

UNIVERSITY OF SYDNEY

SHAPING UNDERGRADUATE COURSES

*A Discussion Paper
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Monday, 3 July 2000*

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1 Introduction

This paper describes the external environment and internal processes shaping the pattern of undergraduate degrees offered by the University of Sydney. It aims to stimulate discussion regarding the rationale for developing new degrees, to assist in the processes by which such programs are conceived, approved and evaluated, to contribute to the shaping of the University's recruitment strategies, and to suggest procedures which could operationalise aspects of the University's 5-year plan.

The paper was drafted initially as a response to a request by some Fellows of the University Senate for advice regarding the growing number of double degrees offered by the University. Coverage has expanded beyond this original aim. The present draft is now being circulated as a discussion paper, with the aim of improving its scope and focus, and developing its proposals and conclusions.

The paper has four sections: (1) a comment on the intentions of the University's undergraduate programs, (2) a review of the pressures bearing on the University's academic programs, (3) a survey of the currently agreed strategic directions of the University and some of the means available to move in these directions, and (4) a discussion of emerging issues and options arising from the interplay between the pressures and the agreed strategic goals. In its current form the paper concentrates on undergraduate program. There is an urgent need to examine issues and options pertaining to postgraduate coursework and research training programs.

2 The Academic Intent of the University of Sydney

At early presentations of this paper, several senior and long-serving members of the University pointed out that a paper of this kind should start from a clear picture of the academic intent of the University – that it should build from the answer to the question "What is the University about in its Undergraduate programs?" It was surprising to encounter this uncertainty, given the long traditions and embedded academic confidence of the University. Presumably, the uncertainty results from (a) the large and rapid reconfiguration of the University through amalgamations over the past decade, (b) obscuration of the special role of the University by its own explosive growth and by system-wide escalation of university participation rates, (c) clamorous competition that lays claim to ground traditionally (and properly) occupied by the University, and (d) unresolved concerns about the place of University scholarship in the modern/post-modern world.

Of course, such concerns are not new. They resonate in writings of academics over many centuries. Indeed, debate and adjustment about them is one of the characteristics that allows universities to be so durable. While this paper does not attempt to sharpen a description of the academic essence of the University of Sydney, it is worth sketching the answer to the question.

The 1849 Select Committee report on the Sydney University promoted the foundation of the University "upon a liberal and comprehensive basis ... accessible to all classes and to all collegiate or academical institutions which shall seek its affiliation." The University has championed the liberal tradition throughout its existence; it is now comprehensive to a degree unimaginable to the founding fathers; it promotes accessibility for all social classes; and it is a sought-after partner in most of Australia's significant academic initiatives. Like the great liberal public universities of the United States of America, the University of Sydney melds the idea of the "Research University" and the "Multiversity." Its structure allows some of the most gifted academic scholars of each generation to work collegially, conducting unfettered enquiry while transmitting knowledge and values that contribute to shaping the hearts and minds of those who will inherit the future.

Building on its traditions, and reinforced by the imperatives of the present, the University has a special place in educating the future leaders of society. Each year it attracts a large proportion of the most academically proficient scholars who enter university, and exposes them to a demanding teaching program founded on the view that graduates of the University of Sydney are known for the depth of their knowledge in their

chosen fields of study. While at the University, students are able to participate in an extraordinarily wide range of collegial and social activities, forming enduring friendships that become an important part of the social fabric of the nation. The University places a particular emphasis on developing the full potential of its graduates, on engaging graduates in life-long learning within and beyond its own learning community, and ensuring that every graduate has been afforded the opportunity to develop important generic attributes as follows:

Generic attributes of graduates of the University of Sydney

As a result of completing any undergraduate degree course at the University of Sydney graduates will be more employable, more able to cope with change and more developed as people. In specific terms, graduates of any faculty, board of studies or college of the University should have:

1. Knowledge Skills

Graduates should

- (a) have a body of knowledge in the field(s) studied;
- (b) be able to apply theory to practice in familiar and unfamiliar situations;
- (c) be able to identify, access, organize and communicate knowledge in both written and oral English; and
- (d) have an appreciation of the requirements and characteristics of scholarship and research.

2. Thinking Skills

Graduates should

- (a) be able to exercise critical judgement;
- (b) be capable of rigorous and independent thinking;
- (c) be able to account for their decisions;
- (d) be realistic self evaluators;
- (e) adopt a problem solving approach; and
- (f) be creative and imaginative thinkers.

3. Personal Skills

Graduates should have

- (a) the capacity and desire to continue to learn;
- (b) the ability to plan and achieve goals in both the personal and the professional sphere; and
- (c) the ability to work with others.

4. Personal attributes

Graduates should

- (a) strive for tolerance and integrity; and
- (b) acknowledge their personal responsibility for
 - (i) their own value judgements; and
 - (ii) ethical behaviour towards others.

5. Practical Skills (where appropriate)

Graduates should be able to

- (a) collect, correlate, display, analyse and report observations;
- (b) apply experimentally-obtained results to new situations; and
- (c) test hypotheses experimentally.

The University learning community has agreed that formation of these generic attributes will be one of the essential components of the curriculum of every course and unit of study offered by the University.

3 Pressures on the University's academic programs

Over the next few years, changing institutional and government policies regarding the balance of public and private funding of higher education are likely to be the major force shaping changes in undergraduate courses at the University of Sydney. Policy changes will impact firmly in the area of tuition fees for local students, and stimulate a quest for an ever-larger proportion of international and other fee-paying students in the undergraduate student body. These changes are bound to lead to alterations in student demand

patterns and expectations. The information explosion, borderless education, intense competition from other tertiary providers and unrelieved squeezes on public funding will also demand an accelerating pace of reform and revitalisation of the curriculum and of pedagogical techniques.

3.1 Demographics and demand

The structure of Australia's population will change markedly over the next 20 years. As implied by Table 1, the size of the 15-24 age group is predicted to remain around 2.7 million over the next 20 years despite a 20% growth in the population. On the other hand, the number of people over 45 will rise from about 6.7 million to almost 10 million, including a 70% rise in the number of people aged 65 or over. These trends point to rather stable demand for higher education from traditional school-leaver groups, unless participation rates climb significantly. Given the heat of the competition involved in recruiting the school-leaver group, some institutions will promote courses for older students, under the "lifelong learning" or "workplace learning" banners. The demographic trends also point to intensification of pressure on public funding to meet non-educational demands, in health, social welfare and related areas.

Table 1: Demographic trends in Australia, 1970-2010

Age group (years)	Actual/projected proportion of total population (%)					
	1970	1980	1990	2000	2100	2200
0-14	28.8	25.3	21.9	20.6	18.7	17.6
15-19	8.9	8.9	8.2	7.0	6.7	6.1
20-24	8.6	8.6	8.0	7.3	6.8	6.4
25-44	25.3	28.2	31.6	30.8	27.8	26.3
45-64	20.0	19.3	19.1	21.8	26.2	26.1
65+	8.3	9.6	11.2	12.2	13.7	17.5
Population (M)	12.6	14.7	17.1	18.8	20.8	22.3

ABS statistics, quoted by C. Robinson in "New Skills, new pathways" (Aug 1999)

Australia's demographic trends are replicated in other OECD countries. However, most non-OECD countries have a younger age profile, and greater growth in the younger age groups. This is a potent force shaping higher education globally, particularly in combination with recognition of the potential personal and community advantages of higher education and the growing capacity of the middle classes in non-OECD countries to pay for such education. The physical exchange of students across national borders is now an important feature of higher education, and in some countries, such as Australia, a significant benefit in the balance of trade. However, offshore tertiary education sits uncomfortably against aspirations for high quality, culturally integrated education systems within nation-states. It is also likely to be challenged by the promise of IT-mediated borderless education. There will be opportunities for great universities such as the University of Sydney to partner offshore collaborators in forming global higher education conglomerates, especially as a means to delivering quality-branded higher education at low unit cost.

3.2 Generic skills and evolution of the disciplines

In the past, changes in disciplinary structures have generally taken place quite slowly. However, the impacts of computer-based information technology, of pressing environmental and ethical issues, and of internationalisation are accelerating the process in several disciplines. The University must anticipate the need for rapid evolution in the content and modes of delivery of units of study and degree programs in areas pressed by these forces. Most professions in Australia are touched by these changes and many may look to the University to provide leadership by suggesting new curricula, new modes of learning and new degree pathways.

It is often argued that the post-industrial society will see people as "knowledge workers". Indeed, many current changes in pedagogy and content are driven by the need for graduates to be equipped to deal with large amounts of, and rapid changes in, the knowledge essential for their vocation – which is itself likely to

change several times in their life. This implies increasing emphasis on developing generic life-long learning skills, and for acquiring a deep understanding of the more durable aspects of knowledge. This point has been amplified by Coaldrake & Stedman, who present a table based on Michael Gibbons' picture of an evolution of work patterns from Mode 1 to Mode 2:

Table 2: Modes of work

Mode 1 characteristics	Mode 2 characteristics
<ul style="list-style-type: none"> • Emphasis on the individual • Academic control and authority over research direction • Discipline-based • Local organisational knowledge base • Quality judged by peer review 	<ul style="list-style-type: none"> • Emphasis on teams • Research direction shaped by interaction between researcher and user • Problem & issue based – Transdisciplinary • Organisational diversity, networks, connectivity- draws together knowledge from diverse sources • Broadly-based incorporating peer review and judgments of users (e.g. economic & social impact)

After Coaldrake & Stedman; Gibbons

As in the past, demand for graduates in many vocational areas will continue to fluctuate markedly, and on a time scale commensurate with the time required to complete a degree. Some tertiary providers in Australia may seek to devise ways to cope with rapid fluctuations with special programs that offer a faster response to changes in demand. For example, adequately prepared students in generalist courses could be admitted to the later years of high-demand vocational/professional degrees, or vocationally-oriented units could be offered as a 4th year in normal 3-year courses, to students for whom honours is not a desired option. The Ontario O-Vitesse program is one model for such a program, addressing acute shortages of IT-trained people in Ontario, Canada, using an approach that more than a graduate-entry short course. Unfortunately, it seems probable that if programs of this kind blossom in Australia, they will do so outside the major research universities which tend to focus on honours programs while overlooking opportunities for innovative vocational programs for some senior students.

3.3 New academic programs and structures

Like all well-managed enterprises, the University of Sydney fosters efficiency and adaptability by ongoing restructuring. At present, one of the major themes in such restructuring is the quest for administrative and academic advantages by consolidating some of the existing departments and schools into larger units. The academic advantages of consolidation include the benefits of better trained and supported Heads, and greater scope for adjustments to, and innovations in, teaching and research programs. Restructuring may also lead to opportunities to introduce, terminate, or restructure certain courses and units of study, particularly as a way to reduce the costs of teaching in small classes and in overlapping discipline areas. Several major universities in Australia pay much more attention than does the University of Sydney to the promotion of efficiency and academic coherence by tight control of unit of study offerings. The University of Sydney will have to follow this trend as staff/student ratios climb and income per student declines.

The growing number of dual degree courses invites the introduction of joint units of study to help students develop a greater sense of coherence in their programs. The introduction of performance-based (as opposed to wholly EFTSU-based) funding for undergraduate teaching may also encourage opportunities to improve efficiency and effectiveness by restructuring programs, and counteract some of the current embedded disincentives for cross-faculty efficiency. The acknowledged need to broaden the University's income base, and to increase income, should stimulate co-operative academic innovation and rationalisation, coherently across the undergraduate, postgraduate coursework, and postgraduate research programs.

3.4 Government policy

The introduction of HECS and the Unified National Scheme (the "Dawkins Reforms") some 10 years ago,

coupled with the "Vanstone Package" of sharp increases in HECS charges, regulated opportunities for local fee paying students and cuts to projected operating grants have shaped many features now present in the Australian university sector. Further changes in government policies are bound to arise in the wake of the research white paper "Knowledge and Innovation," and the announcement of the formation of the Australian Higher Education Quality Assurance Council.

The landscape of government policy regarding the development of post-secondary education through the next decade is not easily discerned at any time. However, it is possible to identify several likely policy settings from the West Report on Higher Education and from political circumstances such as the state of the economic cycle, the Timor situation, the balance of power in the federal Senate, and the importance of rural/regional issues in recent state elections. These settings include:

- Only small increases in general purpose university funding. This situation arises from relatively stable demographics, increasing reliance on local fee-paying students (albeit in a still-regulated market) and competing pressures on public funds.
- Further increases in the participation rate in post-secondary education, especially when an economic downturn occurs. The implied added load will be funded at or below the marginal rate of current students, and may be assigned to help prop up financially weaker institutions.
- Finely targeted funding for increasing load in high-demand areas (e.g. information technology) probably through competitive tendering. Bidders will include private providers and regional institutions which choose to operate at lower marginal returns.
- Enhanced efforts to divide, and separately account for, the funding lines for (1) undergraduate teaching and (2) research and research training within each institution, as a way of dealing with the desire to target research funding and to address the politics of pre-/post- Dawkins universities.
- Continuing exhortations for potential students to view TAFE as an alternative to university studies even though, relative to OECD norms, TAFE education represents a high cost to government compared with the universities. TAFE will be attractive to students in view of its (guaranteed?) fee-free regime, and many universities will seek to exploit this situation by special credit transfer arrangements.
- Increasing efforts to sustain the metaphor of students-as-customers, justified as a way intensifying pressure for institutional accountability to students, and rationalising further transfers of costs from government to students.
- Increasing attention to articulation and transfer issues, including the accreditation of private tertiary providers, encouragement of TAFE/university linkages, and selective application of national competition policy to predatory behaviour between universities and private providers.
- Some relaxation of the regulations applied to local fee-paying undergraduate programs, counterbalanced by protection of regional universities against significant movement of students (and institutional income per student) to larger metropolitan institutions (e.g. by transferring EFTSU allocations to regional institutions.)
- Continuing awareness of, and support for, the importance of programs for international fee-paying students, be they delivered onshore, offshore, or by distance modes.

Inter-institutional competition is likely to intensify in the wake of these kinds of government policy settings. The University of Sydney will keep a sharp eye on developments in competing institutions and there will be a measure of evolution in courses and units of study in anticipation of, and in response to, these developments. It is likely that evolving government policy will be associated with exhortations and incentives to focus on institutional strengths, and, somewhat paradoxically, to form strategic collaborations with other universities and other educational providers. The University of Sydney is likely to continue to be seen as an attractive partner in such collaborations, but will need to be acutely discerning in the selection of its partners to ensure the financial viability and appropriate high quality in joint ventures.

The formation of the Australian Higher Education Quality Assurance Council and proposals to apply selectively some elements of national competition policy to higher education institutions are symptoms of a move to encourage more private-provider activity in the sector. Ongoing, systematic deregulation of aspects of higher education is bound to raise questions about the academic integrity and standards of certain classes

of providers and courses, including some low-value courses offered by public universities. In this climate, it will be crucially important for the University of Sydney to maintain an extremely robust commitment to the highest academic standards, by demonstrating that effective quality accountability processes are ubiquitous in its programs.

3.5 Implications

Taken together, the factors mentioned above imply that the University's courses may tend to evolve in the following ways:

- Proposals for new degrees or degree combinations will continue to emerge at a relatively high rate in response to changes in students' desires, professional bodies' requirements, other institutions' initiatives, and policy changes including those relating to the need to attract an increasing proportion of fee-paying students. Mechanisms for winding down and restructuring some existing courses will need to be devised, to maintain a manageable set of programs.
- Existing courses will increasingly emphasize generic life-long learning skills and durable knowledge, and pedagogical approaches will increasingly be designed to teach these skills. The University of Sydney has a handy lead, which it should seek to increase, in the use of problem-based learning and of research-based teaching styles as means of implementing this re-emphasis.
- Some areas of the University may seek to recruit an increasing number of non-school-leavers in their undergraduate enrolments, with attendant changes in the curriculum and in modes of delivery.
- There will be increasing emphasis on some form of vocational experience within, or in association with, many degrees. This may include links to or from vocational courses in TAFE. Interest in articulation from TAFE diploma courses to advanced standing in bachelor degrees will intensify if the fee structure in TAFE and universities remains different. This path may attract an increasing proportion of students with high academic proficiency, especially from circumstances of social and economic disadvantage.
- Flexibility of student choice, at the time of recruitment and within the course of a program, will be seen increasingly as a competitive advantage at the University of Sydney, in view of its unusually comprehensive academic program. Progression rules will need to be liberalised to capture this advantage, and students will need improved advice on the merits of particular academic pathways. On the other hand, the University will need to manage in a more active way the number and patterns of its units of study to gain optimal quality and efficiency.
- There will be increasing interest in graduate-entry bachelor degrees in professional areas, to allow students time to develop generic skills and to mature intellectually within a first degree, and to make well-considered choices of a profession. The viability of graduate-entry bachelor courses depends strongly on the actions of other institutions and on the views of the relevant professions. New forms of undergraduate award courses that add a vocational element to a generalist undergraduate program may be introduced.
- Increasing attention will be paid to recruiting students with prior undergraduate studies from other Australian and international universities and colleges into University of Sydney Honours or graduate-entry bachelor courses.
- The University will concentrate more on student and graduate satisfaction as a measure of having achieved many of its objectives. This will encourage Faculties and Departments to revitalize and restructure degrees and units of study and to focus more sharply on students' needs and wishes. The introduction of funding elements driven by teaching performance indicators will facilitate this process.

4 Positioning the University

The University Plan, 1999-2004, describes the University of Sydney as a large, comprehensive institution offering undergraduate courses in all areas of study recognized by the Commonwealth government. As Australia's first university, it maintains the best academic traditions and demonstrates national leadership by the innovation and quality of its courses.

4.1 The University's strategic intent

The Plan provides high-level guidance for the development of undergraduate courses and units of study within and beyond the 5-year planning horizon. While the University Plan itself does not translate its goals and objectives into operational plans (for that is the job of Colleges, Faculties and Departments) it does provide a framework of agreed goals towards which academic offerings should be directed.

Expressed intentions in the Plan that relate directly to the structure and evolution of undergraduate degree programs include:

- attracting, fostering and graduating an increasing proportion of the most intellectually able students, both local and international, including an agreed minimum proportion who have suffered social and educational disadvantage,
- providing a rich diversity of formal and informal learning opportunities for all students,
- providing curricula which are informed by current scholarship, responsive to community needs, and which result in confident graduates,
- encouraging and supporting the participation and success of Indigenous Australians,
- attracting more students with research potential,
- ensuring high-quality, relevant curricula which prepare accomplished graduates to take a leading role in their occupations,
- providing graduates with expectations of and opportunities for lifelong learning,
- improving the quality of graduate training and skills, and
- diversifying funding bases.

The University will continue to see a significant number of adjustments to course content and academic pathways arising from changes to College, Faculty and Department plans as they align more closely to the University's strategic intent.

4.2 Filling the profile

The University's profile is filled by a combination of progressing and transferring students, whose profile can be predicted quite accurately, and by newly recruited students. New recruits are drawn from several sources, including recent school leavers, mature-age local recruits, students eligible for special admission and international students. The University's profile of new students is filled with vigorous competition from other education providers. Consistently with the University's plan, the admission team aims to admit the quota to each degree program from recruits with the highest UAIs or the most meritorious cases for special admissions. The recently introduced opportunity to admit local fee-paying students adds another dimension to this complex process and this will assume increasing importance in the future.

The University has a strong tradition, which it plans to enhance, of taking account of social and economic disadvantage in its recruitment practices. It is also concerned to maximize students' prospects of success by taking account of their academic record in prior studies. Therefore, a primary component of admissions is an academically based admissions index, previously the tertiary entry rank (TER) and now the University Admission Index (UAI), which is known to be an indicator of academic performance potential. A prospective student's UAI essentially defines the sub-set of all available courses from which that student may select a particular program. While aptitude for and interest in a proposed program are not directly evaluated before a student is admitted to most degree programs, prospective students are offered abundant information about the nature of each degree.

It is not in the University's or the students' interests to entice students into degrees which they will not complete because their aspirations are mismatched to the academic intent of the course. Several parts of the University currently use non-UAI elements in their recruitment, and there would be many advantages (to students and the University alike) in further diluting the potency of the UAI within the NSW education system. Proposals for provisional admission based on teachers' nominations, portfolio or interview evaluation, and the consideration of a broader range of indicators of academic proficiency and motivation could all contribute beneficially to the quality of the University's selection procedures, particularly where

students are being recruited with UAI scores that suggest increased risk (i.e., below approximately 80-85).

5 Issues and Prospects for the University

The previous sections have described the context and environment in which the university's degree programs have been developed. This section explores the academic dimensions of prospective changes in the programs over the next few years.

5.1 An International Reputation for Excellent Teaching

The University of Sydney is a research-intensive university. Research activity occurs in the widest range of fields of any Australian university, and most members of staff (academic and non-academic) are engaged in some aspect of research as part of their work. It is widely appreciated that its research-intensive standing is a defining characteristic of the University, and that the quality and scope of this research must be judged against *international* standards.

Many overseas research-intensive universities, including some of the greatest, have failed to locate high-quality undergraduate teaching within their core activities. While some are not diminished by this failure, others face significant threats to their autonomy and financial health by falling short of their community and student expectations. It is a recognised imperative for the University of Sydney to deliver high-quality undergraduate programs without diminishing its reputation as a research-intensive institution.

Dealing with this imperative requires that the University should master the art of building many of the *special aspects* of its undergraduate programs on its research base. Some methods for doing this have been summarised recently by Professor Ramsden:

- Focus on quality through recruiting the most proficient learners,
- Recognise that service to students and quality of student experiences are fundamental to excellence in a scholarly community,
- Introduce active, research-based learning early in undergraduate studies,
- Transform curricula to use problem-based methods and information technology to mirror real-world practice,
- Use the techniques of research to make evidence-based changes to teaching and learning, and
- Integrate academic rigour with relevance to employment.

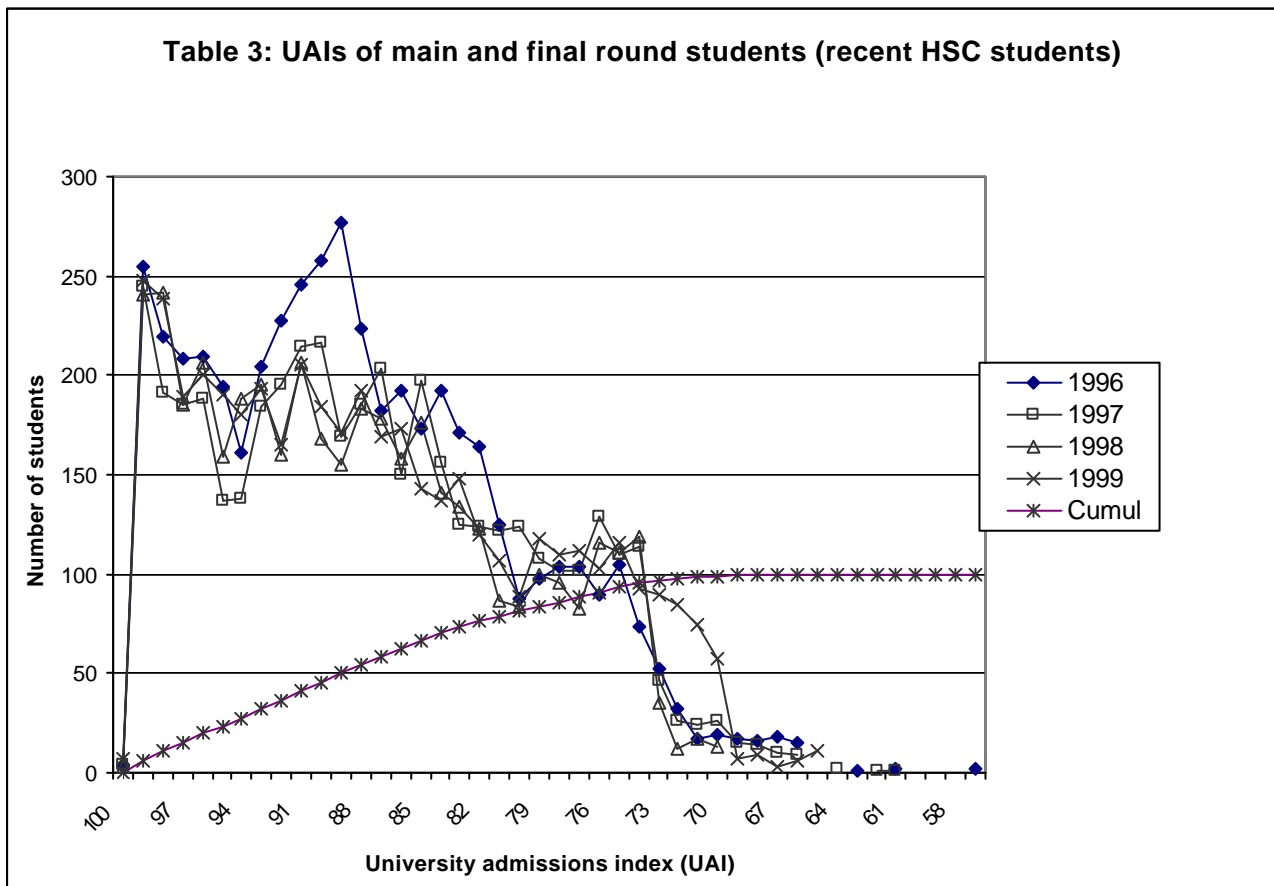
Additionally, the University must ensure that high-quality teaching is properly supported and rewarded, in parallel with the support and rewards it offers for high-quality research. An enabling, empowering idea that appears to encapsulate the University's intent in undergraduate education is the proposal that the University set about ensuring that it *enjoys an international reputation for quality undergraduate education*, paralleling its international reputation for research. The foundation for a thrust in this direction exists, with internationally recognised curriculum reform in some areas, and staff who have international reputations for their expertise in teaching and learning. To go further, the Academic Board and Faculties should work together to:

- Take up the methods listed above, embedding a pervasive and forward-looking teaching/research nexus into the University's academic culture,
- Ensure that undergraduate programs are evaluated against the best international benchmarks,
- Support and encourage staff to engage internationally in discourse about undergraduate teaching and learning, and
- Explain, through the media and other means, how our undergraduates and Australian society benefit when the University takes responsibility for ensuring that its undergraduate teaching enjoys international recognition.

5.2 Academic proficiency of new students

The crucial importance of the academic proficiency of recruited students is recognised by great universities. When all incoming students are academically strong, an institution is able offer educational opportunities that are optimally demanding and maximally rewarding for both the learners and the teaching staff. The students are more likely to respond positively to the learning and scholarship of research-active academic staff, and to be more attuned to the excitement of research-led enquiry. In view of their personal qualities, the students are more likely to occupy leading positions in society during and after their studies. The presence of academically strong students ensures that the university will an attractive destination for other prospective students with high motivation and aspiration.

Table 3 shows the distribution of UAIs of students commencing in 1996-1998, for new students who have left school recently and who have been recruited on the basis of their UAI (students recruited on other criteria generally have lower UAIs.) Since the UAI is a ranked index, the number can be converted to a fraction of the total number of "available" students. In the UAI band 88-98, the University of Sydney recruits over 30% of all of the admissible students from NSW schools: the proportion falls for UAIs below 85 (the apparent lack of students with very high UAIs is mainly a reflection of the far smaller size of the bin with UAI=100.) The cumulative curve shows that for UAI-recruited students, the University recruits 50% of its students with UAIs above 88, and only 10% of its students with UAIs below 75.



Research on student performance suggests that all students with UAIs above about 85-90 have equal probability of academic success, while a larger proportion of students with UAIs below about 85 are at risk. Internal research is in progress to explore further the variation of UAIs and academic outcomes across the University. Given the importance of perceptions and facts about the benefits of recruiting academically strong students, and the very strong performance in high UAI bands, the University must explore means to remove the "tail" from its recruitment profile, for UAC-based and other admissions. This is not an easy task,

since it is known that social and economic disadvantage tends to lower UAI scores for some students, and it would be unacceptable to ignore this. The way ahead may involve the use of additional admission criteria for students with UAIs below cut-off values somewhat higher than those in place at present.

5.3 Attracting fee-paying students.

The University plan acknowledges the importance of broadening the funding base to maintain and enhance the breadth, depth and quality of its activities. While it is planned to support continued growth in the profile over the next few years, the strategic intent is not simply across-the-board growth in the size of the University. Indeed, in several academic units the priority will be to enhance the general academic proficiency of recruited students and to increase the average income per student, without much growth in total undergraduate student numbers. This thrust will be required to maintain the high standards and high standing of each academic unit and of the University as a whole, in the face of declining general government funding and intense competition.

The capacity to attract an increasing proportion of local and international fee-paying students varies among academic units for many reasons, including

- the demand for courses or units of study offered by the unit, by potential fee-paying students, reflecting their perceptions of
 - vocational opportunities arising from the courses, and
 - the academic standing and traditions of the academic unit measured against international and regional counterparts,
- the scope to transfer enrolments from HECS students to fee-paying students in the light of staffing or facility constraints, and
- the inhibiting effects of some government regulations.

Variations in attractiveness to fee-paying students are likely to play an important role in shaping the evolution of the University's academic profile. Clearly the need to sustain the commitments implied by the current student, staff and facility profiles tends at any time to dampen potential rapid swings towards those academic areas most able to increase their proportion of fee-paying students. However, the pressure for such swings is intense, and the University must deal with its potential academic consequences, including

- strong differential pressure for shifts in staffing and facilities between discipline areas, associated with the need to manage shifting trends in staff/student ratios and income-per-student,
- enhancement or decline in the scale of certain academic activities determined predominantly by their capacity to attract fee-paying students,
- the need to support a diversity of academic activities to underpin the academic standing and attractiveness of the University as a whole, even when those activities cannot themselves attract fee-paying students,
- the need to ensure that the academic desires (e.g. immersion in an Anglophone culture) of fee-paying students, particularly international students, in their selected course is not compromised by trends in class composition and pedagogical approaches,
- the challenge of linking and if necessary adjusting the balance between (1) undergraduate teaching and (2) research within and between academic units to optimise the academic development and income-generating opportunities for each unit and the University as a whole, and
- the need for a collective commitment by all faculties, departments and staff to ensuring that the University enjoys the best possible reputation for the experience it offers students across all of its academic programs.

5.4 Equity

There are clear and immediate dangers to social equity in the trend to increase the proportion of fee-paying students, or the costs of study to HECS-funded students, within the University. The dangers are especially acute at a time when the mixture of government and private funding for undergraduate activities are changing rapidly, since individuals and families have had little opportunity to make long-term arrangements to meet the added expenses of university education.

The University is committed to enrolling and supporting an agreed minimum proportion of students who have suffered social and educational disadvantage. This commitment, by itself, will be insufficient to achieve what many would hope to be the objective of a great university: **to admit students of the highest academic proficiency regardless of their social and economic background.** The University of Sydney could attract strong community support and claw back its place as the leader of Australian universities by embracing this objective as one of its major long-term goals. To move towards the objective, it would be necessary to offer potential students access to a range of options for paying for courses, including HECS, loans, scholarships and appropriate paid work (arranged by the University). As part of its desire to support students with evident academic potential, the University does aim to increase the number of undergraduate scholarships, but these are focussed presently on UAI-measured academic merit or other personal qualities such as sporting prowess. The University should consider responding to the need to broaden its income base and improving the academic proficiency of its recruits by implementing more sophisticated recruitment processes, including *means-tested* scholarships and other financial support.

5.5 Flexible learning

The University attaches great importance to on-campus learning and will continue to emphasize on-campus learning in most of its undergraduate programs. However, the changing economic circumstances of students and the spread of new technologies imply that the boundaries of the University's learning community are extending. New teaching modes will have to be introduced to allow increased student participation from places and at times of students' choosing, even in undergraduate programs. Changes in this aspect of the University are likely to have significant impacts on academic work patterns and educational resources such as the library and information technologies.

There is also scope for increasing the flexibility of on-campus programs, for example by reducing barriers on academic pathways, re-using academic programs in several different units of study, and exploiting technology to fine-tune learning programs for each student. Many of the University's academic governance rules tend to inhibit such flexibility, often as an unnecessary legacy from the distant past, and these should be rescinded.

The University has recognised the importance of offering a wider range of postgraduate coursework programs. These will need to acknowledge that potential students often will be in full-time work and may have significant family obligations. Flexible learning will be particularly important in assisting these students, and techniques developed in postgraduate areas may prove to be transferable to undergraduate units of study.

5.6 Duration of courses

Published in 1995 and republished with little change in 1998, the Australian Qualification Framework defines the character and duration of bachelor degrees offered within the Australian Higher Education sector. It is important to recognise that where they stand in the way of financial or academic initiative desired by institutions, the AQF guidelines have been ignored. Consequently, AQF definitions have not inhibited significant evolution in the duration of undergraduate courses. For example, there are recent trends towards lengthening some 3-year programs to 3.5 or 4 years, introduction of an extra year in some 3-year programs to allow further language/international studies, and the emergence of many dual degrees (see below). The trend towards longer courses reflects a combination of factors, including

- the growing breadth and depth of the body of knowledge and skills to be mastered by graduates in most disciplines,
- a greater proportion of poorly-prepared students, due in part to changes in secondary schools but mainly to higher participation rates,
- a desire to enhance the standing of, and level of preparation for, certain professions,
- institutional encouragement of longer studies for educational reasons, associated with administrative advantages of increased retention rates and reduced recruitment costs,
- government encouragement of tertiary studies as a counter to youth unemployment, and
- a desire for enhanced credentials felt by some students and some employers.

There are some pressures to cease, or even reverse, this trend towards longer undergraduate studies, including

- increasing personal cost of university studies through new fees and charges,
- awareness of the opportunity cost of university studies in buoyant economic times,
- strong employment opportunities in certain fields, and
- the reluctance of non-school-leaver students to undertake studies with a long duration.

Given the contradiction between the pressure for longer studies and concerns about increases in tuition and accommodation costs, a large and comprehensive institution such as the University of Sydney should aim to offer a range of options for students. As a basic option, the University could offer the shortest possible duration of studies consistent with the preservation of University academic standards. Strategies for doing this would include the option of acceleration by taking Summer School units, enrolling in single units, or in other ways (e.g. by undertaking Honours project work outside the normal semesters). However, many students will want courses more extensive than the "minimum duration." The University should therefore have flexible options for extended studies leading to higher qualifications (e.g. Honours, language extensions, vocational extensions), transfer with full credit into longer or professional courses (e.g. Science into Engineering), and later-year entry into dual degree and graduate entry bachelor degree programs.

The popularity of Liberal Studies courses, the natural decline in the level of preparation of students as participation rates have increased, the pressure to enhance generic skills formation, and the desire to contain costs invite a continuing discussion of the best way to deliver basic undergraduate programs. It has been suggested that the University could move towards a 4-year program in *all* undergraduate courses (subject to accreditation restrictions.) There would at least two approaches to this development: (1) a "US model" involving broad, generalist studies in, say, the first two years with professional/specialist studies in the senior years, or (b) a "career-focus" model similar to the 4-year Masters programs in the UK, in which the additional work is added as a fourth year. The Academic Board's paper to Senate on this matter has identified some inherent problems with the extension of 3-year programs to four years, including equity and access issues, but the rapid evolution of higher education in Australia invites a continuing discussion of the matter.

5.7 Articulation and credit transfer

It is University policy that (1) unit-specific credit can be given only for "academically identical" units completed at other institutions, and (2) the maximum credit for prior learning that can be given towards the award of a University of Sydney undergraduate degree must oblige the student to undertake a minimum of the equivalent of two semesters of full-time study. The former provision ensures that transferring students do not need to deal with unfamiliar material. The later provision is designed specifically to allow students to transfer into Honours studies at the University, if their academic performance at another institution is satisfactory. Several professional Faculties have additional provisions tending to encourage transfers into the senior years at Sydney. In an intensely competitive environment, the University may choose to promote these transfer opportunities more vigorously, and to make the additional commitment needed to assist students with the academic implications of later-year transfers.

Several universities are working with TAFE and other providers (including private colleges and vocationally orientated high schools) to devise articulation programs that involve advanced standing. Articulation arrangements take many forms, ranging from a generic acceptance of TAFE Advanced Diploma graduates into relevant courses (often on a 1-year credit for 2-years study basis) to jointly negotiated curricula that promise articulating students a seamless transition (often with full credit.) The Faculty of Education is developing a tightly articulated program with TAFE for teacher training in the Design and Technology areas. Other academic areas of the University might also be attracted to similar articulation arrangements with carefully selected partners.

5.8 The Cost of Choice – Managing the Number of Units of Study

The University currently offers over 3,500 undergraduate units of study with enrolled students. The average number of students in a unit of study is over 50, and the average number of units taken by a student is 5. The

number of units with over 100 students is almost 400. There are over 1,400 units with fewer than 10 students. While there are some academic reasons for having units with small enrolments, there are significant fixed costs associated with administering each unit, and there may be significant inefficiencies and opportunity costs in the deployment of scarce resources to small units. It is also probable that students are somewhat bewildered by the large number of academic pathways implied by the large number of units.

The University should develop policies and procedures for ensuring that the number of available units of study is the minimum number compatible with preserving the comprehensive and diverse range of subjects available to students.

5.9 Entries in the UAC guide

The UAC Guide is a critical source of information for prospective students, and it is therefore an important component of the University's recruitment activity. The number and names of courses listed in the UAC guide by a university is partially an indication of the academic diversity of the institution, but many other factors underlie the decision by a university to list a particular course in the UAC guide. These include:

- featuring in the course name a particular theme of study which might appeal to students' academic or career interests,
- comparing and contrasting course offerings between competing institutions,
- appealing to high-UAI or other elite groups who wish to avoid diluting their academic achievement by enrolling in a low-cutoff course,
- combining courses in "double degrees" to produce interesting and/or vocationally recognized combinations with the advantage of time compression,
- balancing intake to similar courses at geographically distinct campus locations,
- controlling intake into particular units of study which have resource limitations,
- creating further study sequences which build on particular academic backgrounds or career paths, especially coming from the diploma level (TAFE),
- encouraging students to exhaust their limited number of UAC preferences in what are perceived to be institutionally or academically beneficial ways.

Despite great improvements, the University might profit from even more refinement of its UAC entries.

5.10 Double/combined/intercalated degrees

Double degrees are proving to be popular with students, offering breadth of study, flexibility, and (generally) a professional degree, with a significant saving of time. To maximise the benefits of double degrees, the University might review issues such as easing geographical and timetable clashes by serial rather than parallel programming of the degrees, increasing the recognition of prior studies for students who abandon double degrees, and addressing the need for a "home faculty". Options for extending the learning of students who will be academically proficient and mature in the later years of a combined degree (e.g. by setting and rewarding work done at an advanced or Honours-level) could be considered. There are also academically attractive opportunities to develop joint units of study in the interdisciplinary fields that emerge from many double degree combinations.

5.11 Honours/internship programs

Honours programs are of particular interest to the University of Sydney since they are a prelude to a research degree. The Academic Board has recently reviewed Honours programs and made a number of recommendations, particularly emphasising the importance of an identifiable scholarly component (the AQF "additional work") and the need for improved Faculty governance rules.

The growing diversity of undergraduate academic pathways, often involving dual or Liberal Studies courses, may tend to reduce the number of students following traditional Honours-Postgraduate routes. Accordingly, the University of Sydney might profitably review alternatives to traditional Honours pathways through undergraduate programs and into higher degrees. There would be scope, for example, to include an Honours component in all 4-year degrees, including the Liberal Studies programs. There is also scope to offer at least one Honours component in a 5-year combined degree program. It could be appropriate to consider a compressed 3.5-year Honours program for the most able students in "3+1" courses (eg., BA, BEc,

BSc) particularly in view of the spread of academic proficiency among students.

Vocational programs ("Internships") as an alternative (or addition) to Honours may be increasingly attractive in Faculties with large enrolments in 3-year programs. They would extend the notion of the practicum, fieldwork, or clinical studies already present in some courses. Should Faculties wish to develop such programs, problems to be considered include the assessment of students in internships, the treatment of EFTSU/HECS issues, workplace supervision, compatibility with DETYA and ATO rules, and the recognition of internships on transcripts. The obligation to provide placements and the question of payment of interns are also important issues. Programs of this kind may be of great interest during the period of the next economic downturn.

5.12 Later year and graduate entry

Professional degree programs are often highly specialised. School-leaving students, enticed to such programs by high UAI cut-offs, peer and parental pressure, and false images of the profession, may therefore find it hard to transfer to alternative studies if their original choice is not convivial. Even when their choice proves satisfactory, students might miss important aspects of university life within a relatively circumscribed academic pathway. The desirability for a mature choice of profession combined with breadth of scholarship implies the need to consider graduate and/or later year entry into professional degrees.

Graduate entry raises a number of issues, including: (a) credit for prior learning in a graduate entry program, (b) induction of students into the senior years of an ongoing study sequence, and (c) the professions' views of breadth of study and their degree of control of the entire study program. Other issues include the provision of HECS and FEE places in graduate professional programs, and equity and policy matters flowing from any extension of the duration of studies. There are also questions about the relationships between double/combined/intercalated degrees and later year/graduate entry: in some circumstances, graduate entry may be academically preferable to a combined degree. The University may respond to these challenges by exploring ways to have co-existing graduate entry and first-degree programs within certain professional Faculties, as a way to offer students increased choice while retaining optimal institutional flexibility.

Some professional degree programs offered by the University of Sydney acknowledge implicitly that students may broaden their area of study beyond the strict needs of the profession, provided that a minimum number of units are taken in the professional discipline. The quest for breadth of study within professional degrees is a commendable academic practice, and professional faculties might consider freeing-up, say, 25% of a 4-year degree course to encourage students to increase their breadth of study.

5.13 Summer School

The Summer School has already become an important feature of the University's academic programs and its popularity is likely to increase. Faculty regulations may need to be changed to allow students the maximum benefit from the School. There are significant equity issues associated with the Summer School (which is solely for fee-paying students or scholarship holders) that are currently addressed by requiring that all Summer School programs are available for HECS students during the normal semesters. This may be a misfocused and unnecessarily restrictive way to achieve the desired equity and academic outcomes.

5.14 Management & governance of academic programs

Improvements in the governance and management of academic programs can benefit students and the University alike. Senate, Academic Board, Faculties and Departments must all work to ensure the maintenance and enhancement of academic standards while striving to treat students fairly and equally. Senate has recently approved Academic Board policies streamlining the regulations governing undergraduate degrees, whose previous form had been described as a "Byzantine web of Central and Faculty constraints."

The new policies establish a set of generic Senate rules which will (a) be common to all undergraduate degrees (avoiding much of the present duplication and non-uniformity), and (b) encourage faculties to express their own regulations in a standard way. The aim of standardization is to simplify the information burden on students and staff, and to gain the maximum possible savings and flexibility from integration of computer-based information systems. There are compelling arguments to provide the same framework for postgraduate coursework programs and, indeed, to ensure as much commonality as possible between undergraduate and postgraduate coursework governance rules.

There has been widespread discussion about the role that might be played by the Academic Board and the Academic Forum in providing a place for debate and discussion about the positioning of the University. There is a view that the University community, including senior management, would welcome a greater number of opportunities for vigorous and engaged participation in the shaping of the University in particularly turbulent times. There is scope for the Academic Forum, in particular, to be recreated as the principal place in which there is general debate about the development of the University.

5.15 Nomenclature of degrees

Considerable freedom exists for the University to manage the nomenclature of its degrees to serve different ends, such as

- coding and managing entries in the UAC guide,
- recruiting students by using attractive degree names,
- expressing academic achievements on testamurs and transcripts.

The freedom requires thoughtful controls to ensure that commitments made to students at the time of enrolment are properly honoured, and that accountabilities to such as professional accreditation and the DETYA profile process can be satisfied. Beyond this, the use of "specializations," "streams" and "majors" within stable "parent degrees," as envisaged in the generic Senate rules, offers opportunities of considerable potential benefit to students.

The multiplicity of pathways in many courses invites discussion of the flexibility that might be established for the wording of testamurs. In an extreme form, this flexibility would see specializations and major/majors in each student's program being printed on the testamur. Indeed, it is sometimes mandated in Faculty resolutions that specializations (Engineering) or majors (Economics) will appear on the testamur. Policy decisions in this area could have a widespread and potentially expensive impact on activities ranging from the maintenance of student records to the operation of graduation ceremonies. They could also influence the classification of responses in graduate destination surveys and the course experience questionnaire.

The few words that can be included in a degree title are insufficient to specify its academic and vocational intent. There is therefore a need for the systematic specification in plain English of the intent of all University courses, specializations and units of study. To be of optimal value to students and potential employers, such specifications should describe the generic skills that graduates will exhibit, and sketch the vocational or other destinations of the various academic pathways in the degrees. The UAC guide and Faculty handbooks go some way to achieving this, but often suffer by mixing the primary message with arcane governance rules. There is a pressing need to improve the University's descriptions of the links between many of its courses and the vocational opportunities emerging from them. One way to achieve this would be to feature plain English descriptions of courses and units of study emphasizing the content and vocational outcomes, relegating turgid governance rules to lower prominence. The University could also consider expressing its governance rules in plain English.