have moved into advanced education courses, CAEs which have added substantial TAFE commitments, and multi-level universities. However, in my view, what is required is at least state-wide, if not national, approaches to the question of rationalisation and restructuring and consideration of much more fundamental changes among the possible options. Already suggestions for more fundamental

restructuring have been made by Dennison[11] and Smith,[12] and more recently by Armstrong.[13]

Clearly there are a number of possibilities when we think in terms of major restructuring. For example, restructuring could include all three current sectors, or only the CAE and TAFE sectors. Both Dennison and Armstrong suggest leaving the universities on their own, or with a small number of other fairly similar institutions, to constitute a separate sector in tertiary education. Batt is highly critical of this. He states:

> The Armstrong proposals are dangerous because they would isolate the universities at a time of declining enrolments and shrinking finance. They would become steadily less relevant to the community, to governments and to their own objectives. They would become little more than debating clubs – a social service programme of institutions to keep academics off the streets.
> The new institutions which I propose would not lose their integrity . . . or their scholarship or their commitment to pushing back the frontiers of knowledge. These things are not peculiar to a particular type of institution and could exist happily in any institutional framework.[14]

This issue is an important one, and one that has troubled planners and policy-makers in many western countries. We can sympathise with Batt's concern to make the universities more socially relevant to contemporary society and more open to students of all backgrounds, and for some of the desirable traditional characteristics of universities to be found in all tertiary education institutions. But there are some fundamental problems to be faced. One problem relates to diversity. Many of the difficulties for tertiary education today spring from the fact that within each modern industrialised society institutions and courses are required to cater for a growing diversity of needs, and that communities are demanding that tertiary education perform an increasing variety of functions. In deciding what institutional arrangements are most appropriate in any particular society, among other things it is necessary to consider what pattern is most likely to cater best for these diverse needs and functions. On this point the key question that needs to be asked is whether the needs of those students who require essentially applied, technical training related directly to employment, and those students who require high level intellectual development in theoretical fields to advanced stages can be catered

for best in a multi-level institution, or in separate institutions? Another problem relates to organisational behaviour. How comprehensive in terms of both range of courses and levels of work can any higher education institution be, and still have lively, innovative work going on in each course and at each level? Experience both here and elsewhere suggests that often in multi-level institutions either the courses at the lowest or the highest levels tend to suffer, and that this tendency is more pronounced when courses differ considerably not only by level but in orientation and guiding philosophy.[15] In Australia there has been a marked tendency, both in universities and CAEs, for lower level courses to wither, and often be dropped altogether. A similar phenomenon has operated in the United States; in fact, in the United States there are many examples of community colleges being converted into four-year colleges (i.e. degree-granting institutions) and soon many of the traditional community college functions being quietly abandoned. Still another problem relates to research. Universities are designed to be both teaching and research institutions. Consequently it is necessary to ask what institutional arrangements will suit the research function best, as well as what arrangements will suit teaching. There is a common tendency in discussions on this topic to considerably under-rate the importance of the research function. In my view, a society like Australia needs a small number of first-rate research universities. On this point it is instructive to look at recent developments in various United States and Canadian provinces. Where university sectors have been substantially increased in size through the up-grading of large numbers of other tertiary institutions, one result has often been for the research function to suffer. First-rate research universities are very costly, and few societies can afford to support large numbers of them. On the whole, in the United States and Canada the best public research universities tend to be in those states and provinces where the universities, or at least the doctorate-granting universities, constitute only a relatively small part of a diverse system of higher education. After considering the issues of the need for diversity, the problems of organisation strain, and the need to encourage high level research I tend to the view that in the first instance it is probably more sensible in this country to think in terms of multi-level institutions which do not incorporate the universities, or at least the major research universities.

A Proposal

I conclude by outlining my own suggestion for system-wide structural reform based on some of the ideas of the North American community college. I must emphasise that it is put forward as a basis for discussion, not as a blueprint for immediate action.

The present system of tertiary education could be rearranged to provide for two sets of institutions, one a set of more specialised institutions catering for high-level research and for important state and national needs with regard to courses, and the other a set of comprehensive multi-level, multi-campus regional institutions, catering for the basic post-school educational needs of regions, as well as providing resources for limited research related to regional needs.

The specialised institutions would include all or most of the universities, the large metropolitan institutes of technology and multi-school colleges of advanced education, and a handful of 'single-purpose' colleges related to fields such as agriculture and paramedical studies. This group also might include a couple of the largest teachers colleges, such as Melbourne State College and Sydney Teachers College. The universities would continue to offer courses for the bachelors degree, the masters degree and the Ph.D., but I would hope that increasing emphasis could be put on graduate work and that at the bachelors level an increasing proportion of students would be enrolled in honours programs. If these hopes were realised, it would enable universities to put greater emphasis on the kind of work they are equipped to do best. The institutes of technology would continue with their current emphasis, but in time most of their students would probably be enrolled in bachelors and masters programs. In certain fields it may be sensible to allow them to develop doctoral programs. The single-discipline colleges would probably develop in a somewhat similar fashion.

But, in terms of size and enrolments, by far the larger set of institutions would be the new, comprehensive, regional colleges. These would be totally new institutions, incorporating all TAFE institutions (with the possible exception of a handful of the strongest metropolitan TAFE colleges, which might become separate autonomous colleges) and all CAEs not included in the first set of institutions. These colleges would not be the product of existing CAEs taking over TAFE colleges, or of TAFE institutions swallowing CAEs. Instead, they would be new creations, with new names, new

councils, new charters, new administrations. Of course, attention would need to be given to the employment rights of academics and administrative staff in existing institutions; on the basis of justice and the need for a smooth transition to the new arrangements all permanent employees would probably need to be guaranteed automatic transfer at the existing salary levels. The role of each of these new colleges would be to provide for the basic post-school needs of their regions. They would offer a wide range of TAFE and advanced education type courses up to a bachelors degree and graduate diploma, as well as providing for non-credit adult education, retraining programs, and refresher courses for professionals, para professionals and people in various technical and trades fields. As in the North American community college, students would be able to follow either TAFE or university/CAE type courses, or a combination of these. Each college would have close links with its regional community, including local employers. Hopefully there could be a policy of open access for all adults. With this would go provision of appropriate counselling facilities, remedial programs and job placement offices. But unlike the North American community colleges, which are generally two-year institutions, these new colleges would be more comprehensive and would be degree granting. This would inevitably mean they would be subject to a higher degree of organisational strain, but such an arrangement seems necessary in order to meet adequately current basic post-school educational needs and in view of the current role of CAEs and the size and distribution of Australia's urban and rural population.

The creation of these new comprehensive colleges would involve numerous administrative problems. It would also affect the territories of various strong vested interests. But in the present circumstances, it seems wise at least to consider some bold new arrangements. In many respects, the comprehensive regional college is quite a logical development in the transition from an e'lite to a mass tertiary education system, and parallels the move some years ago in secondary education from selective high schools, junior high schools and so on, to comprehensive regional high schools. Moreover, this new arrangement offers many potential advantages. It promises to provide the community in each region with easier access to tertiary education (apart from the question of minimum requirements for admission, all current TAFE facilities could be

Table 16.1

Suggested National Structure for Tertiary Education

I. *Specialist Institutions*

(a) *Universities*

All universities, with possible exception of Murdoch, Griffith and Deakin

(b) *Institutes*

(a) 'Multi-school'	*(b) 'Single-school'*
WA Institute of Technology	Roseworthy Agricultural College
SA Institute of Technology	Cumberland College of Health Sciences
NSW Institute of Technology	Hawkesbury Agricultural College
Royal Melbourne Institute of Technology	Sydney College of the Arts
Swinburne College of Technology	Lincoln Institute
Caulfield Institute of Technology	Victorian College of the Arts
Queensland Institute of Technology	Victorian College of Pharmacy
Canberra CAE	SCV Melbourne
	Sydney Teachers College
	Queensland Agricultural College

II. *Comprehensive Regional Colleges*

TAFE colleges plus all other CAEs

Approximate number in each state and territory as follows:

Queensland	6	South Australia	6
New South Wales	10	Western Australia	6
Victoria	11	Australian Capital Territory	2
Tasmania	3	Northern Territory	2

used for on-campus tertiary programs, or as study centres for off-campus programs, thus making entry more convenient to those who for various reasons cannot leave home to study) and also with access to a wider a range of course offerings (preferably in time and through rationalisation each college could offer a wide range of basic programs). Each college would be able to provide a 'mix' of advanced education and TAFE courses to suit the particular needs of its region. Moreover, this plan could provide a fairly simple and painless mechanism for period adjustments and rationalisation. Adjustment and rationalisation at regional level would become an internal college matter. When necessary particular programs could be closed on a campus, and the staff reallocated to other campuses of the college.

With this basic plan, there are a number of variations with regard to whether it operates as a two-sector or three-sector system (it could be thought of as binary with specialist institutes and comprehensive colleges, or as a three-sector system comprising universities, specialist institutes and colleges), how different current institutions are allocated to each sector (all universities could go into the specialist sector, or possibly Deakin, Murdoch and Griffith could be undergraduate universities or be part of new comprehensive

Table 16.2

Suggested Structure of Tertiary Education in New South Wales

I. *Specialist Institutions*
  (a) *Universities*
    Sydney
    N.S.W.
    Macquarie
    New England
    Newcastle
    Wollongong
  (b) *Institutes*
    NSW Institute of Technology
    Sydney Teachers College
    Cumberland College of Health Sciences
    Hawkesbury Agricultural College
    Sydney College of Arts
II. *Comprehensive Regional Colleges*
  (a) *Metropolitan*
    Northern Suburbs (TAFE + Kuringai CAE)
    Western (TAFE + Nepean CAE)
    South West (TAFE + Milperra CAE)
    Central and Southern (TAFE + Alexander Mackie CAE, Sydney Kindergarten TC, Nursery School TC, State Conservatorium of Music)
  (b) *Non-Metropolitan*
    North Coast (TAFE + Northern Rivers CAE)
    New England (TAFE + Armidale CAE)
    Hunter (TAFE + Newcastle CAE)
    Central West (TAFE + Mitchell CAE, Orange Agricultural College)
    Riverina (TAFE + Riverina CAE)
    Monaro and South Coast (TAFE + Goulburn CAE and Wollongong Institute of Education)

Note: This scheme makes no provision for non-government teachers colleges.

colleges), and the particular brief given to institutions in each sector. One way of developing the suggested arrangement is set out in Table 16.1. Table 16.2 then shows in detail a possible arrangement under this scheme for the state of New South Wales. But there are many others that deserve equal consideration, including arrangements providing for some merging of function between TAFE colleges and senior high schools, and arrangements whereby within each state all the new regional colleges were linked together in a state-wide multi-campus system.

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Index

This book deals with the current crisis facing Australian tertiary education, especially universities and colleges of advanced education. Its message is simple. Tertiary education is becalmed in the sense that, after a long period of sustained and rapid expansion, it has now entered a period of no growth and decline. Student enrolments overall have levelled off, and in some fields and in some institutions have fallen alarmingly. As well, since 1976 financial support for universities and CAEs, which in past years kept pace with expansion, has been progressively cut in real terms by the Commonwealth Government.

But in addition, tertiary education is becalmed in the sense that it has lost much of its wind, its energy and vitality. The end of the era of expansion came abruptly, and caught many academics and administrators by surprise. After coming to regard growth and sustained expansion as normal, they have found it both difficult and painful to adjust to the new situation in which universities and colleges of advanced education find themselves today. Further, this problem of adjustment to the 'steady state' has been made more difficult by the oversupply of graduates in a number of fields, and by marked changes in public attitudes towards education and educational institutions.

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