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Higher Education at the Crossroads
A submission on behalf of ANZAAS

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SUMMARY

University education is more than training.

Specialisation is essential but will require changes to institutions and more support for students and teachers. A national approach is required to ensure that essential disciplines are maintained.

Casualisation of the university work force is deplored.

INTRODUCTION

This submission has been prepared on behalf of the Australian and New Zealand Association for the Advancement of Science (ANZAAS) Inc. For over 100 years ANZAAS has sought to promote the development and maintenance of Australia's capacity to conduct scientific research and the public appreciation of science. It has been used by Governments as a sounding board and source of comment. ANZAAS welcomes the opportunity to make a submission to the Inquiry.

Higher education is, necessarily, in a constant state of review. Lecturers review the content of their courses in the light of new advances in knowledge. Schools and departments review the range of courses they offer in the light of availability of staff and other resources. They respond to changes in demand and take advantage of new areas of study. Universities review the range of degrees and programs offered for similar reasons. Above that, governments direct the flow of funding and provide direction in response to society's needs and expectations.

At present there is little co-ordination or co-operation between these different levels of review. While review at the level of the individual course may have a very short cycle (annual in some cases) there is a need for a longer cycle of review at the higher level to provide a framework and a direction over periods long enough for development of strengths in teaching and research. In recent years there have been a number of reviews into aspects of tertiary institutions at the national level. These have created considerable uncertainty but have yet to result in clear national directions. While we welcome the opportunity to comment upon the 'Crossroads' process we hope that the outcome is some positive action, and not a further round of reviews.

EXPECTATIONS OF HIGHER EDUCATION

We welcome the discussion of the role of universities and the purposes of higher education. It is important to recognize the distinction between 'education' and 'training' and there is a need to strengthen training institutions as well as universities. Given the nature of the modern workplace, and the need for flexibility in response to changes within career paths, one of the roles of tertiary education is to provide the skills necessary for life long training. With career changes will come the need for appropriate new technical skills and training. Technical skills taught in a first degree will have a limited shelf life, but the experience should provide the learning skills for the future.

We welcome the recognition of the role of higher education in developing society, but fulfilling this role may conflict with some of the moves to increase the 'efficiency' of the sector. The higher education experience must include time for reflection and intellectual development, and not be reduced to factual cramming.

The higher education system of the future must be flexible, but there needs to be greater

recognition of the constraints to very rapid change. When students enter programs it is with the reasonable expectation that they will be able to complete them. Changes in degree structures and discipline availability have to be phased in and out, rather than occurring overnight, to ensure equity to students. This will involve periods of apparent inefficiency with small numbers of students taking some courses in particular years.

AN AUSTRALIAN SYSTEM

In submissions to previous inquiries ANZAAS has expressed support for a mix of public and private funding of universities. However, we are concerned by the decline in public funding. For the reasons well articulated in Chapter 1 of 'Crossroads' there is an overwhelming case for a strong university system being essential for the future of the economy and society. In this circumstance, government, through appropriate consultation and policy making processes should establish the core characteristics of a national university system and provide appropriate funding for maintaining those core features. Sources of private funding should be developed and encouraged, but government cannot dictate as to how philanthropy is expressed. Levels of private funding will vary between institutions, between disciplines and over time. Private funding will provide opportunity for increasing diversity between universities, and for the maintenance and development of particular specialities, but should not be relied on for sustaining the core national system.

ENGAGEMENT OF UNIVERSITIES WITH THEIR COMMUNITIES

We strongly support the need for universities to be involved with the broader community. However, we would point out that current financial management regimes of universities may stand in the way of this. Paragraph 111 suggests that university facilities can be made available for community activities. However, facilities may only become available at charges which are beyond the ability of community groups to meet (and, additionally, at present, insurance liability issues may raise further complications). While community involvement is one of the factors which can be taken into account when considering promotion, the weighting applied may not be sufficient to encourage staff to fully engage with the community.

INSTITUTIONAL SPECIALIZATION

This is the key issue to be addressed.

ANZAAS has expressed concern at a series of apparently *ad hoc* decisions which have resulted in the loss of particular disciplines at individual institutions (most recently, the announcement of the closure of geosciences at La Trobe University).

Clearly it cannot be argued that every university should support every single discipline. However, within a national system there is a need to identify which disciplines are essential for the long term future and ensure that each is represented in at least one institution in the country.

Making the choices as to which departments are to be retained will not be easy, and unless there is national leadership the process is likely to become bogged down in inter-institutional and interstate rivalry.

Specialisation will require completely new approaches to recruitment, and, at least initially, be expensive. It will make it difficult to train generalists who are able to integrate and combine the findings of many specialties.

Advances in Information Technology may allow several universities to share the skills of specialised staff, especially in honours courses. Attention is drawn to the work of Professor A H J Sale in developing systems for distributing specialised lessons in primary and secondary schools.

There does not appear to have been much research on the factors which influence student choice of institution, but for students in major cities there is very little movement to other centres (at either first or second degree). If a few national centres in a particular discipline are established there will need to be mechanisms to encourage students to travel. One impediment is the absence of accommodation; institutions in major cities only have college accommodation, or less formal halls of residence, for a small proportion of the student population, while affordable private accommodation is in short supply. Extra funding either for construction of colleges or for student financial support may be required. Additionally, as is identified in paragraph 88 most ostensibly full time students are working part-time. If they move away from their home base it may not be so easy to gain employment, creating further financial stress. For specific subdisciplinary courses distance mode courses available nationally may be a solution, but when a whole degree program is concentrated at a single centre, then, if it is to serve national needs, students will be required to travel.

From the ANZAAS perspective there is a particular need to maintain the breadth of sciences, particularly in the enabling sciences (mathematics, physics and chemistry) and in areas like the geosciences and various subdisciplines in biology. Despite the importance of molecular biology, plant sciences, zoology and so on must be sustained.

Dr Batterham (Chance to Change,page34) has drawn attention to "worrying trends-the fall in the number of enabling science students of mathematics, physics and chemistry". Knowledge and training in these areas are an essential foundation for Australia's capabilities in science and technology. Accordingly, there is a real cause for concern as to the future availability of personnel with such training.

Measures aimed at reversing these present trends must be considered as a matter of urgency. This is not simply a university problem, but one requiring attention in schools and even increasing awareness in the wider community. As a first step, it is suggested that an information program commencing at mid-secondary school level for both students and

teachers should be introduced immediately to stress the study requirements and career opportunities in mathematics, physics and chemistry.

EFFICIENCY AND EFFECTIVENESS

Considerable attention has been given to paragraph 125, regarding the number of small units of study.

Much more detailed analysis is required of these data. There could be many reasons for the apparently large number of small attendance courses. Some may be courses which are either being phased out or started up. Many may be Honours level courses where much teaching is necessarily one to one, and where each subspecialisation of a degree may have its own badge resulting in an apparent proliferation of courses. Some of the number may be a consequence of the particular student administration system of an institution.

Nevertheless there is a need to address the issue of small courses, and the consolidation of some specialities on a national basis will be a solution in some instances.

However, cutting out small enrolment subjects is not necessarily a solution, and may even exacerbate the problem of overcrowding in large classes. The mix of room sizes at some institutions is not appropriate for the range of class sizes, but rectifying the problem will require an expensive building program.

Paragraph 130 draws attention to the utilization of resources. This is a frequent criticism of universities, but in many cases facilities are used out of session time for conferences and various special schools. The issue is not unique to universities – large publicly funded infrastructure such as entertainment and sporting venues, and dare we say, parliament chambers, are ‘idle’ for a much larger proportion of the time.

CUTTING BUREAUCRATIC RED TAPE

Universities must necessarily and properly be accountable, not only financially, but also in terms of educational outcomes, occupational health and safety, animal ethics and so on. Nevertheless, the reporting and other requirements of accountability are a contributory factor to what is seen as inefficiency. In some cases decentralization within institutions creates an illusion of increased efficiency through reduction of central staff at the cost of greater burdens on departmental staff.

CASUALISATION

We are concerned that in a number of institutions there is an increasing reliance on casual and contract staff to meet core teaching needs. In some cases development of new research opportunities, for example in Cooperative Research Centres (CRCs), has led to experienced

staff gaining teaching relief. We recognize the importance of providing opportunities for senior research students and post-docs to gain teaching experience, and also the value which can result through teaching relief for senior staff. Nevertheless, the overall balance needs to be kept under review and there needs to be long-term commitments to core teaching to ensure continuity and coherence, and to demonstrate to students (and to the broader public) that institutions recognise the importance of good and innovative teaching. We are also strongly of the view that exposure to good teachers who are active and recognised research workers is the best way to main interest in, and enthusiasm for, the disciplines.

STATISTICS

The appendices contain much useful information. We are particularly concerned in Table a9 which shows, over 1991-2000, a very worrying decline in the number of education students (but a 123% increase in lawyers). Without maintaining the output and quality of school teachers the long term future of the nation is at risk.

CONCLUSION

We hope that the outcome of the 'Crossroads' process is a firm commitment to plan to strengthen and consolidate Australia's undoubted excellence in Tertiary Education. The uncertainty and negativity of the recent past must be put behind us. Without a reinvigoration and improvement in morale within tertiary education the ability of the sector to meet national expectations and needs will be impaired. While some improvements can be made within the existing funding arrangements, we believe that the problems mentioned in this submission will require extra resources for their solution.

The opportunity to identify the key centres for the long term sustainability of particular disciplines is an exciting one, but will require strong national leadership, and a willingness by states and institutions to overcome narrowly parochial thinking. It will also require a revolution in how students plan their educational progress. Failure to grasp the nettle will leave us even further behind the rest of the world.

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